

# On being a Gulf veteran: an anthropological perspective

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There is no doubt that Gulf service has affected the well-being of some of the members of the UK armed forces who served in that conflict, yet the reason for this remain unclear. At present, the debate surrounding Gulf War Syndrome (GWS) has become stagnant and highly polarized. This paper argues that a new perspective is needed to further improve our understanding of the problem and suggests that the methods and theories of anthropology, with its focus on nuances and subtleties, can provide new insights. Data were generated from 14 months of ethnographic fieldwork in the UK including participant observation, semi-structured interviews and document analysis. Anthropology provides a unique way of approaching and understanding somatic symptoms and suggests that GWS symptom reporting can be seen as a form of communication. The work focuses on the sufferers' accounts, the symptoms themselves and the context within which we find them in order to better understand what was being expressed and commented upon. Although necessary to contextualize GWS through situating it among other emergent illnesses and widespread health beliefs, this paper shows there is a need to bring back the particular. This work seeks to make sense of the cultural circumstances, specific and general, which gave rise to the illness.

**Keywords:** anthropology; Gulf War Syndrome; somatization

## 1. BACKGROUND

There is no doubt that Gulf service has affected the well-being of some of the members of the UK<sup>1</sup> armed forces who served in that conflict. Research undoubtedly shows that a proportion of individuals who served in the Gulf feel their health to be significantly worse than comparable military personnel (Unwin *et al.* 1999) and that 17% believed they have something specific called 'Gulf War Syndrome' (GWS) (Chalder *et al.* 2001). However, studies have shown that veterans do not have increased rates of mortality, there is not a distinct set of symptoms and no single cause, suggesting that there is no specific syndrome (Ismail *et al.* 1999; The Defence Analytical Services Agency 2004). What is clear, however, is that soldiers who were involved in the Gulf conflict report more symptoms than those who did not serve in the Gulf. Despite the fact that GWS continues to be a contested illness, there is no disputing that many Gulf veterans are ill. Additional perspectives are evidently needed to further understand the illness and the way in which it is understood and lived by its sufferers. Although a great deal of research has been done on the health of Gulf War troops, very little has been based on sufferers' own accounts. It appears that medical and epidemiological studies had gone as far as they could in explaining GWS and an alternative approach is needed to more fully understand the illness.

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## 2. THE GWS DEBATE

Researchers investigating contested illnesses such as GWS will constantly be asked: 'Does it exist?' 'Is it real?' Philosopher Ian Hacking (1995) reported a similar situation when he studied multiple personality disorder (MPD). He pointed out the fallibility of the questions: a real *what?* Of course it was real, Hacking put forth, in that there were people that fit the criteria of MPD. Similarly, the author would suggest, of course GWS was real; but what is it? In his work on the creation of the category of post traumatic stress disorder (PTSD), the medical anthropologist Young (1995, p. 5), said

If, as I am claiming, PTSD is a historical product, does this mean that it is not real?... On the contrary, the reality of PTSD is confirmed empirically by its place in people's lives, by their experiences and convictions and by the personal and collective investments that have been made in it. My job as an ethnographer of PTSD is not to deny its reality, but to explain how it and its traumatic memory have been *made* real, to describe the mechanisms through which these phenomena penetrate people's life worlds, acquire facticity and shape the self-knowledge of patients, clinicians and researchers.

In the same way, the author's work is an attempt not to explain GWS away, but instead to provide an ethnography of the illness and the place it has in the lives of those it affects. When the question of the reality of GWS is posed, it generally comes with certain connotations. Those involved are forced to take sides: either you believe it exists and all that goes with it or you are a non-believer. Either GWS is physical or it is in

the veterans' minds. The world of science and often, correspondingly, the Euro-American worldview assumes a world of black and whites. Yet this artificial system of either A or not-A does not reflect reality, where there are not two extremes but infinite shades of grey in between (Kosko 1994). Generally, the debate surrounding GWS is divided into two main and opposing sides. The first consists of veterans and their advocates, including a small number of scientists and doctors, who understand the illness to be a unique and discrete biomedical entity. Within this standpoint GWS is a physical illness with an underlying organic pathology caused by exposures in the Gulf. On the other side are those who argue that GWS is not unique and is likely to be psychological in nature. Entwined in this perspective are notions of GWS as a form of hysteria or somatization.

