

It is essential to understand the Vietnam conflict if we are to understand some of the factors involved in Gulf War outcomes of combat stress. However, it is important to note that this chapter cannot and does not attempt to review the voluminous literature on stress and posttraumatic stress disorder (PTSD) during or since the Vietnam era. Rather it provides an introduction to some beliefs and research on stress and PTSD with regard to Vietnam veterans. Vietnam produced an extremely low proportion of proximate combat stress casualties<sup>1</sup> and produced or is claimed to have produced massive numbers of postcombat casualties. Therefore, Vietnam breaks with the past normative pattern of combat and war zone stress casualty production. A claim of those espousing the singularity of the Vietnam War is that it was designed, by its horrifying nature, to produce masses of posttraumatic stress casualties; however, this claim was a postwar development. A commonly cited figure of close to one million PTSD casualties (out of the two million nine hundred thousand who served in Vietnam, of whom about 15 percent or about 435,000 were in combat roles) is startling and raises many questions regarding the question of causality. (The wide disparities in prevalence figures are seen in McFarlane and De Girolamo, 1996.) The historically established basic conditions for such casualty generation and such widespread symptom prevalence was not perceived during the combat phase of the war. The second event cited as singular was presumed soldier exposure to Agent Orange; however, the presumption of exposure has produced widespread symptoms that cannot be verified as having an epidemiologically unique cause and physical examination does not differentiate the “exposed group” from the “control group.” Therefore, the Vietnam experience leads us to wonder how much we are dealing with the sequelae of postcombat belief, expectation, explanation, and attribution rather than the sequelae of combat itself. While it would be impossible to deal comprehensively with the vast array of probable psychological, psychosomatic, nonphysically traumatic, and somatic

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<sup>1</sup>This is normally the best indicator of postcombat casualties with a significant psychological component.

consequences of the Vietnam conflict, an overview and some cautious analysis is in order. I have chosen examples from the literature of the Vietnam era and some more recent examples to support my assertions regarding stress and PTSD.

### VIETNAM AS A PARADIGMATIC CASE

To do justice to the complexities of the consequences of service in Vietnam would require a massive historical and analytic effort. Neither adequate time nor resources are presently available for such an undertaking as part of this report. Yet, if we are to understand the consequences of the psychological stresses of combat and deployment and comprehend the degree to which such consequences appear to be dependent upon sociocultural contextual variables, the Vietnam conflict may well be the paradigmatic case of this century. Vietnam illuminates the power of cultural constructs, military organizational behavior, and values and beliefs in the generation of a range of casualties. It also initiates the currently widespread belief that certain wars provide unique causal factors for their various psychological, psychosocial, psychosomatic, and somatic consequences.

The complex differences between casualty “sets” generated during the war and after the war would appear to underline the profound interactions between stress, belief, and a wide range of symptoms in shaping both the expressions of illness (i.e., that narrative composed of words, symptoms, and other behaviors that the individual presents to others) and the perceptions of causality. These interactions force us to question the taxonomic parameters involved in the nosological assumptions of military psychiatry as well as temporal and causative assumptions about the generation of combat and postcombat psychological and psychophysiological casualties. They also give us additional insight into the dynamics of popular beliefs and assumptions about the assignment of cause and the dynamics of blame.

The Vietnam conflict also, I believe, provided a powerful dimension that had been absent in past conflicts—a conceptual and political undermining of the operations of military medicine, including its ethical behavior, approaches, therapeutic techniques, and overall legitimacy. It would not be untoward to consider that the Vietnam conflict played a major role in persuading patients to believe in a conspiratorial antipatient view of much of institutional medicine (equivalent to the role it played in the widening evolution and development of such views of government in general). It is out of the cauldron of Vietnam that the views were popularized of government and “establishment institutions” as the “enemy of the people” and, putatively, their conscienceless users and abusers were popularized. These views moved, with the propelling aid of both

the extreme right and extreme left, from the supposed “lunatic fringes” of society to a position of quasi-legitimacy.

From a technical point of view, in terms of the consequences of deployment and combat, Vietnam was different in a number of ways from the other wars that the United States had engaged in during this century. While one can point out structural similarities to aspects of the Philippine Insurrection or the Korean War, it certainly differed from both. It fell into markedly different phases, each enmeshed in differing perceptions of the war, its nature, its legitimacy, and the manner in which it was fought. It intersected a national and worldwide drug epidemic (at least among the Western industrialized nations) and produced markedly differing arrays of psychological casualties through time. Its “major” cohort of psychological and psychophysiological casualties appeared to arise at home, among those who served in the period of lowest combat intensity. This coincided with a national outcry about U.S. participation in the war, accompanied by guilt, frustration, or betrayal, depending upon the political position of the perceiver.

In addition to the confounding factor of the drug epidemic of the late 1960s and early 1970s, Vietnam’s latter phase and postwar period were characterized (as had been in no other conflict) by the widespread stigmatization of those who had served, combined with equally widespread attempts<sup>2</sup> to delegitimize a number of the major precipitating events and rationales for American participation. There appear to have been two gross dividing lines in terms of patterns of casualty generation during the conflict. The first is the Tet offensive of 1968, and the second is the drug abuse epidemic and shift to the policy of “Vietnamization.” The Tet battle, perhaps more than any other set of events, served to propel a national sense of futility and delegitimize participation in the conflict. It is important to note that this major shift in perspective took place not in response to a military defeat but to what many analysts considered the most overwhelming tactical victory won by American arms in the course of the conflict. The population of South Vietnam did not rise in support of the North Vietnamese offensive despite the enemy’s hopes and our fears. Although the military capacity of the enemy was destroyed for months to come, the media presented the offensive as a defeat for the U.S. and South Vietnamese forces (see Braestrup, 1977). Karnow (1991) makes the point that Tet, rather than transforming public opinion, simply hardened an already polarized public between the majority who wanted a tougher all-out war and a minority who wanted an immediate withdrawal. It is, of course, easy to see that such a pattern of beliefs, contrasting as they were, would nevertheless jointly reinforce percep-

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<sup>2</sup>This is often supported by data, as in the *Pentagon Papers*.

tions of the illegitimacy of governmental operations and deepen suspicions of its motives.

### PSYCHIATRIC CASUALTIES IN VIETNAM

It is important to point out, in this context, two issues: first, senior medical and psychiatric personnel were operating with diagnostic and clinical criteria developed from the experience of World War II and Korea. Second, *ex post facto* analyses of the operations of military psychiatry in Vietnam seldom underline the critical “cultural point,” i.e., that the perceptions of the “line” practitioners created the “facts” for the participants and others at the time. In the initial years of the Vietnam conflict, the number of psychiatric and psychological casualties was small. However, junior medical psychiatric personnel were often both militarily and psychiatrically unsophisticated.<sup>3</sup> As Huffman (1970, p. 344) pointed out, “the man least trained and most junior in rank became [for some months] the sole representative of Army psychiatry in the only combat zone of the United States Army.” Throughout most of the war, the only senior, fully experienced military psychiatrist in Vietnam was the theater consultant. In addition, the expectational set that existed was that the majority of casualties would parallel those of previous wars and consist primarily of “classical” combat or battle fatigue cases. Of the 610 patients whom Huffman saw between May 1965 and April 1966, only 48 appeared to have had combat stress as a component of the reason for their referral. The overwhelming majority of casualties were support troops without combat experience. One hundred thirteen had “severe problems related to alcohol intoxication”; and many had been reduced in rank because of adaptational or behavioral difficulties.

Larry E. Morris, an Air Force psychiatrist at Cam Ranh Bay in 1965–1966, studied noncombatant psychiatric casualties as the product of “a time-limited stress situation.” He noted (1970, p. 353) that even without combat, “insurmountable hardships existed in the environment. Constant heat, humidity, noise, filth, vermin and crowding . . . [and] . . . the more subtle stresses of delay, shortage, uncertainty and ambiguity” as well as “the prison farm atmosphere of the bases in Vietnam.” Morris saw a biphasic reaction pattern characterizing his patient population of 225. The first group<sup>4</sup> was characterized by “debilitating anxiety” and a wide array of physical disturbances and symptoms. Morris characterized

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<sup>3</sup>As one new Army psychiatrist noted, “Having just completed an on-the-job training course of fourteen weeks in psychiatry before assignment to Vietnam, I was unsophisticated about psychiatric observations and practices in this or previous combat situations” (Huffman, 1970, p. 343).

<sup>4</sup>Twenty-nine percent of the total became patients during their initial two weeks in Vietnam. It must be remembered that these were the patients whose symptoms were serious enough to warrant evacuation to a hospital.

these patients as essentially immature and dependent; however, almost all of them were, with treatment, able to complete their tours.

The “second phase” adjustment-reaction patients (39 percent of the total) were predominantly depressed, exhibiting, “fatigability, sleep disturbance, maudlin episodes, irritability, rage reactions and drunkenness” (Morris, 1970, p. 357). Almost all of these men were diagnostically categorized as situational reactive depressions, “characterological” in base (see Morris, 1970). Almost all of them finished their tours in Vietnam, improving markedly after the six-month point of their twelve-month tours. It is important to point out that these were not men reacting to the traumatic stresses of combat. Rather, their exposure was to the myriad erosive stresses of the deployment. Throughout this period, the great majority of psychiatric “cases” were deemed to be “character and behavior disorders,” with a situational illness episode “probably” precipitated by the situational stresses of combat and/or deployment.

In an editorial in the *American Journal of Psychiatry* in September 1967 about the psychiatric caseload on the hospital ship *UNS Repose*, the writer (R.J.B.) commented (p. 378),

There would be a plethora of character and behavior disorders (67 percent) that will come as no surprise to those familiar with military medicine, for this percentage is roughly comparable to that of shore based hospitals.

Treatment tended to be aggressive, relying heavily on use of medications such as the phenothiazines and the anxiolytics and was reported as highly successful. Perhaps conditioned by the extremely high levels of combat psychiatric casualties generated during World War II and in the first year of the Korean War, the intellectual, practical, and emotional focus of military mental health was on the prevention, treatment, and level of generation of cases of what had come to be called “classical combat fatigue.” Most agreed that only a few situations in Vietnam possessed the characteristics that generated high incidences of combat fatigue cases in past wars: the static “slugging match” with prolonged commitment to combat and prolonged exposure to weapons of indirect fire. Vietnam combat casualties had primarily short-duration exposure to firefights in hour-long or day-long “meeting engagements,” combined with periods of rest and recuperation between such engagements and the sure knowledge of rotation home. Thus, those in military health care perceived that these soldiers were protected against the worst causal factors. This more “handleable” pattern was combined with a highly competent and aggressive forward, preventive psychiatric program. The note sounded by skilled and experienced commentators, looking at overall figures, was one of satisfaction and, to a degree, congratulation at the apparent solution offered to the threatening and destructive problem of combat fatigue and its human costs. An editorial signed by Colonel

William Tiffany (1967, p. 1585), then Army consultant in psychiatry, was typical. Tiffany began by noting that:

The incidence of neuropsychiatric illness in U.S. Army troops in Vietnam is lower than any recorded in previous conflicts. The rate in Vietnam in calendar years 1965 and 1966 of individuals hospitalized or excused from duty for neuropsychiatric reasons was 12 per thousand troops per year. The rate during the Korean War was 73 per thousand troops per year. And in World War II, in combat areas the rate was as high as 101 in the First U.S. Army in Europe.

In addition to the rotation policy and sporadic combat, Tiffany noted that morale and training were probably better than those in World War II or Korea, as were the functioning of psychiatric teams.

While those engaged in forward treatment echoed the appraisals of Tiffany and others as to the very low level of combat fatigue casualties, they saw and reported a somewhat more complex scenario. Morris drew a picture of the non-combatant psychiatric casualty whose characterological vulnerabilities led to depression and psychophysiological symptoms. Several other psychiatrists pointed to a more complex differentiation of classes of combat stress casualties. "Classical" combat fatigue was indeed low in its incidence. But they maintained that it was complimented by another kind of combat stress reaction, called "pseudo-combat fatigue" by Strange (1968). Strange noted that classical combat fatigue included essentially "healthy" precombat personalities, pseudo-combat fatigue included patients that were premorbidly "neurotic" and far more difficult to treat. While both classes demonstrated the same array of depressive and psychophysiological symptoms, the pseudo-combat fatigue patients showed personality disorders, a history of poor adjustment, and poor stress tolerance and were poorly bonded to their units. Also, they responded more poorly to treatment than "classical" patients; a significantly lower percentage of those suffering pseudo-combat fatigue (50 percent) were returned to duty than the former (78 percent) (Strange, 1968). According to Strange, just 15 percent of the psychiatric patients<sup>5</sup> suffered classical combat fatigue.<sup>6</sup>

## VIETNAM COMBAT REACTION

Strange's observations were complimented by variations reported by Pettera, Johnson, and Zimmer (1969) from the 9th division. They note (p. 673) the low level of classical combat fatigue in their division, describing it in Glass's terms

<sup>5</sup>These were the patients hospitalized on the *Repose* (roughly the same proportion of Marine psychological casualties treated in forward areas during "periods of heavy engagement").

<sup>6</sup>These cases had typically been in the war zone for more than six months, were deeply bonded to their units, and had excellent records.

as a “psychological disturbance” and going on to state that the most common symptoms were “uncontrollable crying, hyperventilation, extreme tremulousness, acute incapacitating anxiety,” etc. Their description is an extremely limited one given the protean and polymorphic structure and distribution of symptoms that had contributed to the diagnosis of combat fatigue in previous wars. They found those individuals who fell into their category of combat fatigue to be readily treatable. The other major category that the authors described was “Vietnam combat reaction,” which they defined as a psychophysiologic reaction to combat, a full-fledged syndrome, and, in the diagnostic language of the era, a “neurosis,” with probable long-term consequences. This reaction, they noted, was seen in men approaching the end of their combat tours<sup>7</sup> (Pettera, Johnson, and Zimmer, 1969).

The observations of Pettera, Johnson, and Zimmer are of striking importance since they came extremely close to the first comprehensive description in Vietnam of what was later defined as PTSD.<sup>8</sup> For this reason it is worth quoting extensively from a section of their article (p. 674).

The syndrome we call Vietnam combat reaction should be classified as a neurosis by virtue of being precipitated by repeated severe psychic trauma and developing over a relative prolonged period of time. . . . Another distinctive trait of this syndrome is the nearly identical case histories of its development from men of widely separated units whose only common denominator is participating in combat in Vietnam.

The symptoms presented in this syndrome are extensive, and some of them are fairly dramatic:

The first symptoms of Vietnam combat reaction are either insomnia, anorexia or both, later progressing to a full blown syndrome which typically . . . includes: insomnia; recurrent terrifying nightmares, which are usually a reliving of a severe psychic trauma (friends and fellow combatants severely injured, mutilated, or killed, the subject himself wounded close to a vital organ, or perhaps his unit overrun by enemy with few survivors); anorexia progressing to nausea; vomiting (precipitated by enemy contact or explosions) and sometimes even watery diarrhea; depression, including guilt over not having saved his buddy’s life or perhaps not having grieved enough for him, as well as shame for having broken down when others in his unit maintained emotional control; and, most prominent, severe anxiety with tremulousness, to such a degree as to make the soldier ineffective in combat. . . . Subjectively the soldier experiences a deep fear of combat or the thought of it, and notices increasing tremulousness beyond his control when in the field, especially if actual enemy contact is made (Pettera, Johnson, and Zimmer, 1969, p. 675).

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<sup>7</sup>That is, those with an average of ten months of in-country service.

<sup>8</sup>Or at least they came close to the symptom constellation from which the disorder is drawn in today’s diagnostic classifications.

## THE ECOLOGY OF COMBAT AND THE SOCIOCULTURAL CONTEXT OF THE VIETNAM CONFLICT

Pettera, Johnson, and Zimmer do not discuss the possibility of predisposing factors in those showing this syndrome. The argument may be made that almost all of the symptoms observed in Vietnam combat reaction are also symptoms of combat fatigue in World War II. One is struck however by the assertion of the common sharing of all the symptoms, their appearance toward the end of the 12-month compulsory Vietnam tour, and the roles played by repeated exposure to trauma and repetitive nightmare. These commonalities may reflect in some measure the sociocultural contribution to the initiation and generation of psychological and psychophysiological disorders. In World War II, military personnel served for the duration of the conflict. Commitment to combat was open ended; only death, severe wounding, or a complete breakdown provided escape from the battlefield. Casualty rates were often very high, and soldiers became both inured to traumatic events and fatalistic about their own survival. With some salient and terrible exceptions, casualty rates were comparatively low in Vietnam. The acceptance of death as the predictable and "normal" outcome of combat should not have had the controlling power over Vietnam soldiers' perceptions regarding survival that it did in the open-ended time commitment of World War II. Pettera, Johnson, and Zimmer, I believe, correctly reject a simple identification of this syndrome with "short-timers" syndrome, seen in Korea after the imposition of the time-limited tour. But we must wonder about the possible contribution that firm knowledge about the precise end of a tour of duty may have on exacerbating the responses to stress (see below).

Rotation was adopted in part in response to the work of Beebe, Appel, and others following World War II, which demonstrated a significant relationship between length of time in combat and the risk of psychological breakdown (Appel and Beebe, 1946). These observations from Vietnam may lead us to consider whether a close-ended and time-limited commitment may ultimately exact an equally high or perhaps greater long-term price by stripping the soldier of the psychological armor of fatalism and acceptance of death. It might also lead us to wonder whether brief, intermittent, or short-term exposures to extreme traumatic situations followed by rapid movement back to normalcy, may have the capacity to create worse long-term psychological and psychophysiological consequences than prolonged exposure combined with some of the adaptational mechanisms commented upon from the Civil War onward.

There were, certainly, from the latter part of the "advisory period" on, both Kafkaesque as well as Alice-in-Wonderland aspects of the war intermixed with the real trauma. The world of the American military in Vietnam was, for many, a world of ambiguities and ambivalence. With the exception of a few major population centers, most of the country was off-limits to American personnel, either

because it was held by the enemy (as in the 1964–1965 period) or as a matter of policy and security concerns (later in the conflict). Some U.S. troops expressed extreme ambivalence about the Vietnamese government and military—as a phenomenon of the later years of the war following the announcement of “Vietnamization.” The same perceptions were expressed forcefully in the Walter Reed Army Institute of Research study during the advisory period in 1964.<sup>9</sup> With the exception of a few elite forces, Americans had little esteem for most Vietnamese Army units, which were often viewed as poorly trained, unmotivated, and in some cases cowardly. Thus, the national police were persistently referred to as “white mice,” only in part because of their white uniforms. While some commentators have viewed these perceptions as “racism,” they were complemented by an extraordinary appreciation of the motivation and combat qualities of the Viet Cong (VC). A majority of advisers at province, district, and unit levels expressed the belief that if they were in charge of a company or battalion of VC, they could “clean things up in a month.”

At the same time, many advisers expressed admiration and respect for their Vietnamese counterparts, and almost all felt that their task would be worthwhile if they could assure “democratic freedom of choice” for the South Vietnamese. The national instability, as government after government was overturned during this initial period, cast doubt on the enterprise but also was a source of hope. There was a widespread feeling among the advisers that the government of South Vietnam was actively carrying out policies that would further alienate the peasantry and drive them into the arms of the National Liberation Front, and a feeling that the American Country Team refused to intervene to alter policies that were losing the “political war.” Many of the advisers felt far more stress from their interactions with the American chain of command than in their transcultural relationships with Vietnamese. A number complained bitterly that there was not any way to tell “Saigon” (Military Assistance Command, Vietnam headquarters, and the embassy) anything that they did not wish to hear. The use of “numbers” as guides to interpretation of mission success or failure presaged the later utilization of “body counts” as indices, leading to bitterness on the part of some province advisers.<sup>10</sup>

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<sup>9</sup>I was a United States coinvestigator of study of Vietnamese adviser/counterpart relationships in 1964.

<sup>10</sup>Several advisers pointed this out to me after the first computer center arrived in Saigon in 1964, following which provincial political assessment shifted from qualitative to quantitative assessment. The following quote is from one such advisor (all research subjects were promised complete confidentiality):

There is no way to point out that the number of bicycles which they [Saigon and Washington] see as markers of middle class (and therefore presumed anti-Communist) status is as large as it is in my province because they make up the V.C. transport and logistics net.

Even during the early period, ambivalence about and widespread distrust of the Vietnamese population was common. How did a soldier distinguish friend from foe?<sup>11</sup> There also was a disparity between the ultimate goals—stopping communism, creating a peaceful and democratic South Vietnam, and winning the “hearts and minds” of the peasantry—and the political and military means utilized to achieve those ends. There may be truth to the notion that the legitimacy of the ends (i.e., the reasons for engaging in combat) provides part of the context determining the outcome of acts and experiences. In that case, it is probable that a number of the means that delegitimated the ends being fought for were already latent in the context of service in Vietnam in 1964.

The advisers lived in a world of shifting and interpenetrating relationships. They lived between an unsafe domain of, on the one hand, combat, trauma, life threat, and the difficulties and stringencies of life in a third-world nation and, on the other hand, a world of comparative safety and, in some cases, even indulgence. Those stationed in Saigon could watch governments being overthrown from the comparative comforts of hotels or apartment buildings.<sup>12</sup> While this constant apposition of domains was not true for all, it presaged as well as symbolized the world of perpetual and rapid transition, combining with social isolation from the Vietnamese. This isolation and rapid switching of domains continued to characterize how many in the American forces lived after the escalation in 1965.

## THE PHASES OF THE VIETNAM CONFLICT

One of the critical problems in considering the psychological and psychophysiological effects of the experiences of deployment and combat is the structure of the different wars being fought over time in Vietnam. Davidson (1991), among others, divides the war into three wide phases: phase one, extending through mid-1965, is seen as essentially an insurgency/counterinsurgency war, qualified by some conventional battles; phase two, extending from mid-1965 until Tet in 1968, a combination of insurgency and conventional war; phase three, following the almost total destruction of the VC and their political infrastructure during Tet, is characterized as a predominantly conventional guerrilla war—i.e.,

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<sup>11</sup>The beliefs or myths were well established that small children were prepared to throw grenades at Americans or that a pretty girl smiling at a soldier driving through her village might well toss a grenade at him or fire at him with a weapon concealed under her *au dai* (traditional Vietnamese female dress).

<sup>12</sup>In Saigon hotels such as the Rex, field-grade officers were billeted, enjoying their regular “steak nights” and popular music combos with attractive singers. Sipping cocktails, these men watched a horizon illuminated with streams of tracers as gunships plied their trade while the combos’ bass was reinforced by the thud of artillery. Officers assigned to the Military Assistance Command-Vietnam (MACV) could be seen daily impeccably dressed in white shorts and shirts, lunching and playing tennis at the Circle Sportif.

guerrilla-type operations carried out by North Vietnamese regulars (Davidson, 1991). It should be remembered, however, that temporally, with the exceptions of a few major battles (Tet, Khe Sanh, etc.), Vietnam had more in common with 19th century than with 20th century warfare. Lasting for two days, the first major force-on-force battle in which American troops were engaged pitted units of the 1st Cavalry Division (Airmobile) against North Vietnamese Army (NVA) regulars in the Ia Drang valley. These were comparatively short, bloody engagements, in which the losing force broke off contact and quit the field (Moore and Galloway, 1992).