The debate that surrounds GWS reflects a continuing bias within biomedicine. Though psychiatry and many other areas of biomedicine are shifting towards a more dynamic, multifaceted and psychosocial model of illness (Bakal 1979), there appears to be continued reliance by GWS sufferers on a restricted biological explanation. Despite a conceptual and empirical union of the psyche and soma, the implicit dualism of biomedicine makes a significant distinction between 'real' disease, with demonstrable physical pathology and 'imaginary' illness, which arises exclusively from patients' cognitive processes (Kirmayer 1988). This distinction is clear to veterans and they understandably focus on uncovering and 'proving' the real status of their pain and suffering. Psychological explanations 'generally convey connotations of problems being at once less serious, less deserving of the conventional sick role, more due to the patients' own bad actions or character flaws and therefore, more directly damaging of their social identity' (Kirmayer 1999, p. 274). The veterans, therefore, are pushed down the path of trying to prove the existence of their physical illness by relying on explanations that point to Gulf exposures.

The situation is one where because of the rigidity of medical classifications, the debate was bound to become stagnant the way it has done. As a result of the mind/body dualism that pervades medicine, any bodily expressions of emotional or social distress have been attributed to the specific psychological mechanism of 'somatization' (Kirmayer & Robbins 1991). Somatization in the field of biomedicine refers to the presentation of bodily complaints assumed to arise from psychological disturbance, but which are attributed by the patient to organic disease (Bass & Murphy 1996, p. 103). It is the propensity to experience and report somatic symptoms that have no pathophysiological explanation, to misattribute them to disease and to seek medical attention for them (Lipowski 1988, pp. 1358–1368). GWS is often described as a somatization condition and a discussion of somatization has dominated the GWS debate, with veterans strongly denying this explanation. Importantly, a diagnosis of somatization is often derogatory in that it implies the patient is not being truthful or, at the very least, is unaware of the real nature of his problems. The diagnosis often accompanies assumptions about the

sufferer not being intellectually sophisticated or that they are unwilling to accept psychological explanations.

Anthropologists have struggled with the notion of somatization; a struggle largely due to the explanatory power the theory holds. As Trimble (1982) has pointed out, the term 'somatization' is often used indiscriminately in patients' notes as if it were an end to the diagnostic process. Its use assumes that everyone, except the patient, understands what the cause of the symptoms is. The word is doubly unfortunate because it not only suggests a unitary aetiology where none exists, but also perpetuates the 'either/or', 'organic versus psychological' dichotomy in medicine (Bass 1990). Somatization is used as though it is an explanation in and of itself and often represents the end of the search for explanation. Furthermore, anthropologists try to avoid the implication that somatization is a psychological process, but this is often difficult. An anthropological account of GWS suggests that concluding the illness is a form of somatization is simply not good enough. Instead, one must go further and investigate the symptoms themselves and the specific composition of the illness: the way in which GWS is an expression of particular beliefs and experiences.

The most contentious debate has focused on the impact of psychological stressors versus various potentially toxic environmental exposures. It has been suggested that GWS is not very different from other illnesses seen among civilians and is similar to the medically unexplained illnesses seen in other post-combat situations (Jones & Wessely 2004, 2005). However, based on ongoing research, the suggestion is not that veterans are not genuinely ill, but that to date no firm evidence has been presented of any known underlying medical cause (Wessely 2001). Nevertheless, this does not mean that sick veterans do not have a 'genuine' illness, but that contrary to non-expert opinion, it is largely a psychiatric and social disorder (Hyams *et al.* 1996; Showalter 1997; Lee *et al.* 2002).

The debate regarding the impact of psychosocial factors versus environmental exposures has tended to be highly simplified and polarized (Hunt *et al.* 1999). Furthermore, the debates, disagreements and misunderstandings are likely to reduce the quality of care afforded to veterans and possibly affect clinical outcomes (Hunt *et al.* 2004) and, thus, it is necessary to move beyond the present state of affairs. Importantly, recent studies have shown that conventional psychiatric disorders do not sufficiently explain the observed ill health (Ismail *et al.* 2002). Such findings suggest that we are in relatively uncharted waters and point to the need to look beyond the narrow confines of both medicine and psychiatry (S. Wessely 2004, private conversation). An anthropological approach can respond to this call for additional inquiries, for looking beyond the parameters of biomedicine and, indeed, questioning the very nature of the boundaries is exactly what such an investigation sets out to do.

We, therefore, are left with a situation where discussions of GWS are divided along two opposing sides where any findings or suggestions put forth by one side are immediately attacked, derided or, more often, ignored by the rival side. An anthropological account of

the illness goes beyond this dichotomy: to show the way in which the debate had become stagnant and unhelpful for all involved. An anthropological approach enables one to go beyond and asks how did we get to this state of affairs, from where did it develop and what is happening in culture and society that helps to form such a situation? It shows how GWS is neither physical nor psychological, but both; but it is also a social, cultural and personal phenomenon. Moving beyond the dichotomy of either physical or psychological, anthropology enables one to inhabit and explore the grey areas that illnesses such as GWS inhabit.