Vietnam was a war without fronts, in which comparatively safe havens existed for both antagonists, in which both sides had committed to a war of attrition of the other's will and human resources,<sup>13</sup> and in which combat was defined by essentially time-limited engagement. The pattern of rapid movement from a relatively safe domain to an unsafe one may have been unavoidable.<sup>14</sup> The quasi-isolation from the population being defended was also, in all probability, a function of the "ecology" of the war. The world of the Vietnamese was continuously one of potential hostility and threat. The possibility of death and maiming from mines and booby traps was everywhere. The bar-girl or beckoning prostitute might well be a VC agent; safety lay in the cantonment.

#### **THE PROBLEMS IN RESPECT TO PSYCHOLOGICALLY BASED CASUALTY GENERATION**

At present, it is puzzling that these contextual factors did not appear to lead to higher levels of combat stress casualties during the first phase of the war, overlapping into the second phase (the period 1965–1968). These phases were punctuated with brutal, albeit brief, combat episodes. A good exemplar was the first truly major combat engaged in by American forces—the battles in the Ia Drang valley cited above. In three days of the battle at landing zone X Ray, the 1st Battalion 7th Cavalry had 79 killed and 121 wounded. When asked by the press for the name of the place of this battle, one lieutenant replied "The little Big Horn" (Moore and Galloway, 1992). C Company alone had 42 killed and 20 wounded. In the next of the battles in Ia Drang (Albany), units of the 2nd Battalion 7th Cavalry and 1st Battalion 5th Cavalry suffered 151 killed, 121 wounded, and 4 missing. The minimal military rule of thumb in World War II was that one psychiatric casualty would be generated in a reasonably proximate period for

<sup>13</sup>To the extent on the American side that body count, rather than territorial control, became the measure of military success.

<sup>14</sup>The war's 20th century parallel may have been the experience of heavy bomber crews stationed in England during World War II; however that included no quasi-isolation from the populace being defended.

each man killed.<sup>15</sup> However, nothing presently available in the literature indicates a significant number of combat stress casualties arising out of these battles in Vietnam.

A study of psychiatric referrals arising from the 78-day siege of the Marines at Khe Sanh demonstrated no rise over the level of such casualties in the same period in the previous year (see Edmondson and Platner, 1968). During the siege of Khe Sanh, which lasted from January 21 to April 6, 1968, 300 were killed, 2,500 were treated for wounds, and 2,250 were air evacuated. But there were only 67 psychiatric referrals, and 60 percent of these were returned to duty. The referrals were not the only psychological casualties, and as Edmondson and Platner (1968, p. 30) point out,

After interviewing medical officers who did duty at Khe Sanh during the siege, the authors concluded that excellent treatment of most acute cases was done by battalion surgeons and corpsmen on the spot, usually sedation and tranquilization in a relatively safe place.

The Khe Sanh experience, like that of Dak To in 1967, was counterintuitive in terms of the numbers of psychological casualties generated. The number of combat-stress casualties remained consistently low. Thus, of the 823 psychiatric casualties evaluated at the medical battalion of the Third Marine Division, between February 1, 1967, and October 31, 1967 (90 percent of all those incurred by the division), only 11.8 percent were diagnosed as combat reactions, and an additional 5 percent as situational maladjustments. Personality disorders accounted for 30 percent of the total, and neurotic disorders for 32 percent. Both of these latter diagnostic categories, particularly for Marine personnel, were far more likely to be evacuated than the few diagnosed as combat reactions (see Kilpatrick and Grater, 1971).

In later years, these low levels were to lead to assault upon the professional premises and assumptions, as well as the ethics, of military psychiatry and the charge that psychically deeply wounded and highly symptomatic men were simply returned to duty in service of the needs of the institution, regardless of how profoundly they may have been damaged (see, for example, Barr and Zunin, 1971; Friedman, 1971). In reviewing at least a part of the literature of the period, it is difficult to discern either a pattern of coercion or a refusal to treat or evacuate a significant proportion of those who were referred to divisional or other psychiatric facilities. One measure of this may be to ask whether or not psychologically injured men who might have been kept in the line during a pe-

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<sup>15</sup>A review that I was involved in with the Israeli Defense Forces of combat stress casualties during the Lebanese incursion in 1982, demonstrated that somewhat lower casualty rates than those reported for Ia Drang inflicted on units of similar size led to the generation of substantial numbers of stress casualties.

riod of crisis, such as the siege at Khe Sanh, appeared in greater numbers after the siege was lifted. This is not an unreasonable proposition based upon the World War II experience when, according to Glass (1973) psychiatric referrals almost always peaked some days after the battle had been resolved. Here Edmondson and Platner (1968, p. 30), referring back to those treated locally, note that,

Most of these cases recovered without serious sequelae, it would appear as the incidence of referrals following the siege did Not [authors' underlining] increase; in fact a smaller number were seen.

### THE TEMPORAL PATTERNS OF COMBAT-STRESS CASUALTIES

The central psychiatric conundrum of the Vietnam experience thus lies in the fact that combat-stress casualties were at their lowest for the years of the highest-intensity combat.<sup>16</sup> The great increases in psychiatric and stress problems took place during the period 1969–1971, when American involvement in combat became consistently lighter. After a temporal delay, the greatest increase then took place among veterans, particularly those who served in this later period. Following discharge and return to civilian life, the number of PTSD diagnoses rose.

The rule of thumb for the relationship between combat intensity (as defined by the rate of killed in action (KIA) per thousand) and psychiatric (psych) casualties, (in this case indicated by admissions to treatment facilities) was well illustrated by the annualized statistics for the Korean War. See Table 9.1.

This normative paradigm should be compared with the situation in Vietnam. The data for physical casualties is shown in Table 9.2.

**Table 9.1**

**Killed in Action/Psychiatric Casualty Rates: Korean War**

	Rate per 1,000 KIA	Rate per 1,000 Psych
Jul.–Dec. 1950	136	99.4
Jan.–Dec. 1951	36	59.0
Jan.–Dec. 1952	11	21.37
Jan.–Jul. 1953	12	13.57

NOTE: Based on data drawn from Reister, undated.

<sup>16</sup>Other psychiatric diagnoses also appeared to remain at about the same level as among garrison troops.

**Table 9.2**  
**Deaths from Hostile Action in Southeast Asia**

	1965	1966	1967	1968	1969	1970	1971
Annual	1,369	5,008	9,314	14,537	9,361	4,225	1,160
Monthly average	114	417	782	1,216	785	352	163

NOTE: Based on data from Thayer, 1978.

All of the available data point to an exceptional increase in the rate of psychiatric and psychological admissions and referrals from 1970 onward. The only data that I have been able to find thus far that annualize psychiatric admissions are in a study reported by Palinkas and Coben (1988) that overviews psychiatric casualties among Marines in Vietnam. The authors pointed out that the overall psychiatric hospitalization rate for the Marines was equivalent to the rate for the Korean conflict of 35.3 per thousand per annum. As shown in Table 9.3, the greatest number of psychiatric diagnoses were generated during the period 1965–1969, peaking in 1968. However, the ratio of psychiatric casualties to wounded represents an inverse curve, with the ratio increasing as the number of wounded dramatically decreases.

It is important to point out that overall, only 3.5 percent of those diagnosed as psychiatric casualties were diagnosed with combat exhaustion. Personality disorders represented the largest single cluster, followed by anxiety neuroses, and acute situational maladjustment. Unfortunately the other diagnoses are not broken down on an annualized basis; thus the modest proportions attributable to drug abuse (2.7 percent) and alcoholism (3.4 percent) provide us with no clues as to patterning over time.

**Table 9.3**  
**Ratio of Hospitalized Psychiatric Casualties to Wounded in Action,  
 U. S. Marines 1965–1971**

Year	Casualties		Ratio psych./WIA
	Psychiatric	Wounded in action	
1965	180	806	22:100
1966	1,062	7,883	13:100
1967	1,928	20,501	9:100
1968	2,334	26,287	9:100
1969	2,255	17,410	13:100
1970	876	5,369	16:100
1971	193	485	40:100

NOTE: Based on data from Palinkas and Coben, 1988.

Spector (1993, p. 63), quoting Neel (1973), summarized the psychological casualties of Vietnam this way:

“After 1968 the neuropsychiatric disease rate for Vietnam began to rise and increased more precipitously than in any other location where there were large numbers of American troops. By 1970 there were more than twice as many hospital admissions for psychosis, psychoneurosis, and character and behavior disorders as there had been in 1967. In terms of man-days lost, neuropsychiatric problems had become the second leading disease problem in the theater.”

The issue involved is one of no small importance, if, as asserted in the dictum subscribed to by Glass and Weinstein, each war produces its own varieties of psychological casualties and psychological components of other illnesses.<sup>17</sup> Vietnam appears to have produced a poor connectivity between combat and the generation of psychological consequences. We are therefore faced with the question of what factors might have been responsible.

## FACTORS SOME PRESUMED TO ACCOUNT FOR RATE VARIATIONS

### Prescribed Medications

Any number of contributing causes have been adduced over time to account for the radical variations in rates as well as longer-term outcomes of psychological casualties. A number of commentators often pointed to the widespread use of neuroleptic and anxiolytic agents by physicians and psychiatrists in the theater for the treatment of combat fatigue, situational anxiety, and depression. In addition, commentators blamed the widespread use of Compazine, a neuroleptic used as an antinauseant in gastrointestinal (GI) diseases that has marked tranquilizing properties. Compazine was used for the treatment of the GI distresses and symptoms that in prior wars were seen as aspects of the immediate psychophysiological response to the stresses of combat and deployment. These treatments were usually short term and were widely reported as extremely successful. As Datel and Johnson (1981) reported following a survey of 116 Army psychiatrists and general medical officers who served in Vietnam in 1967, “prescribing physicians were of the opinion that psychotropic drug treatment was by and large quite influential in reducing the problems presented.” When we look at later patterns of casualty increases, this treatment, however, does not appear to have been efficacious in either limiting or, from late 1969 onward, controlling the rapid rise in noncombat-stress-related psychiatric casualties classified as character, behavior, and like disorders.

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<sup>17</sup>Personal communication with Albert J. Glass, 1982; and personal communication with Edwin Weinstein, M.D., 1994.

## Group and Unit Cohesion

Another factor that has been implicated was the rotation system itself. While any number of authors, particularly military psychiatrists during the first two phases of the war, have considered that the rotation system was one of the great moderators of stress and served to prevent breakdown (see, for example, Bourne, 1970), many other commentators have pointed to the problems of erosion of primary group and unit cohesion as well as to the continuous changes in leadership skill levels created by the even more rapid rotation of unit leaders—which led to periodic “unnecessary” increases in casualty levels (see Thayer, 1978).

In the initial deployments to Vietnam following the decision to “escalate” the war, most units were deployed as the kind of moderately stable organizations that characterized the U.S. Army and other services of the time. Most men had spent a reasonable amount of training time together and were as skilled as soldiers without combat experience could be. Because U.S. forces were managed and maintained on an individual—and not a unit-replacement basis—the weight of the psychologically protective bond created by organizational continuity was adventitious. As men were wounded, became ill, were transferred (to aid in unit cross-leveling), were killed, or returned home, their individual replacements came in at paces that undoubtedly had negative effects on maintaining unit skill and cohesion. This problem was exacerbated as time went on as more partially trained personnel were sent to Vietnam. As the war proceeded, particularly in the post-Tet period, many replacements entered the theater with little more than their 15 weeks of initial entry training as infantrymen. Some divisions insisted upon at least two weeks of training in jungle warfare for new arrivals. But some new arrivals found themselves on patrol or involved in “search and destroy” missions within days of arrival in the country.

Another factor contributing to the stresses experienced by those in combat organizations was the abbreviated command tour of battalion and company commanders, which often averaged less than six months. Bey (1972) documented the rise in stress for the organization as a general phenomenon. While Bey discussed leadership style and administrative behavior, Thayer pointed to what was probably an equally if not more significant source of stress: the difference in casualty rates incurred in sizable skirmishes when there was a change from long-term to new commanders. Those with less than six months in command averaged 2.46 killed in action per battalion commander month in command while those with more than six months in command averaged 1.62 per battalion commander month in command. This distinction was, Thayer believed, confirmed by a comparative analysis of casualty rates suffered in units of long-tour commanders during the first six months of the tour as opposed to subsequent months—thus establishing a learning curve thesis rather than a se-

lection difference. As Thayer points out, sizable skirmishes were perhaps the best measure of battalion commander effectiveness, since deaths due to snipers, mines, booby traps, etc. were independent of commander experience.<sup>18</sup> This is not the place to argue the propriety of the leader rotation policies; however, the experience of the Cohesion and Operational Readiness Training and most other programs designed to provide stable soldier and leader tours (see for example, Marlowe, 1984–1989) demonstrated that the Army’s cultural focus on maintaining maximum individual equity and equal “ticket punch opportunity” are the central issues in assignment patterns, rather than impact on the unit. Thus, there was seldom the possibility of promotion of an experienced officer from within the unit to command. In most cases, the new commander arrived from some other location with no prior experience in Vietnam combat.

All of the literature of the Vietnam conflict and many of the postwar analyses have indicated that these patterns of leader rotation were significant sources of stress for the war’s participants. Each change of command often led to wide apprehensions about being “wasted”—treated as a disposable—while it was perceived that a new commander was out to establish a reputation. At the company level, a soldier might be exposed to three or more changes of command during his one-year tour and at least two to three changes at the battalion level. Each of these changes often meant an extensive period of high stress for the soldier, involving greater perceived risk to life and limb as well as the imposition of new, and sometimes entirely incomprehensible, ways of carrying out the daily round of activities. This set of major stressors was (as Thayer’s data demonstrate) equally present in the years of extremely low psychological casualties as well as in the years of high psychiatric referral.

### Short-Timers Syndrome

One of the possibly more profound consequences of the 12-month tour was “short-timers syndrome” mentioned above. Short-timers syndrome, defined as a drop in morale, rise in anxiety, and a withdrawal from commitment to com-

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<sup>18</sup>Company commander experience also resulted in fewer battle deaths, but the difference was in no way as dramatic as that for battalion commanders. It was dramatic in terms of company commander survivability in that the highest probability of the company commander himself being killed was in the first four months. However, over half of uninjured company commanders were relieved without cause prior to the end of their fourth month in command, and over 72 percent had been relieved prior to the end of five months (Thayer, 1978). There was an attempted rebuttal of Thayer’s findings by the Office of the Deputy Chief of Staff for Operations, as well as by MACV headquarters, which Thayer, I believe, skillfully countered on the basis of the soundness of the data. The former also invoked the concept of a need for rapid rotation due to “commander burnout,” a concept that even at the time should have been seen as having been made untenable by the effectiveness differentials defined in the data.

bat, among other patterns of behavior, was not new. It had been noted as an aspect of the limited tour in Korea. It had also been seen in World War I and World War II as a widespread group phenomenon as knowledge of the imminent end of combat spread through the ranks. Few men wished to be the last to be killed or wounded as the war approached its final days. In Korea and in Vietnam, appearing to have been even more intense, it had shifted from an appropriate response of the group to either final victory or defeat to a purely individual syndrome, as men counted down their days. In contrast to the already noted fatalism of a long war, it is difficult, at this point, to assess the longer-term psychological and psychophysiological consequences for men for whom the war wound down individually and differentially. Short-timer syndrome was noted as much as three months before the soldier's expected date of rotation back to the United States. We have no way of measuring what increases in stress and anxiety might have occurred during those final months—the crude but standard psychological instruments available then to assess stress and anxiety were not used. In many cases, soldiers lost so much combat effectiveness that they had to be moved to noncombatant positions as the end of their tour approached. Nor do we know if the experience of removal from battle created a form of “survivor guilt,” which had been widely noted since World War II and deeply contributed to the psychiatric problems of men who survived when members of their primary group had been killed. The behavior exhibited could be dramatic and flagrant. As Dowling (1967) reported, as the time of return approached:

There is the period of anxious apprehension, a potentially severe syndrome of emotional distress beginning mildly two to three months before rotation, but usually occurring obviously in the last three weeks of the tour and most marked the last three days prior to rotation. Irritability seems to alternate with euphoria. Pacing is a common sign. Quiet hard working individuals who for eleven and three quarters months have put up with deprivations, long working hours, and continually increased demands will suddenly behave in a rather inappropriate manner. A fire chief at the 1st Cav. who worked a 12 hour day—20 days on, one day off for 11 months 26 days—suddenly flew into a rage in his orderly room, disobeyed orders from his commanding officer, was eventually subdued and was brought to the psychiatric ward. After a somewhat lengthy period of ventilation the crux of the situation seemed to be that he was not yet manifested on a flight to leave for the states, but the same day a co-worker with whom he had arrived had departed for the states getting a four day drop in time.

### **Life Restructure As a Factor**

The intensity of these responses may speak to an issue that has been little discussed in relation to the sources of behavior in a combat zone. This issue involves a restructuring of the values assigned to various interactions and events because of the circumscribed arena of life events. This restructuring leads to

social and physical environments having extraordinary determining power over the soldier. Restructuring also leads to a consequent increase in the symbolic value and threat-based stress response that events have, which under other circumstances might be classified as trivial. The closed microculture's power to develop stress, apprehension, anxiety, depression, and overreaction has not been well investigated. In a 1950s study of Army basic training, this amplificatory effect of the closed-system "hothouse" appeared salient to the author (Marlowe, 1963b). Unpredictability and 24-hour-a-day scrutiny by peers and leaders gave threatening and stressful significance to events and behaviors that might not even have been noticed in other environments. We must consider then, in a combat zone, what shifts would be made in the baseline levels of chronic stresses and the number of punctuate events in an environment always perceived as holding the imminent possibility of death or maiming and that could call forth chronic, high-level physiological responses from a large minority of the population.

### **SUBSTANCE ABUSE IN VIETNAM**

The rise in psychiatric referrals has been attributed by some to the so-called Vietnam drug epidemic. This is another "presumed" causal factor that must be examined with great care. It is sometimes forgotten that, rather than representing a specific response of alienated service personnel to the conditions of Vietnam and "feelings" about the war, drug use in Vietnam coincided with both a U.S. and worldwide epidemic of polydrug usage. The initial focus upon drug abuse and use in Vietnam was on marijuana. As in most other nations of Southeast Asia and the United States, marijuana was widely grown and widely available in Vietnam.<sup>19</sup> By early 1967, psychiatric referrals for marijuana-induced toxic psychoses were being reported by military facilities in Vietnam. In a survey of prisoners in the Long Binh Stockade, the major U.S. military confinement facility in Vietnam, the majority of prisoners had used marijuana, and most of these had started using it in civil life (Baker, 1971). Another survey, reported in the same time frame, was of approximately 4 percent of the men leaving III and IV Corps areas in Southern Vietnam to return to the United States during the same period—28.9 percent of the respondents admitted to using marijuana in Vietnam, and 31.7 percent admitted using it at some time during their lifetimes (Roffman and Sapol, 1970). However, 61 percent of that total claimed to have smoked marijuana for the first time in Vietnam. Almost all of those who might be classified as heavy users had been such prior to coming to Vietnam.

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<sup>19</sup>Note also that Cannabis, in addition to being the source of hashish and marijuana, is also the source of hemp, at one time the substance most widely used in the world for cordage and sacking.

There was nothing unique about these levels of drug use in Vietnam.<sup>20</sup> Levels of drug use and abuse were accelerating throughout American society, particularly in the age group that accounted for most of the junior personnel in the military. Within the Army, there appears to have been a rapidly rising curve of usage if criminal investigation records represent a reasonable indicator of prevalence and incidence. Baker (1971) reported that “in 1967, 4.7 percent of the cases received at the criminal investigation repository for filing were drug cases.” The percentage rose to 27.4 in 1968 and to 37.4 in 1969 (Baker, 1971).

The baseline agents of abuse in Vietnam were marijuana and alcohol. Both were apparently equally abused by those who did not deploy to Vietnam as well as by those who were not in the military. In addition to these baseline substances, a wide pattern of polydrug use was evolving throughout the period, in Vietnam, in the United States, and in other overseas theaters. In one study, done in 1971 at Fort Riley in Kansas, there was little difference of reported current use of illicit drugs between Vietnam returnees and controls. That drug use in Vietnam appears to have been more the product of a “drug-accepting youth culture” moving into an area of high availability (“a drug cafeteria”) rather than, as some claimed, a mechanism for coping with stress, anxiety, and trauma (see Fidaleo, 1968) is supported by the data in one of Robins, Helzer, and Davis’ studies of returnees (1975). It is noted (p. 958) that:

If a man was going to use narcotics at all in Vietnam, he usually began early in his tour. One-fifth of all users began within the first week of arrival and three-fifths within the first three months. Only one-fourth of those who had ever tried narcotics waited more than four months to begin. This early use might suggest that the particulars of the Vietnam experience with respect to danger, combat experience, and experiencing deaths of friends must not have been critical factors in trying narcotics, since first use generally preceded extensive exposure to these hardships. This assumption was supported by the fact that there was no correlation between drug use and assignments, danger, or death of friends.

Robins, Helzer, and Davis (1975, p. 958) go on to point out that “the most common reason given for use was the drug’s euphoria-producing effect.”

The high levels of polydrug, and particularly narcotics, use in Vietnam did not exist as a unique outlier. As Baker (1971) pointed out, in 1962, 1 percent of the psychiatric admissions to Walter Reed General Hospital in Washington, D.C., was substance abuse related, rising to 20 percent in 1968 and 25 percent in 1969. This rise in Vietnam-era drug-based psychiatric referrals in areas other than Vietnam would appear to make it difficult to hold the “drug epidemic” re-

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<sup>20</sup>After all, 1967 was the year in which a series of national workshops were held on the drug problem on college campuses (see, for example, Nowlis, 1969).

sponsible for the wide disparity in rates of psychiatric referral and admission in Vietnam as opposed to other areas.

While 43 percent of Robins, Helzer, and Davis' sample had used narcotics in Vietnam, use for the majority was recreational and for almost all did not fit the American stereotypes that had been associated with such use. Heroin was primarily smoked and like most other drugs used commensally and socially. The model for usage of the OJ (opium joint–heroin loaded cigarette) was that of the social group use of marijuana at home. While an image of drug use by alienated draftees was common at home, drug use rates among the lower enlisted ranks was disproportionately high among regular Army enlistees who had volunteered for service. Once again heavy users in Vietnam tended strongly to be those who had been heavy users prior to entering the service. Despite the often described group opposition between “heads” and “juicers” (i.e., drug-using junior enlisted personnel as opposed to alcohol consuming “lifers”—career service members—see, for example, Ingraham, 1974), drug using groups were also characterized by alcohol consumption. This latter form of use represents the major carryover into post-Vietnam civil life and the highest “agent” correlate with those who produced the patterns of psychological and physical symptoms that have come to be perceived as aspects of PTSD.

The most telling finding about the Vietnam drug user and abuser was the rapidity with which narcotics use was terminated upon return. There was a rapid regression from the high levels of use in Vietnam to the levels of use that had been cited prior to the Vietnam deployment.<sup>21</sup> Those who were at higher risk, for both behavioral and particularly psychological problems, were the 10 percent of the Robins, Helzer, and Davis' sample who continued some level of narcotics use after return. While only 1 percent of the total reported the symptoms of dependence, Robins, Helzer, and Davis (1975, p. 959) point out that there were predisposing factors, noting that,

The best predictors of heavy use among those who used narcotics at all after Vietnam were as follows: injecting drugs before Vietnam, having parents who had drinking problems or arrests, drug use in or before Vietnam, dependence on barbiturates, and being an enlistee rather than a draftee.