### 3. WHAT IS ANTHROPOLOGY? WHAT IS MEDICAL ANTHROPOLOGY?

Why approach GWS through a lens of anthropology? In order to understand how anthropology can be helpful or indeed, how it is essential to understanding this illness; the paper will briefly discuss anthropology and its methods. Anthropology is the comparative study of human culture, behaviour and biology and how these change through time. It is the study of human culture and humanity. The discipline is generally broken down to three sections: biological (physical) anthropology, archaeology and social (cultural) anthropology. As a social anthropologist (specializing in medical anthropology), the author concerns herself with human societies and culture; but what exactly is culture? Culture, then is a set of guidelines; it is an inherited *lens* through which the members of that society perceive and understand the world. These systems of shared norms, beliefs, customs, values and behaviours act as a kind of template that are transmitted through generations.

Medical anthropology concerns itself with how people in different cultures and social groups explain the causes of ill-health, the types of treatment they believe in and to whom they turn if they get ill (Helman 2000). Central to the approach of medical anthropology is the classic distinction between disease and illness, which was first proposed by the anthropologists Eisenberg (1977) and Kleinman (1980). This distinction is created by dividing up the field of *sickness* into the domain of *disease* (an underlying biological change) and its representation as *illness* (our personal expression and response to disease). Disease refers to 'abnormalities in the structure and/or function of organs, pathological states whether or not they are culturally recognized.' Illness, however, 'refers to a person's perceptions and experiences of socially disvalued states including, but not limited to, disease' (Young 1982, p. 264).

The special contribution that anthropology can make to the study of GWS is that it seeks to contextualize and to investigate what else is happening in the lives of these people besides their malaise. To better understand GWS, such an investigation looks beyond the illness itself and investigates the wider context of sufferers' lives. Importantly, such an approach introduces elements of which sufferers might or might not, be aware. Whereas medical studies of GWS focus on the individual, their body and also the narrow boundaries of their war experience, an anthropological approach widens the frame and looks at other

relevant aspects of a person's life. Features such as social factors, family, Euro-American culture (including health beliefs and anxieties), military culture, military experience and post-war experience are all considered in this more holistic investigation.

### 4. METHODS

Between September 2001 and November 2002, the author became embedded in the GWS community. She interviewed those on both sides of the debate: the veterans and their advocates as well as those who disputed the reality of the condition. The main focus, however, was on the sufferers themselves and what they had to say about their illness. A total of 93 interviews<sup>2</sup> were conducted, 75 of which were with Gulf veterans, the majority of whom believed themselves to be ill with GWS. In addition to formal interviews, constant contact was maintained with informants, allowing for more informal discussions and observations. Casual interactions were extremely important, for anthropology highlights the value of data gathered informally and the differences between what people say, think and do. Other forms of research often fail to 'distinguish between normative statements (what people say should be the case), narrative reconstructions (biographically specific reinterpretation of what has happened in the past) and actual practices (what really happens). Anthropological practice ensures awareness of these distinctions even when interpreting interview data, by 'situating' an interviewee's statements and the circumstances of the interview as far as possible in the broader context of that person's life' (Lambert & McKeivitt 2002, p. 211). So although interviews are important, they are tempered with participant observation. Participant observation is anthropology's most characteristic research strategy, which involves direct observation while participating in the study community. For an anthropologist, it is not about gathering information through interviewing and leaving, instead, the anthropologist stays with those she is studying, takes part in the community and by so doing is able to observe and gain insight.

The research involved following GWS through the various arenas within which it moved and generating a range of information as a result of these various sources of information. In addition to media files and other relevant documentation<sup>3</sup>, this included transcribed interviews with sufferers, family members, advocates, practitioners, scientists and researchers. Observations of interactions among those involved in the arena of GWS were also noted. Clinical encounters<sup>4</sup> and formal meetings were observed while informal discussions with researchers and scientists were used to further explore the biomedical and mainstream discourse surrounding GWS and the way in which this was negotiated by sufferers. Exploring the domains GWS inhabited, the author attended a number of large events such as meetings and conferences where veterans, advocates, scientists and others were in attendance.