These factors thus make it difficult to attribute significant aspects of the extensive psychological, psychosocial, and psychophysiological problems of a subset of veterans to the consequences of the drug experience during or after Vietnam. According to Nace et al. (1977) and O'Brien et al. (1980) in a population subset

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<sup>21</sup>The patterns of use appear to have rapidly devolved to the widespread ones of recreational drug use in society at large, particularly in terms of agents of choice with minimal continuation of regular narcotics use.

of drug users and nonusers studied in Philadelphia, the majority of those who had preservice histories of use were depressed and continued heavy alcohol use following return to the United States while high alcohol use was common to all groups.

### **TRAUMATIC EXPOSURE IN VIETNAM AND ITS ATTRIBUTIONAL ROLE IN THE DEVELOPMENT OF THE PTSD OUTCOME CATEGORY**

A segment of the psychiatric community believes that an extraordinarily high level of multilayered traumata is the common experience of those who participated in the Vietnam conflict. This model, promulgated initially in its most comprehensive forms by Shatan and Lifton (see, Lifton, 1973; and Shatan, 1972 and 1973), represents a core set of evaluative and diagnostic principles out of which the construct of PTSD has evolved into its present wide currency. This model assumes that the experience of Vietnam was similar to the experience of the Holocaust, with the soldier bearing the multiple traumata of both victim and perpetrator. Both authors believed that military psychiatrists in Vietnam systematically ignored, or at any rate did not attend to, the deep and profound psychological injuries being borne by the participants in the conflict. To say that this image of Vietnam service is Dantesque is perhaps an understatement, and from my perspective, the establishing data may well be problematic in that it arose out of highly politicized sources.

Neither Shatan nor Lifton served in or experienced Vietnam. In 1971, Lifton, who was vocally against the war, participated in the “Winter Soldier” testimony organized by the Vietnam Veterans Against the War (VVAW).<sup>22</sup> These hearings, generated in part out of the response to widening knowledge of the events at My Lai, painted Vietnam as a catchment of continuous atrocities and “dehumanized” behavior. It should be noted that some have raised serious doubts about the creditability of the testimony and some of the “testifiers” at the Winter Soldier meeting. Lewy (1980), among others, has pointed out that there were grave problems with the Winter Soldier testimony, some were apparently not the people they had presented themselves as, and all refused to give military investigators the dates, sites, and names of perpetrators of atrocities that they had reported. The tragic reality, as Lewy pointed out, was that Herbert’s book (Herbert, 1973) and testimony were established to be a series of falsehoods and half truths.

This issue is of some importance in terms of the factors that generated the spectrum of psychological and other disorders that appeared to originate in the

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<sup>22</sup>The full transcripts of the “Winter Soldier” are available on the web ([http://lists.village.virginia.edu/sixties/HTML\\_docs/Resources/Primary/Winter\\_Soldier/WS\\_entry.html](http://lists.village.virginia.edu/sixties/HTML_docs/Resources/Primary/Winter_Soldier/WS_entry.html)).

Vietnam experience, because widespread participation in and exposure to atrocities were taken as a characteristic of the Vietnam experience, differentiating it from other wars. It may also be important epistemologically, in terms of the assertion about key causative factors that were assumed to underlie the widespread diagnostic attribution of PTSD to a vast number of Vietnam veterans. It is a highly debatable issue and one that remains contentious. Many historians and participants in the Vietnam conflict, drawing upon their experiences, stoutly deny that atrocities like the terrible slaughter perpetrated at My Lai were anything but aberrations. A modest measure of how aberrant such acts were may lie in the statement made by Daniel Ellsberg, a leading antiwar activist quoted by Spector (1993, p. 205):

“My Lai was beyond the bounds of permissible behavior, and that is recognized by virtually every soldier in Vietnam. . . . They know it was wrong. . . . The men who were at My Lai know there were aspects out of the ordinary. That is why they tried to hide the event, talked about it to no one, discussed it very little even among themselves.”

Spector then goes on to cite a conversation he had with the Americal Division (the division to which Medina’s company and Calley’s platoon belonged when Calley ordered the murders at My Lai): “How did the men react to My Lai when the story broke? . . . ‘That’s easy,’ was the reply. ‘Nobody wanted to be in the Americal Division’” (Spector, 1993, p. 206).

Some have claimed that widespread atrocities were hidden in a massive conspiracy and cover up. Lewy (1980) has pointed out that very few soldiers<sup>23</sup> were convicted by courts-martial of crimes against the Vietnamese—a low level compared with the level of convictions in previous conflicts. As Isaacs (1997) pointed out, the socially constructed reality in fiction, the media, motion pictures, and television presented atrocity commission and murder as the regular behavior of soldiers in Vietnam. He adds (p. 22),

But the actual incidence of GIs murdering or accidentally killing civilians was certainly a small fraction of the murder rate reflected in novels and movies and television shows.

It appears to have been well established that the overwhelming majority of the civilian deaths in Vietnam were the result of the basic tactics and technologies utilized, but the rules of engagement allowed for proportionally fewer such casualties than in either World War II or the Korean War (see, Isaacs, 1997; Spector, 1993).

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<sup>23</sup>Between 1965 and 1973, just 201 soldiers were convicted of crimes against the Vietnamese. Between 1965 and 1971, 77 Marines were convicted of these crimes.

Initially, assertions about the level of atrocities appeared to be correlated to the political commitments of the commentators. This, in my view, unfortunately appears to have been so in the work of Lifton, particularly in terms of the perceptions and beliefs upon which he built the posttraumatic stress paradigm that has come to play such a massive role in defining the consequences of the Vietnam War for its participants. As part of his analysis of the psychological effects of Vietnam, Lifton defined the men who served in Vietnam as both “victims and executioners,” the products of a training regimen, racism, and a counterinsurgency doctrine that combined with conditions in Vietnam to create an “atrocious-producing” situation and its subsequent consequences. The stage upon which their behavior was played out was one inhabited by people they had been shaped to treat solely as prey, the “dehumanized” “South Vietnamese–gooks.” The invocation of massive racism as a source of dehumanization and guilt is an unproven assumption.<sup>24</sup> While racism may be a component, it was certainly neither a necessary nor even the most extensive one. As a general thesis, the criticality of racism is undercut by the admiration expressed for the enemy and also by the consistent patterns of intermarriage between American soldiers and Vietnamese women.

Above all, in Lifton’s formulations, there is no image of American behavior as responsive to enemy behavior, tactics, or assaults. He wrote of a time inhabited by only the crucified (the Vietnamese) and the crucifiers (the Americans). Lifton ascribes authentic nobility and warriorship only to those on the side of the National Liberation Front (NLF) or North Vietnam—authentic humanity exists only in the recognition of this central iconic “fact,” all else is “false witness.” Lifton’s vision of this process is, I think, epitomized in the following passages from *Home from the War*, which defined the political assumptions upon which at least a part of his diagnostic and attributional model was built. The reasons for the war were bound up in three psychohistorical illusions:

The first of these illusions concerns the nature of the war and converts a fifty year old anticolonial revolution, nationalist and communist from its inception, into an outside invasion. The second concerns the nature of the government we have supported, and converts a despotic regime without standing among its own people into a “democratic ally.” The third illusion, partly a product of fatigue over the first two holds that we can Vietnamize the war. . . . Bound up with this last illusion is a seemingly pragmatic Machiavellian effort . . . to create in Vietnam an urbanized “consumer society” under American and Japanese corporate hegemony (Lifton, 1973, p. 65).

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<sup>24</sup>That there is and has been a significant amount of racism in American society is a truth beyond cavil. However, racism is not needed to facilitate violence. For example, in Thucydides’ descriptions, barbarity, mass murders, pillage, and enslavement are carried out between city-states that shared the same biological substrate, religion, language, and culture. Distinguishing features are readily created out of the substance and events of war.

While there are partial truths embedded in Lifton's "psychohistorical illusions," they would not be recognized as fair accounts by most historians of either the war or Vietnamese nationalism. Another set of implicit assumptions underlying Lifton's etiological and diagnostic thought lies in his interpretation of the "gook" syndrome and the combination of racism and victimization that he saw as driving it. He concluded that, "by victimizing another group and establishing it as death tainted, one's own collective existence or symbolic immortality can seem to be confirmed." Furthermore, he states:

Equally important to the outcome is the victim's (or potential victim's) rejection of that state, the refusal to be "gook" or "nigger." By casting aside his own earlier adaptation to victimization, by instead insisting upon living out collective forms of protest and transformation he initiates renewed historical connection and lays claim to modes of symbolic immortality that prevent him from being viewed or treated as a "death tainted victim." This is precisely what has happened among Vietnamese: by becoming national revolutionaries, whether through joining the North or the NLF, men and women ceased to qualify (in the eyes of first the French and then the Americans) as "death tainted gooks" or their equivalents. In contrast millions of Vietnamese more or less under the control of the American-sponsored regimes of the South have remained locked in the counterfeit Universe and thereby condemned to the fate of gook-victims. . . . In this fundamental psychohistorical way, the Vietnam war epitomizes a world wide struggle (mostly on the part of non-white peoples) against victimization (in the past by European imperialism and now by the Pax Americana replacing and in ways perpetuating that imperialism)—a struggle whose psychological as well as political success seems to depend upon a revolutionary mode of immortality (Lifton, 1973, p. 214).

The subtext of Lifton's work is that participation in Vietnam created an illness driven by racism, atrocity, and victimization. Therapy for the victim (the American veteran) consists, according to Lifton, in the rejection of this heritage and embracing or coming to the authentic world of "nonvictimhood."

From an epidemiological point of view, the universality of Lifton's findings is suspect. They are drawn from a small cadre of antiwar veterans' perceptions, statements, and psychological pain. In addition, these veterans were self-selected for treatment under the aegis of the antiwar group VVAW, which assigned all operational good to one side, North Vietnam, and all evil to the other. In the light of the history of both the war and the succeeding decades, this position proves difficult to maintain.

As van der Kolk, McFarlane, and Weisaeth (1996) point out, the work done by Lifton and Shatan in defining "Vietnam veterans' syndrome" represents one of

the tap roots in the development (or rediscovery) of the concept of PTSD.<sup>25</sup> In 1974 the *Diagnostic and Statistical Manuals of Mental Disorders* contained no diagnostic category for war neurosis or war-generated disorders, and the addition of such a category to the third edition (American Psychiatric Association, 1980) would certainly have been in Lifton and Shatan's opinion an appropriate response necessary to fill such a lacuna. However, certain basic problems remain, and the PTSD construct remains a difficult one. Young (1995) has criticized it as a convenient sociocultural construct—a new “created category” of illness. Van der Kolk and his coauthors (1996, p. 67), on the other hand, see changing sociocultural and political conditions as having led continually to the denial of the importance and psychiatric consequences of psychic trauma through a prolonged period:

Psychiatry's amnesia about the importance of psychic trauma has taken the strange form of a “repetition compulsion.” Because of periodic denials about the reality of trauma's effects on the human soma and psyche, hard earned knowledge has been repeatedly lost and subsequently discovered *de novo*.

In light of the changing assumptions underlying depth psychological thought in psychiatry over the years, one might consider where the major sources of such denials might have originated.

However, it is important to note that the very concept of psychic trauma, if it is not coupled with coeval physical assault or insult, is, as we have pointed out, subject to cultural definition. The initial characterization of PTSD as the result of experiencing an event that “falls outside the range of normal human experience,”<sup>26</sup> involves a set of value judgments about human experiences and the valences of events that vary widely from culture to culture and historical epoch to historical epoch. For most human societies until quite recently, chronic warfare, famine, brutality, persecution, and slavery were essential facts of human experience.