### 5. THE IMPORTANCE OF CONTEXT

As an anthropologist, the author describes a system of thought. As the anthropologist and psychiatrist Roland

Littlewood said about MPD, 'whether at this point we read multiple personality as an idiom of distress<sup>5</sup>, as a psychological defence against sexual abuse or as a creative fantasy, whether we grant it some existence as a distinct psycho-physiological entity, socially induced or requiring public acceptance to bring it into the open, its local context and meanings are significant' (1996, p. 22). Similarly, whatever we say or believe about GWS, its context and meanings are significant. It is not the anthropologist's role to decide whether or not something is rational, it is our job to make it intelligible (Firth 1985).

Central to this discussion, however, is the concept of rationality. Anthropologists ask about moral universes, with their basic duty being to 'understand the intentions and objectives of actors within particular social worlds, as well as what these actors say, understand, believe truth and those worlds to be, a task in metaphysical description' (Overing 1985, p. 4): Raymond Firth, the anthropologist, argued that it is the role of the investigator to capture both the sense and the sensibility of behaviour. The anthropologist unfolds the *intelligibility* of behaviour and not so much its 'rationality'. Furthermore, Firth stressed that the cognitive process does not act in isolation.

Rational judgment and rational action are interwoven, some would say inextricably, with elements of impulse and feeling. Firth showed the way in which what at first appears to be irrational behaviour takes on a different face: a blend of reason and affective reaction when placed in context. What does seem significant is whether it is *intelligible*, i.e. capable of being understood by an anthropologist from another cultural setting, but with curiosity to enquire as to meanings (Firth 1985, p. 33). Following Firth, the author contextualizes GWS in order to show how it makes sense. Similarly, the anthropologist and philosopher Ernest Gellner suggested that concepts and beliefs do not exist in isolation, in texts or in individual minds, but in the life of men and societies (Gellner 1974). Context must be known. The real essence of the sociologist Emile Durkheim's doctrine, according to Gellner, was the view that concepts, as opposed to sensations, are only possible in a social context and that they can only be understood when the social context is known. Context refracts the line of interpretation, but 'tolerance-engendering contextual interpretation calls for caution: that as a method it can be rather more wobbly than at first appears.... [T]he prior disposition concerning what kind of interpretation one wishes to find, determines the range of context brought in' (Gellner 1974, p. 32).

#### (a) *GWS and modern health beliefs*

When we contextualize what people say and do, it can make it make sense. GWS is wider than the Gulf War; it could also be viewed as characteristic of the anxieties and beliefs of late twentieth century/twenty-first century Euro-American life (see Durodié 2006). There were other things happening in the lives of these men and women other than the war that they are trying to explain. The way in which illnesses are formed by fitting into the existing illness models must be examined to better understand the condition. GWS

emerged and gained media attention because it both responded to and conformed to existing illness beliefs and anxieties. Simultaneously, it was formed by these pre-existing cultural beliefs. Thus, the author looks at GWS within the context of veterans' lives: within the war, the military and more widely; but she also widens the context out in order to see GWS within the realm of twenty-first century health anxieties and beliefs in the West.

An illness movement 'will take only if there is a larger social setting that will receive it' (Hacking 1995, p. 40). In order for an illness to gain legitimacy it must resonate with a larger cultural framework, which makes it intelligible. Illness representations spread throughout a population: a sort of 'epidemiology of representations,' the circulation and contagion of ideas and anxieties (Sperber 1985). As McGill psychiatrist Laurence Kirmayer suggested, whether an illness representation gets taken up by many people depends on a number of social factors, including, the 'aptness of representations in terms of coexisting cultural representation and practices' (Kirmayer 1999, p. 279). Hacking pointed out that certain disorders result out of the interaction between the individual and his cultural and medical surroundings. The individual may not be representing a mirror of society, but instead the fault lines of the culture (Hacking 1992a). Every culture has its fears and these fears can help to frame and to construct social facts such as illness. GWS has been constructed, framed and articulated by particular themes, which are relevant to the society. Culture allows individuals to appropriate these collective symbols to work with personal conflict; at the same time, culture works through individuals as each person contributes to new collective meanings through their own symbolic constructions (Obeyesekere 1981, 1990). As concepts such as an illness or an illness category like GWS are only possible in a social context and can only be understood when its social context is known, an anthropological account that looks at the wider cultural framework from which GWS emerged is necessary for making sense of the illness. Such an approach investigates the cultural circumstances that gave rise to the illness.

GWS must be understood against the backdrop of increasing anxiety about health that we find in the present Euro-American cultural milieu. Although people are healthier than they ever have been, with fewer risks to their health, they are more likely to feel ill and anxious about their well-being, something which has come to be known as the 'paradox of health' (Barsky 1988). In the Euro-American context, we are more likely to pay attention to benign symptoms and see them as arising from occult causes. People are increasingly bothered by, aware of and disabled by distress and discomforts that in the past were deemed less important and less worthy of medical attention. Because we are more likely to pay attention to and worry about symptoms, we actively seek explanations for them. We live in a society perpetually fearful of toxins, allergens, chemicals and viruses, which we see as constant threats to health mainly via their effect on the immune system. There appears to be a progressive decline in our threshold and tolerance for mild and

self-limited ailments. Society's 'heightened consciousness of health has led to greater self-scrutiny and an amplified awareness of bodily symptoms and feelings of illness' while the widespread 'commercialization of health and the increasing focus on health issues in the media have created a climate of apprehension, insecurity and alarm about disease' (Barsky 1988, p. 414).

Health scares, spurned on by media attention, provide a constant background to twenty-first century Euro-American life. New illnesses 'often assume prominence in the mass communications media and public consciousness before their scientific dimensions have been established' (Barsky & Borus 1995, p. 1932). It would seem that everyday life is saturated with anxiety about the world around us. Every day there is another health scare about which to worry. In the past decade, we have seen this trend increase at an alarming rate. Media reports often exaggerate health hazards and relay factual inaccuracies to the public. Preliminary research findings are touted as breakthroughs and presented without appropriate cautions. This 'medico-media hype, promulgated by media people, advertisers, public relations experts, manufacturers and even some members of the health professions, induces a cultural climate of alarm and hypochondria, undermining feelings of well-being' (Barsky 1988, p. 416).

Associated with this focus on health, we are witnessing an ever-more intimate connection between health, identity and the self. We see the body as the locus of the self and treat it accordingly. Illnesses and the movements that appear around them are entwined with identity. Similar to other new and contested illnesses, GWS has an accompanying social movement. Most sufferers have formed movements around their illness and are 'organized, coordinated and feel a kinship based on their shared illness experience' (Dumit 1997, 2000). Veterans' kinship is based on illness and supercedes traditional comradeship based on battalions and/ or combat experiences. The GWS illness movement helps to construct a GWS narrative and identity and enables the sufferer to become part of community based on shared experience.

Illness provides a way to make sense of life events and allows one to develop an effective and robust identity. GWS has become a lifestyle for many of its sufferers, defining who they are and how they live their lives. Many illnesses become lifestyles, but GWS is so uniquely bounded to identity that an approach such as anthropology that takes into account the wider social elements of illness is necessary. Illness movements provide templates for meta-narratives<sup>6</sup> which enable sufferers to link apparently disparate experiences together into one, sweeping explanation. Beck and others have described the way in which living in modern society requires a reflexive 'do it yourself' approach to one's biography (Beck 1992, p. 135). Dumit has argued that new illness movements, like GWS, provide such 'construction kits of biographical combinations' (Beck 1992, p. 135 in Dumit 2006). Such diagnoses and their accompanying movements give the sufferer the sense that everything is connected and explainable and that someone else is to blame. Constructing a coherent narrative provides explanation, which leaves the sufferer no longer feeling the

victim of the inexplicable and uncontrollable (Garro & Mattingly 2000) and thus gives them the sense that they are gaining control. GWS and its movement create a sense of order out of an experience of chaos and unravelling. It makes the incoherent coherent.

Veterans are trying to make sense of the chaos of their lives. In the present climate, which lacks meta-narrative, people construct them for themselves, often through illness and other social movements. Structuring one's biography around a template of chronic fatigue syndrome (CFS) or GWS provided an inclusive, yet flexible system through which to make meaning out of experiences. A GWS illness narrative supplies a template to restructure identity. It provides a comprehensive model to make sense of all veterans' suffering, personal difficulties and illness. Through the explanation of GWS, all experiences of misfortune and illness are linked together and made intelligible.