Thus, witnessing a public hanging or beheading would be traumatic for a large segment of the present American population, while in the 18th and 19th centuries it was conceived of as good entertainment in most Western societies. We may have widely expanded the spectrum of events responded to as sources of trauma well beyond that of preceding generations. This point is of some import given the extraordinary proportions of Vietnam veterans who have been categorized as suffering from PTSD and who have suffered a range of psychological and physical symptoms. The levels of atrocity, fire fights, and other traumatic

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<sup>25</sup>“Vietnam veterans' syndrome” was ultimately subsumed in PTSD according to DSM III (see van der Kolk et al., “History of Trauma in Psychiatry” in van der Kolk, McFarlane, and Weisaeth, 1996).

<sup>26</sup>A definition that continued to be used in DSM III R (American Psychiatric Association, 1987).

situations in Vietnam claimed by Lifton (his VVAW groups and those who followed him) and the postwar media images of soldiers' experiences vary greatly from what appear to be more-objective and wider-scale assessments of the occurrence of such events in the Vietnam conflict. One response has been to broaden the concept of traumatic exposure to include secondary and tertiary forms of exposure. Thus, the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (American Psychiatric Association, 1994), includes as extreme stressors both witnessed events and events experienced by others that have been learned about. Indeed, the diagnosis of PTSD (309.81) is a function of the stressor and the symptom pattern of the individual's response to that stressor.

There are the additional problems involved in focusing on trauma to the exclusion of other stressors in the production of both proximate and delayed psychological and physical symptoms. Myriad complexities are involved in the widespread use of the concept of PTSD and in the issue of its "reality" as a medical diagnosis or a cultural catch-all, generated in part out of political conceptions of the moral validity of the Vietnam conflict. PTSD itself, like combat or battle fatigue in World War II, was built upon a set of implicitly psychoanalytically derived models. These models came from the observations and theoretical assumptions of Kardiner, Grinker, and Spiegel; were further developed by Figley, Horowitz, van der Kolk and others; and have been seriously questioned by Young among others (see Kardiner, 1941; Grinker, and Spiegel, 1945; Horowitz, 1976; Figley, 1978; van der Kolk, 1984; and Young, 1995).

The PTSD figures, cited in various studies of its prevalence in Vietnam veterans, present us with a problem that bears upon both historical epidemiology and the nature of diagnostic allocation. The study most often cited is the National Vietnam Veterans Readjustment Study (Kulka et al., 1990). According to this survey of veterans' self-reported symptoms, 15.2 percent of male Vietnam theater veterans had PTSD features 20 years after the war and another 11.1 percent had partial PTSD; and there was a total prevalence during the 20-year period of 960,000 veterans who had suffered PTSD features. These figures are remarkable.<sup>27</sup> A contrast is provided by the Centers for Disease Control (CDC) Vietnam Experience Study, which included actual comprehensive examinations. Here the sample produces a figure of 15 percent as the prevalence of Vietnam veterans who had ever suffered from PTSD and 2 percent as a point prevalence for the preceding month (Centers for Disease Control, 1988a). DSM IV

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<sup>27</sup>Note that they are not based on actual psychiatric diagnoses, but upon the presence of self-reported symptom sets, both psychological and physical, in response to various survey instruments. The fineness of the "diagnostic mesh" of these instruments may well be debatable.

(American Psychiatric Association, 1994, p. 426) points out about study data on prevalence of PTSD:

Community based studies reveal a lifetime prevalence for Posttraumatic Stress Disorder ranging from 1% to 14% with the variability related to methods of ascertainment and the population sampled. Studies of at-risk individuals (e.g., combat veterans, victims of volcanic eruptions or criminal violence) have yielded prevalence rates ranging from 3% to 58%. Such wide parameters are seldom reported for other diagnostic categories.

There is another reason to be concerned about the sources of the wide array of psychological and somatic symptoms presented by individuals reporting themselves as suffering from PTSD, and this lies in the proportion of returnees who have exhibited symptoms of this syndrome. Approximately 2,900,000 Americans served in Vietnam over the entire period of the conflict, and a majority of these were support personnel not combat troops. Presumably one-third of the total force has suffered PTSD since the war. This might make sense if Vietnam had really been, for almost all personnel there, as traumatic as described in Lifton and Shatan's *Winter Soldier* testimony. Pointing out this discrepancy is not to say that a large number of Vietnam veterans did not experience very real stress-related features postcombat; rather it seems to point to an uncertainty or lack of a clear understanding of what were true antecedents to postcombat or posttraumatic stress. The large numbers challenge prior thinking and call for further investigation.

In the heavy and relentless combat of World War II, combat-stress casualties averaged one for every four wounded.<sup>28</sup> The levels of exposure to traumatic events in the environment were, for many World War II support personnel, perhaps as great if not greater than for those in Vietnam. It must be remembered that American tactical doctrine and reliance on firepower leveled towns, villages, and cities, causing high numbers of civilian as well as military casualties.<sup>29</sup> Unlike Vietnam with its search and destroy tactics, support personnel moved rapidly into population centers that still reeked of death and destruction. Van der Kolk and others may dismiss the modest numbers of "delayed" casualties or sufferers from traumatic neuroses from these past conflicts under the rubric of denial. However, it is important to note that neither the nations nor the medical communities involved denied the probability of a large cohort of men suffering postcombat psychiatric problems following either World War I or World War II. The official statistics for shell shock from the British Army in

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<sup>28</sup>This rate fluctuated with the duration and intensity of combat, the amount of indirect fire experienced by the troops involved and was mediated by cohesion, morale, and the effectiveness of the members of the organization.

<sup>29</sup>Body parts, dead women and children, enemy dead, and our own dead were common sights. Still, this level of carnage did not reach that created by World War I and a number of other wars.

World War I are unreliable, but it was estimated that the total number of “shell-shocked wounded” between 1914 and 1917 was 28,533, with approximately another 51,000 “shell-shocked sick” (Babington, 1997). Babington further notes (1997, p. 121) that “fresh cases of war neurosis were occurring continuously during the post-war years.” In all, he reports that 120,000 men had either been pensioned or received a cash payment for “primary psychiatric disability.”<sup>30</sup> The deep national concern in Britain about the consequences of combat is underlined by Babington (1997, p. 122) when he points out that “in 1919 a new charity called ‘Combat Stress’ was founded in London.” Its purpose was helping men and women of all ranks who had developed a psychiatric illness while serving in the armed forces or the merchant navy.<sup>31</sup> After World War I and World War II, while there were postcombat and postwar casualties there was no deluge of delayed psychiatric casualties. The anticipated diagnostic metaphor may not have been PTSD, but those of war neurosis, combat fatigue, etc. would have covered the same range of disabling symptoms. While the issue may thus be one of nominal allocation to a “named” diagnostic category and etiology, it is doubtful that masses of humans in pain, who would have had to number in the millions from World War I and World War II, would not have found an appropriate category of illness in which to present themselves.

### **SOME FURTHER CONSIDERATIONS ON THE ISSUE OF PTSD**

It would be unfair at this point, to those suffering from PTSD and those engaged in research and treatment, to leave consideration of PTSD to the formulations that characterized the first decade of concern and much popular thought about this problem. Given the approximately 3,000 articles that have been published in the last 25 years on the topic of PTSD, this report is no venue for attempting a comprehensive history of the evolution of the diagnostic category and scientific thinking about it. It is also important to note that the field of PTSD research has evolved greatly since Lifton and Shatan. My criticism of their writings is included to demonstrate and exemplify the influence and important reliance on sociocultural and political thinking on the labeling of the causal factors of what came to be referred to as PTSD at that time. Also of note is that while current thinking may have been motivated by Lifton and Shatan, the field and contemporary thinking are not dependent upon it and include many skilled and learned researchers and clinicians.

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<sup>30</sup>Approximately 70,000 Americans had been disabled by psychiatric ailments during World War I, the actual proportion who continued to demonstrate significant symptoms does not seem to be available.

<sup>31</sup>The organization adopted Rudyard Kipling’s evocative stanza: “They broke his body and his mind/And yet they made him live,/They asked more from My Mother’s son/Than any man could give” (Babington, 1997, p. 123).

My concern in this report has been with the establishment of a category, label, and diagnosis that was applied to those who served in combat. I have deliberately focused on some of the clinical assumptions, sociopolitical assertions, and value perceptions that led to the establishment of a broad category of illness. It is important to note that I am not personally critical of the diagnostic entity and validity of PTSD. My criticism is based on my own experience and scientific inquiry. My stance in this report has not been clinical but scientific in the sense of attempting to consider the factors involved in the connection of the category and problems with some of the underlying assumptions and judgments. In Karl Popper's (1959 and 1972) terms, PTSD as a concept was in danger of ceasing to have scientific validity as it became "non-falsifiable" and less and less subject to testing. A number of concepts were the subjects of clinical inference with no or little empirical verification—e.g., repressed and unrecovered or hidden memories, Lifton's "death imprint," and the widespread belief that exposure to trauma alone was sufficient cause of PTSD. These types of inference added to the difficulties involved. A number of commentators tended to anachronistically view all psychological problems suffered by soldiers in combat as PTSD, extending even to Shay's view of Achilles in the *Iliad*.

For some, the extensive work done during World War II on the "normal battle reaction"—a variable set of psychosomatic, psychological, autonomic symptoms, combined with fear and fatigue—was self-limiting (see Ransom, 1949). The greatest concern of military psychiatry in World War II was for those whose reactions went beyond the normal and became fixed and disabling. In Hanson's introduction to this monograph (Hanson, 1949), he points out that tremulousness, insomnia, and recurrent nightmares are "normal" in combat and probably pathological not in combat. Unfortunately the diagnostic language and categories are markedly different from those of today. The category evoked is neurosis described in terms of a continuum of anxiety. The greatest concern was for those whose symptoms became fixed in a chronic state of anxiety. The precipitants were assumed to be fear, danger, and exposure to cataclysmic events. All of this is familiar enough, as are the physical and physiological symptoms involved. What future generations attended to less were the observations that patients who tended to develop fixed symptoms were a group strongly biased in terms of the existence of premilitary psychological problems. This was a finding substantiated by Brill and Beebe (1951) in a post-World War II follow-up study of psychoneuroses, in which preexisting factors were shown to affect outcome greatly. As pointed out previously, this issue of predisposition or vulnerability was seldom considered in the period from World War II to Vietnam. It is not surprising therefore that the initial post-Vietnam development of PTSD concepts should have focused almost exclusively on extrinsic factors—i.e., exposure to traumatic events, psychological sequelae, and psychosomatic consequences. The issue of exposure was the *sine qua non*

for determining the sequelae of PTSD. Conversely, for some, if PTSD symptoms existed, then, by definition, the individual had been exposed to trauma even if no such exposure existed in the record.

In a number of senses, work on PTSD demonstrates some of the great strengths of scientific inquiry and method contending with the possible flaws in initial formulations and approaches to a medical problem. The history of the development of conceptualization, experiment, and analytic rethinking is an extremely complex one. This chapter can be indicative only and not comprehensive. Of the nearly 3,000 separate journal articles that have dealt with aspects of PTSD, the neurobiological work, in particular, bears most strongly on present and evolving perspectives on PTSD. The neurobiological work also evokes issues that should be of present and future concern to issues of postcombat syndromes that have stress-related components. At the risk of further repetition, it would not be a misstatement to note that in the initial phases of the establishment of the PTSD diagnosis, the dominant focus was on a set of sociopolitical perceptions of the “nature of the war.” This included assumptions about the experience of Americans in it and the profound trauma this experience was believed by some, like Lifton, as noted above, to characterize all returning American servicemen.<sup>32</sup> This position of focusing upon external events—the trauma—not unnaturally (despite or because of its political aspects) held great power in the way in which the etiology and to a degree the treatment of PTSD were considered by many practitioners. In 1980, the revised *Diagnostic and Statistical Manual* of the American Psychiatric Association recognized post-traumatic stress disorder as a clinical entity for the first time (American Psychiatric Association, DSM III, 1980). In DSM III, PTSD was listed as one of the anxiety disorders sharing symptoms with a number of other disorders. Its primary distinguishing characteristic was etiological—exposure to an event defined as being outside of normal human experience: This was the “recognizable stressor that would evoke significant symptoms of distress in almost everyone” (American Psychiatric Association, 1980, p. 247).