Following one of the earliest and most influential medical anthropologists, E. Evans Pritchard, anthropologists look at the way Western science answers the 'how', but not the 'why' question. Interested in cultural responses to misfortune, Evans Pritchard revealed how people seek out explanations that orient their world, but are also moral systems. Such classic anthropological work can help to further understand the experiences of veterans, for Gulf veterans make a claim for causality that is not only or strictly biomedical. They want to dictate what they think is the causality of their individual case. Medicine is strict, but we are faced with the nebulous. There are different meanings in cause; the veterans are creating a grand ontological system. In many ways, the veterans' view of the world is similar to belief systems of other societies where it is normal for truth to be tied to other truths that are social, moral and political in scope (see Gellner 1973). Veterans create chains of causality where everything is linked together and has overall meaning. One veteran explained to the author that he walked with a walking stick because he had a bad leg. He had a bad leg because of a motorcycle accident, but he was disabled because the leg did not heal properly because of GWS. In other cases, veterans would say that they had cancer. But that cancer did not run in their family or they thought it was 'rare' for them to get it and, thus, they had cancer due to the exposures in the Gulf. Others might say that their illness 'was in them' but it was triggered by the Gulf exposures, thus, they would not have actually become ill if they had not been to the Gulf. Veterans fashion out an explanation in a way that makes sense to them and makes sense of their experiences both as an individual and as a group.

#### (b) *GWS and other contested emergent illnesses*

The present milieu of increased anxiety about health and sensitivity to bodily signs has resulted in the emergence of new illnesses, labelled 'medically unexplained' or 'functional somatic syndromes' (Shorter 1992; Wessely *et al.* 1999), whose scientific status and medical basis remain unclear. Many influential researchers (Barsky & Borus 1995; Wessely *et al.* 1999) situate GWS squarely with other 'functional somatic syndromes' and thus place it alongside CFS, total allergy syndrome, multiple chemical sensitivity

(MCS), irritable bowel syndrome, fibromyalgia and sick building syndrome. Investigators point to the considerable overlap in the narratives and the symptoms of these various disorders (Wessely *et al.* 1999). Most often within the medical system, sufferers of these medically unexplained conditions are thought to be somatizing.

There has been a tendency within medical circles to explain MUPS/FSS as one overarching phenomenon. CFS, MCS and GWS, in this perspective, are merely variations of the same thing. While it is necessary to acknowledge that GWS shares many characteristics with other emergent illnesses and this helps to contextualize and make sense of the condition, there is a danger of generalizing. Lumping all of these illnesses together as one phenomenon incorrectly suggests that they are interchangeable and are the expressions of the same experiences. By grouping them together as manifestations of the same process, the way each of these conditions is unique and responds to different issues is ignored. Such an analysis overlooks the differences between these very diverse illnesses and by so doing lacks a real understanding of the conditions themselves and the unique factors which give rise to them. An anthropological inquiry brings the subtleties of each illness to the forefront and explores the uniqueness of the particular condition.

## 6. THE APPROACH OF ANTHROPOLOGY

Whereas biomedical interpretations of somatization often rest on the presumption that it is an expression of psychiatric disturbance, anthropologists have shown that somatization need not be limited to expressions of psychiatric distress; indeed, it may not always represent pathology or even maladaptation. Anthropologists' work on somatization has focused on the way in which it is the predominant expression of mental illness in the non-Western world; but they have also looked at the way it is also common in the West. There are a number of problems with the medical interpretation of GWS and other contested illnesses as a form of somatization. Firstly, it does exactly what veterans and sufferers of similar illnesses are trying to avoid: defining the illness as psychological. It simply does not resonate with their experience and does not enable them to make sense of it.

Illness behaviour in 'somatization may become prolonged and eventually frozen into a long-term sick role in which complaining about bodily symptoms and preoccupation with illness form a central part of one's everyday behaviour and means of dealing with other people, as in chronic pain syndrome' (Kleinman & Kleinman 1985, p. 473). Alternatively, 'chronic somatization sometimes occurs in the absence of any medical or psychiatric disorder as a habitual coping style or idiom of distress' (Kleinman & Kleinman 1985, p. 473). Altered social relationships and economic benefits are the 'social gains' that reinforce psychobiological processes and maintain illness behaviour in the ways described.

The process of medicalization, when a sufferer seeks to become a patient, may also constitute a means of coping with suffering through the construction of

a narrative to make sense out of chaotic life events which threaten one's sense of self integrity (Cassel 1982).

We all express ourselves through our bodies and somatic symptoms and this need not be limited to the expression of suffering, but can also be a way to comment upon social or individual dilemmas or merely to convey experience. Somatic symptoms are the most common individual expression of social problems and emotional distress (Kirmayer & Young 1988) and are referred to as 'idioms of distress' (Nichter 1981; Kirmayer 1996). Idioms of distress are culturally understood ways of communicating; they are commonly experienced symptoms or problems that are recognized within the culture as indicating personal or social difficulties (Nichter 1981). In this way, somatization is understood as the expression of distress through physical symptoms (Kirmayer & Young 1988), but this is a form of communication that need not be related to psychological disturbance. Symptoms are used to talk about and negotiate matters other than bodily illness (Kirmayer 1996).

This idiomatic use of symptoms 'allows people to draw attention to—and metaphorically comment on—the nature of their quandary' (Kirmayer 1996, p. 3). The term 'somatization', turns the 'ambiguity and uncertainty of medically unexplained symptoms into the presumptive clarity of a distinct form of psychopathology' (Kirmayer 1999, p. 272). Kirmayer suggests that any 'serious analysis of the problem should probably begin by reversing this rhetorical move and turning 'somatization' back into its 'raw observable': medically unexplained symptoms' (1999, p. 272). When reduced simply to symptoms of a disorder the meaningful and social dimension of distress may be lost (Kirmayer 1999).

This anthropological investigation into GWS, then, focuses on the sufferers' accounts, the symptoms themselves and the context within which we find them in order to better understand what was being expressed and commented upon. It focuses on the 'raw observable', the symptoms themselves, to better understand the meaning they may be conveying. An anthropological approach draws attention to the more collective aspect of symptom and symptom language. Central to this is the way in which anthropologists may look at and interpret individual symptom reporting differently than other researchers. Illness symptoms are not only 'biological entities', but can also be conceptualized as 'coded metaphors that speak to the contradictory aspects of social life, expressing feelings, sentiments and ideas that must otherwise be kept hidden' (Scheper-Hughes & Lock 1986, pp. 138–139). Somatic symptoms have been variously described as 'communicative acts' (Kirmayer 1984) and 'coded messages' (Racy 1980), whereby the individual, having troubles in various areas of life, conveys these in bodily terms. That is to say, physical symptoms can be seen as part of a process of making meaning out of experience. The body is a site of angst and resistance. GWS can be interpreted as the expression of a collective social angst and is a kind of shared bodily language, an expression of social distress as well as a form of commentary. It is both personal and social.

Sociologists and medical anthropologists have focused on the way in which metaphor informs illness through its relationship with physical experience (Lakoff & Johnson 1980) and the way in which certain metaphors become prevalent tropes for illness (Sontag 1978; Hacking 1992b; Littlewood 1998). Sontag (1978) suggested that metaphor infuses certain illnesses with such meaning that they become a symbol of their time. Her work emerged from her experiences as a cancer patient and pointed out the excess of meaning invested in cancer. Metaphors enable a linking together of apparently disparate spheres, making abstract connections seem concrete. Military, literary and political domains are associated with one another through the language of cancer, for example, investing layer upon layer of meaning, which we find difficult to entangle. Our language and our very ideas about illness become so entwined with these metaphors that we no longer consciously are aware of the meanings they convey. This will, however, impact on the way we experience our bodies and our illness. Think, for a minute, about a cancer sufferer who is told that a battle is raging inside her, she must imagine her white cells fighting the disease cells: what will that mean for how she views her body, *herself* and her illness? Or think about the way we, in the West, commonly describe depression in terms of directional orientation: a depressed person is 'down', they feel 'low' and think about how that becomes completely entwined with how one experiences depression. We must also remember how complex one's experience of one's body is. There is no 'sharp distinction between metaphors, attributions and sensations; even a conventional metaphor or attribution may shape perception so that the corresponding symptom is actually felt' (Kirmayer 1996, p. 4).

Although Sontag felt that metaphor should be stripped away, the author would maintain that one cannot easily strip away metaphorical thinking, for no one ever 'experiences cancer as the uncontrolled proliferation of abnormal cells. Indeed, we can experience anything at all only through and by means of culturally constructed socially reproduced structures of metaphor and meaning' (DiGiacomo 1992, p. 117). As we can only experience and understand illness through these culturally constructed structures, it is pertinent that we investigate them to fully understand a condition such as GWS. It is only through analysing the use of metaphor in GWS narratives that a full understanding of the illness and how it is experienced by its sufferers can be reached. Thus, the author asks what are the metaphors that inform the language and experience of GWS? What are the metaphors that have become embedded in the stories and accounts of the illness? Sontag warns against disease being translated into metaphor and anthropologists warn against the opposite: the translation of metaphors of experience to be reified into biomedical entities (Scheper-Hughes & Lock 1987).