In addition to the event itself, DSM III included a number of other possible symptoms, such as recurrent intrusive memories of the event, recurrent dreams, or flashbacks. The next class of criteria was based on the numbing of responsiveness to the external world, beginning some time after the event, through either loss of interest in significant activities, feelings of detachment from others, or constriction of affective responses. A final class included at least two of the following symptoms that were not present prior to the event: hyper-

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<sup>32</sup>The perceptual set that Lifton brought to his initial work on the traumatization of Vietnam veterans was laid out earlier in his testimony before the Senate Subcommittee on Veterans Affairs in 1971 and published later (Lifton, 1974).

alertness or exaggerated startle response, sleep disturbance, guilt about surviving, memory impairment or trouble concentrating, avoidance of activities that recalled the event, and intensification of symptoms by stimuli resembling the event.

It should be noted that with the possible exception of the startle response, all of these criteria are essentially psychological or psychosocial, with the central issue of exposure to a traumatic event. Many of the criteria adopted had been developed as part of the work by Horowitz (1976 and 1982) on “stress response syndrome” (see below), as well as drawing on Lifton and Shatan’s original formulations.

This event-centered etiology was well articulated by Green, Lindy, and Grace in their critique of the DSM III PTSD diagnosis in 1985. While considering the premorbid aspects of breakdown, the authors primarily assign these aspects to characterological factors, and their focus is on the event. In their formulation (Green, Lindy, and Grace, 1985, p. 407),

the primary determinant of outcome is the nature and intensity (i.e., the objective characteristics) of the external event (the stressor). . . . [A]s the degree of stress becomes more severe a larger proportion of individuals will break down (i.e., develop symptoms). If the stress is sufficiently intense, virtually everyone will develop what would usually be seen as “neurotic symptoms.”

Two citations provide exemplars of a break with what might be called the “universalist” causal-thinking cued to combat exposure per se. Green, Lindy, and Grace (1985) noted the problem in operationalizing what classes of stressors produced which levels of pathological effects. A similar position in terms of the “dimensions” of the stressors involved was taken during this period by Laufer, Frey–Wouters, and Gallops (1985, pp. 88–89) who felt that

the measurement of stressors in PTSD is a complex problem which requires careful conceptualization of the specific phenomenon under study. The early studies of the effects of the war on PTSD concluded too quickly that combat was the key issue. Future research needs to pay careful attention to the relationships between traumatic experience and patterns of subjective reaction to these experiences.

With the passage of time it was becoming obvious that not all those exposed to traumatic events developed PTSD or responded the same way to the event. As a corrective of sorts to the limited DSM III diagnostic category (distinguishable only by the presence of a traumatic event initiating symptoms indistinguishable from those in other disorders), it was proposed to include the Horowitz model of stress response syndromes. (See for example, among Horowitz’s many publications, Horowitz, 1982). Horowitz focused on the event and its psychological sequelae, particularly the repetition of perceptions related to the traumatic

event. The critical variables for Horowitz were the unwanted intrusion of memories of the event, avoidance, and numbing.

Based on these considerations Horowitz, Wiulner and Alvarez (1979) developed the “impact of events” scale (IES). The IES became a widely used instrument in epidemiological studies attempting to assess the prevalence of PTSD in a number of populations and was also used for diagnosis by some investigators. It was joined throughout the 1980s by a number of other scales used for both epidemiological and diagnostic assessment—one of the most salient of these is Keane’s Mississippi Scale for Combat Related PTSD, widely used with Vietnam veterans (see Keane, Caddell, and Taylor, 1988). A good review of the kinds of psychological assessment instruments utilized in PTSD is that by Newman, Kaloupek, and Keane (1996).

Throughout the initial decade of work on PTSD, while a number of investigators paid some attention to the kinds of physiological phenomena seen in patients diagnosed with PTSD, the major emphases were psychological and psychosocial. Thus, primary emphasis was placed on psychological and behavioral symptoms. Such issues as the level of dysfunction exhibited by the individual, levels of traumatic exposure that would produce symptoms (the issue addressed by Green and others), and the question of the effects of exposure to chronic stress in relation to such symptom production were not really addressed. While the assessment instruments discussed above are essentially oriented to psychological symptoms and constructs, a wide array of physiological symptoms was also noted as characterizing patients diagnosed with PTSD. These included such physiological changes as higher reactivity, startle, hormonal, and other neurophysiological phenomena. These were seen as sequelae initiated by the traumatic exposure and part of the subsequent PTSD condition. Thus in DSM III R, physiological symptoms, in addition to startle, were essentially limited to: “physiologic reactivity upon exposure to events that symbolize or resemble an aspect of the traumatic event.” (American Psychiatric Association, 1987, p. 250). Significant work was being done on physiological issues in patients diagnosed with PTSD, as well as on differences between such patients and others. The kind of work done by Mason and his group (1986) at Yale/Westhaven Veterans Administration on differences in cortisol levels is a good exemplar. Most physiological research during this period appears to have centered on the assumed link between physiological reactivity and exposure to stimuli evocative of the traumatic event presumed to have been responsible for the patient’s PTSD. This was, of course, particularly true of work done with Vietnam veterans. In work done by Blanchard, Pitman, Mason, Yehuda, and many others, a wide range of psychobiological differences was seen between PTSD patients and others, particularly when exposed to evocative stimuli but also when medications stimulating autonomic arousal were given (as in work

by Rainey et al. and Southwick et al.). See, for example, Blanchard, Kolb, and Pallmeyer, 1982; Blanchard, Kolb, and Gerardi, 1986; and Pitman et al., 1987.

A large number of psycho and neurobiological effects of PTSD have been cited in the literature. These have included gross psychophysiological differences between PTSD patients and controls, neurohormonal differences, neuroanatomical effects, and immunological effects. Many of these effects appear to be real and substantial. It would be important to keep in mind, however, O'Brien's (1998, p. 106) caveats in his review monograph:

There has been investigation of a massive range of possible biological markers or of indicators of Pathology in PTI [posttraumatic illness] and PTSD. Most of the studies have used small samples, and repetition has not always produced replication, leading to questions about methodology and rigor of application as well as questioning the original findings.

Throughout most of this period, the emphasis remained on the traumatic event as the precipitant of the disorder, and indeed that concept has been critical to the inclusion of PTSD in the various iterations of the DSM. However, some began to question whether exposure to a traumatic event was sufficient to be the sole responsible etiological agent of PTSD. A good example of this questioning is the work of Breslau and Davis (1987a, p. 582), who asserted that there was "insufficient data to show that the set of symptoms characteristic of PTSD is strongly and uniquely associated with extraordinary stressors." They also found, as did others, that the whole of the variance was not explained by the degree of traumatic combat exposure. In their study 35 percent was explained, in others equivalent findings were reported (Breslau and Davis, 1987b).

Such findings certainly influenced the rewriting of the diagnostic criteria for PTSD in DSM IV (American Psychiatric Association, 1994). Certain important changes were made. The operationally meaningless characterization of the traumatic event as outside the "range of usual human experience" was dropped in favor of exposure to a traumatic event in which

both of the following were present:

- (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of others.
- (2) The person's response involved intense fear, helplessness or horror (American Psychiatric Association, 1994, p. 427).

In addition, DSM IV (p. 429) added dysfunction to its diagnostic criteria along with symptom duration of more than one month stating that, "The disturbance causes clinically significant distress or impairment in social, occupational or

other areas of functioning.” It also divided the diagnostic categories into two subtypes: acute—less than 3 months—and chronic—more than 3 months.

This change moved the etiology of PTSD from what I have called a universalistic reliance upon the experience of a traumatic event to one involving classes of events interacting with the specific responses of the individual involved. In this sense, the effect of the event was reordered in terms of the way the patient responded to it. This move from absolute to relative valuation was, of course, necessary given the fact that large numbers of persons exposed to highly traumatic events did not develop the symptoms of PTSD. In a simplified sense, this brought those etiologic criteria more closely into line with the strictures developed by Brown and others—assessing the stress-creating power of “life events” defined in terms of the weight given to the event by the respondent. (See, for example, Brown, Harris, and Peto, 1973; Brown et al., 1973; and Brown and Harris, 1978.)

It should be noted that no singular pathophysiology of PTSD is listed—a not uncommon fact when dealing with psychiatric ailments. No major attention is paid to psychobiological or neurobiological phenomena. As with many other psychiatric and psychological diagnostic criteria, as well, categories of symptom sets are listed, and diagnoses are to be made when the patient exhibits some combination of the symptoms.

DSM IV then begins to move toward a more selective diagnosis of the entity called PTSD, but many of the criteria are somewhat amorphous and, to a degree, subjective. The latter is certainly important in clinical practice where, in the absence of hard signs—laboratory tests and other like measurements—the judgment of the practitioner is the final diagnostic authority.

As we can see, the scientific process, based upon querying assumptions with data, began an evolutionary process in terms of etiological assertions and the definition of PTSD. This evolution has continued as investigators have moved from focusing on so-called soft signs (like behavior) to the neurobiology of PTSD. Investigators’ findings regarding the neurobiology of PTSD have, for at least a number of key investigators in this field, led to a reconceptualization of the etiology and nature of the disorder. The need for a new conceptualization was laid out by Yehuda and McFarlane (1995). In their article, they pointed out that new findings support the idea of PTSD as a distinct diagnostic entity but that the findings are different from those that arose from psychosocial theory and stress research. Yehuda’s work has exemplified the movement away from central focus on the traumatic event in an attempt to scientifically define PTSD, distinguish it from other posttraumatic responses to events, and approach the differences between pathological and nonpathological responses to trauma. In a sense, it moves back to Ransom’s (1949) distinction between “the normal

combat reaction” in World War II as opposed to pathological ones. Most men who suffered normal combat reactions went on to live lives not much different from those of their neighbors who had never gone to war. Those in the minority who suffered pathological reactions such as “old sergeants syndrome” (see Sobel, 1949) often required extensive treatment and exhibited a pattern of slow recovery. To Yehuda the challenge is to explain the difference between those who develop PTSD and those who do not. Her work strongly indicates that differences in neurobiology appear to be those that best delineate one group from the other. In simple terms, their autonomic nervous systems respond differently. PTSD victims continue to reexperience the neurochemical responses to stressful and fearful stimuli long after the fact.

The neurobiological issues raised by Yehuda and others also raise the issue of possible predisposition to an abnormal response to a traumatic event. These predispositional factors would not lie in the psyche but in the autonomic nervous system and that might well be amenable to either preventive or *post hoc* biological intervention. Schnurr, Friedman, and Rosenberg (1993) did find, using the Minnesota Multiphasic Personality Inventory (a psychological diagnostic instrument) that some subset of college students’ scores appear to have predicted risk for the development of PTSD symptoms, if not PTSD, after combat.

The issues surrounding PTSD as a diagnostic entity remain contentious on many levels. Predisposing factors, preventive techniques, modes of treatment, and etiological conceptions all have partisans of various approaches. For example many, including the U.S. Armed Forces, espouse “critical incident” stress debriefing after exposure to acute trauma as a significant mediator of possible symptom development. In addition, the most recent edition of a standard handbook for crisis intervention workers (Gilliland and James, 1997) recommends this debriefing technique unqualifiedly. From a scientific point of view, the efficacy of critical incident stress debriefing has not yet been proven. It appears to have little or no effect on long-term outcomes but does make both the briefer and the debriefed feel better at the time (see Raphael et al., 1996, and O’Brien, 1998).

These few exemplars of the evolution of PTSD, as in so many of the historical examples reviewed, demonstrate that on the one hand science ultimately is an evolutionary process, and on the other, they demonstrate our continuing capacity to make judgments based on assumptions and beliefs rather than knowledge. The issue of PTSD has served a great function in helping to further our understanding that body/brain-mind/environment are all part of a single open system. It has played a great role in furthering our understanding of the effect of trauma on homeostasis and mental and physical disability as well. It has also

demonstrated that we often, as before and will in the future, know too little and therefore come to assumption-based conclusions, cleaving to them tenaciously.

## HEALTH CONSEQUENCES OF SERVICE IN VIETNAM

If sheer physical exposure to trauma is not a sufficiently viable cause of PTSD and if we can hypothecate that human nature and human physiology had not changed so much in a generation (a likely biological or evolutionary proposition), then it constrains us to ask: What accounts for one-third of the deployed cohort presenting themselves as PTSD casualties?

On the one hand, the combination of a diagnosis of PTSD and the experience of the stresses of heavy combat in Vietnam is correlated with long-term health risks. Boscarino's study (1997) of the medical histories of almost 1,400 Vietnam veterans strongly suggests, for example, that those who had been in heavy combat and had a PTSD diagnosis were 50 percent to 150 percent more likely to both contract and develop serious diseases as well as abnormal immune functions 20 years after service in Vietnam. On the other hand, however, in almost all surveys and studies, Vietnam veterans persistently report higher levels of physical symptoms and disease episodes than do nonveterans. The comprehensive CDC Vietnam Experience Study (1988b, p. 2713) concluded that:

Vietnam veterans more frequently reported current somatic symptoms and physician diagnosed diseases than did non-Vietnam veterans. Most of these conditions were not currently detectable by the comprehensive physical and laboratory screening examinations used in this study.

Almost every study of Vietnam veterans has produced this same outcome: While Vietnam veterans report more adverse health events and symptoms than non-Vietnam veterans, the level of detectable conditions between the two groups does not differ significantly. The implication, then, is that we must look to other causative factors.

## HERBICIDE EXPOSURE

Another factor that has been implicated in Vietnam veterans' reporting of PTSD appears to be the widespread concern and beliefs about the health consequences of possible exposure to herbicides in Vietnam. In many ways, these concerns foreshadowed the responses of some of our troops to possible exposure to toxic agents in the Persian Gulf.

Herbicides, particularly the dioxin-based one popularly referred to as "Agent Orange," were used extensively in Vietnam. As a result of rumors, media attention, and interpretations of some laboratory findings, herbicides became the fo-

cus of significant postwar concern about health consequences for veterans and Vietnamese who were exposed to significant levels of them. As part of the Vietnam Experience Study, the CDC did an epidemiological study comparing those in the study who claimed exposure to Agent Orange and those who did not. The results are extremely interesting because of the way they illuminate the power of *post hoc* claims about the threat values of an experienced exposure to shape both causal attribution and symptomatic expression. If the Agent Orange paradigm is indeed one of *post hoc ergo propter hoc*, it underlines the power of postwar stressors to create and intensify causes attributed to wartime happenings. Vietnam veterans, as noted above, reported significantly more health problems and physical symptoms than did nonveterans, and the number of problems increased with the veterans' perceived exposure to Agent Orange.

The conclusions drawn by Decoufle et al. (1992, p. 321) are as follows:

We identified self-reported exposure to herbicides in Vietnam as an important predictor of outcome reporting among Vietnam veterans. Men who did not report any herbicide exposure in Vietnam (43% of all Vietnam veterans in the study) had a health profile similar to that of non-Vietnam veterans. Among Vietnam veterans, we observed monotonically increasing trends in reporting of most outcomes as levels of perceived herbicide exposure increased. This pattern was even seen for cancer, although this disease category was not reported differently in the overall comparisons between Vietnam and Vietnam era veterans.

At least three considerations argue against these associations (health outcomes and perceived exposure) being indicative of a causal relationship between herbicides and health status. First, it is unlikely that one class of chemical products, such as herbicides, is causally related to a multitude of heterogeneous health outcomes, such as those examined here. Second, other investigators found no relation between the self-reported herbicide exposure index we used and a biologic marker of actual herbicide exposure among US Army veterans who served in Vietnam at least in respect to the dioxin containing herbicides. . . . Finally, in a subset of study participants who underwent a physical examination, there was no relation between objective signs of four major diseases . . . and our herbicide exposure index.

While this investigation, like others, produced data indicating a relationship between PTSD and the extent of combat exposure, the investigators concluded with respect to this other symptomatic group:

that the strong positive associations that we found between a multitude of reported health outcomes and self-reported herbicide exposure in this group of Vietnam veterans are probably not accounted for exposure to chemical herbicides in Vietnam. Rather, these relations more likely resulted from a combination of psychological stress reactions and conditioning by intense and prolonged media portrayal of herbicides as a health threat that produced

hypochondriasis, somatization, and increased medical care utilization in some Vietnam veterans (Decoufle et al., 1992, p. 321).<sup>33</sup>

Two other theoretical developments during this time period also have pertinence. One was the development of social support theory—viewing social support as a primary mediator or buffer for the effects of stress.<sup>34</sup> Another arena was the study of the role of life events as stressors having the capacity to predispose the individual to both physical illness and psychological problems. This approach, developed in studies of U.S. Navy personnel by Gunderson and Rahe (1974), became a critical mode of examining the cumulative effects of stress and its consequences. A third area that should be considered is the development of interest in the concept of “culture shock” as a significant source of stress and a probable contributor to both psychological and somatic symptoms.

The differentiation of models and the history of the concept of culture shock were cogently dealt with by Gertrude Marlowe in 1996. As she pointed out (p. 111),

The medical model of culture shock singles out the depressed, anxious, angry bewilderment state a person living abroad may experience when any of his accustomed cues to everyday behavior disappear and are replaced by unfamiliar ones.

While Gertrude Marlowe quite correctly pointed out that the nexus of culture shock came in interaction with another culture, a specific variant appears to have been played out in the Persian Gulf. In a number of arenas, the cultural patterns of U.S. forces changed markedly in response to the anticipated cultural sensitivities of the Saudi's. Hypothecated Saudi cultural responses thus defined changes in the previously predictable responses of commanders and organizations. (Personal observation and interviews during Operation Desert Storm.)

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<sup>33</sup>It should be pointed out that one of the major concerns about herbicide exposure in Vietnam—that it led to teratogenesis and other birth defects—an area in which Vietnam veterans reported more adverse health events—could not substantiate the self-reports. The reported summary was that:

Vietnam veterans reported more adverse reproductive and child health outcomes in the telephone interview than did non-Vietnam veterans. However, results of a substudy of birth defects documented on hospital birth records showed that Vietnam veterans were not at increased risk of fathering children with birth defects evident at birth (CDC, 1988c).

<sup>34</sup>Strangely enough, this did not develop directly from pertinent observations of military psychiatry in World War II and Korea, which had been pointing out the role of the primary group in mediating stress for decades. The lack of comingling of military findings with civilian findings remains a puzzle.

## HOMEcomings PATTERN

The final wide-scale nonindividual factor considered by many to be associated with Vietnam veterans' psychological maladaptation was their homecoming. For many Vietnam veterans, the return was a journey filled with many assaults and insults, akin to those of Odysseus. Veterans navigated through a psychological and social landscape filled with the symbolic equivalents of Cyclopes, Circes, Scylla, Charybdis, and a galaxy of angry Gods; all, as in Odysseus' case, dedicated to preventing some Vietnam veterans from being psychologically at peace and at home. For many, unless they chose to join therapeutic groups, it was a journey all too often made alone.

In most other wars in this century, soldiers had returned either with their units or with others who had shared their experiences on comparatively slow forms of transportation, usually ships and trains. They traveled as members of groups that provided social support. Their fellows served as primary mediators helping them deal with stressful events and experiences. Sharing common experiences provided normalcy and legitimacy to their actions and their responses to their experiences. This sharing, combined with the consequences of the culture's and society's approbation or disapprobation of those events, served as a mediator of memory to assign long-term value to those murderous and horrific acts, scenes, and consequences that define war. If the war was agreed upon as serving a higher good—as, for example, in the war against Nazi Germany—the assaultive and insulting aspects of memory should be “mediated” by this transvaluation of events. Thus, victory itself can be such a mediator.

The Vietnam War produced no victory. What were the consequences for the soldier of a war in which success was defined in terms of the body count—rather than the destruction of and victory over the enemy? The consequences of the “strategy” of attrition adopted after Ia Drang (see Moore and Galloway, 1992), in anticipation of achieving victory through a 10 or 11:1 casualty differential, do not appear to provide a long-term legitimating goal. Neither, apparently, did continuing combat after “Vietnamization” (the policy of turning combat responsibility over to the South Vietnamese) was announced. The soldier was also not able to share his experience with others, blocking another way of dealing with the stress of war. The soldier often entered a unit singly, because of rotation, and often withdrew from his affective ties as the date of his return home came into view, when he checked off the days on his personal “short-timers” calendar. As an individual he was put on the “bird” home, usually in the midst of strangers who had not shared his experiences, in aircraft seating that militated against the sharing of experiences. Some 17 or so hours later he arrived in the United States. As the antiwar movement grew in size and aggressiveness, he often had to face hostile demonstrations shortly after return. Finally, when he arrived home he was enmeshed in a world of people who had

not shared any of his experiences. He may have been confronted by antiwar activists whose kindest words at the time were “baby killer.”

Many in the media and a number of vocal segments of American society stigmatized returning soldiers and focused on the disabilities they were “supposed to have.” In the latter phases of the war, the returning veteran was portrayed as a plundering junkie who would unleash an era of crime and violence upon American society such as had never been seen before. He was also characterized, as we have seen, as a seething mass of psychiatric disabilities. Employers were often suspicious of him and fellow students often rejected him and treated him with great hostility. The stress of this kind of homecoming on the vulnerable cannot be overestimated.

The remarkable epilogue to this Odyssey, and a testament to the resiliency of human beings, lies in the fact that the overwhelming majority<sup>35</sup> of Vietnam veterans proceeded with their lives, adapted well, felt that their service had contributed positively to them, and did somewhat better than their nonserving peers. (See, for example, Burkett and Whitley, 1998.) For a minority of returnees, however, the outcome was not positive.

As noted at the beginning of this chapter, the effects of the Vietnam War on its participants might be viewed as paradigmatic for analysis of the psychological effects of war. I certainly have not been able to do them justice comprehensively. However, those effects presented illuminate a number of questions even if there is, as yet, only partial understanding of them. In many senses, the experience of Vietnam taught us to see the veteran as part of a vulnerable population affected by a myriad of environmental stressors that generated various classes of psychological and psychophysiological symptoms. It is reasonable to consider that the responses to the veteran, both sympathetic and unsympathetic, helped to create a continuing environment of stress and apprehension. The psychiatric, etiological, and ideological constructs that a number of physicians and mental health workers brought to the “client” certainly appear to have contributed to this. In a wider sense, the processes that developed for classification, allocation, and attribution of causality and popular cultural expectations and beliefs all contributed to the returned soldiers’ stresses and their effects.

Let us proceed to Operations Desert Shield and Desert Storm in the light of the history and groundwork discussed above. This report will then end with some conceptual and theoretical concerns, reflecting on the past 15 years of re-

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<sup>35</sup>The most commonly cited figure is 85 percent. There are many sources from various surveys. See, for example, the roundup on the web, *Statistics about the Vietnam War* ([www.vhfcn.org/stat.htm](http://www.vhfcn.org/stat.htm)).

search—research that, I believe, pushes us toward new frontiers in the integration of the physical, the psychosocial, and the psychological in relation to critical concepts regarding illness.