The 'individual body should be seen as the most immediate, the proximate terrain where social truths and social contradictions are played out, as well as a locus of personal and social resistance, creativity and struggle' (Scheper-Hughes & Lock 1987, p. 31). Anthropologists have argued that physical bodies are

shaped by culture, partly by means of widely held models, images and metaphors. Metaphor not only arises out of embodied experience but, conversely, becomes embodied and thus, we should investigate 'the psychophysiology of metaphor' (Kirmayer 1992, p. 336). In a discussion which ties together immune systems, health, psychology and culture, researchers have suggested that cultural dissonance may be enacted somatically (see Wilce 2003). When the 'individual is continuously checking his or her own cultural consonance and finds it wanting, it is likely to be a frustrating and depressing circumstance. This is a process that is also expressed somatically' (Dressler *et al.* 1998, p. 440; Wilce & Price 2003).

The relationship between metaphor and illness is fluid and travels in both directions. Metaphor informs illness and certain metaphors become dominant tropes for illness. But illnesses are also metaphors of experience. Metaphor can be appropriated to draw attention to and comment upon a dilemma, becoming a social and political critique (Kirmayer 1992; Scheper-Hughes & Lock 1987; Lock & Scheper-Hughes 1996). Any culture allows individuals to appropriate collective symbols to work with personal conflict (Obeyesekere 1981, 1990). We can interpret GWS symptom reporting as a vehicle to draw attention to and a means to communicate concerns of the people it affects; issues such as trust, life within a dramatically changing military, gender roles and toxicity. GWS can be interpreted as an expression, both social and personal, of the experiences of those it affects and of contemporary issues.

**(a) GWS as unique: focusing on particular symptoms, the example of burning semen syndrome and low libido**

Although contextualizing GWS must take into account its relationship with other contested illnesses and more general health beliefs, it is also a unique illness with distinctive characteristics. It is in this area that anthropology has the most striking contribution to understanding GWS, for anthropology enables the investigator to explore the subtleties and nuances that make the illness unique. In the medical model GWS may not be unique, so it is impossible for these relevant issues to be brought to light.

Unique issues, such as the themes of contagion, sex and sexuality arise clearly from veterans' narratives. When interviewing Gulf veterans, the author was struck by how often they spoke about: low libido, infertility, birth defects and issues pertaining to contagion. Veterans often suggested that they feared they had passed on symptoms or illnesses to their partners and children. Burning semen syndrome (BSS) is often described as one of the oddest and rarest conditions associated with GWS<sup>7</sup>, yet many informants described it as a central feature of the illness. Only one informant directly listed BSS as a symptom, but almost all spoke about the condition and referred to it as a salient characteristic of GWS. One must ask why it is that some symptoms take on such meaning and become a central feature even if the majority did not experience them. Again, an anthropological inquiry is helpful in the way in which it can interpret somatic symptoms.

Whereas for other disciplines, the 'reality' of the symptoms is key, for an anthropological interpretation, the most important issue is the fact that people talk about them. Of central importance is what symptom reporting is conveying, rather than focusing on uncovering the objective truth of them. BSS, impotence and infertility, have all become entwined with GWS narratives and become powerful markers of it and, thus, are clearly communicating something meaningful, yet these symptoms are unlikely to be picked up by epidemiological and medical inquiry.

By focusing on these particularly emphasized symptoms and investigating their meaning led the author to interpret these findings by suggesting that GWS narratives express concerns about masculinity or more precisely a loss of masculinity. The investigation led the author to look at the role of masculinity in the military and the way this regimented notion of masculinity was under threat at the time GWS emerged. Again, we see how issues wider than the war are linked to the illness. In this case, the culture of the military and the changes soldiers were experiencing as the military was transforming are central to the illness. This form of symptom reporting and emphasizing certain symptoms is also linked with veterans moving from a military environment to life within civilian society.

Stories about GWS continue to circulate because they have cultural meaning more widely. People 'do not speak with the truth, with a concept of the accurate description... to say what they mean, but they construct and repeat stories that carry the values and meanings that most forcibly get their points across. People do not always speak from experience—even when that is considered the most accurate kind of information, but speak with stories that circulate to explain what happened' (White 2000, p. 30). The way in which GWS is talked about and portrayed is similar to the alarmist health stories one so often sees. The issues contained in GWS are so important that they are spoken about in a variety of ways across a variety of sites. GWS is about much more than itself: people talk about it and are concerned with it. The stories of GWS continue to circulate: it is a potent package that allows people to talk about the matters that are important to them and helps them to make sense of their experience.

## 7. CONCLUSIONS

Science treats 'the grey or fuzzy facts as if they were the black-white facts of math' (Kosko 1994, p. XV) and in our language, science, maths, logic, culture we have assumed a world of black and whites. As Bertrand Russell said, everything is vague to a degree you do not realize until you have tried to make it precise (p. 1972 in Kosko 1994). An anthropological approach is an attempt to move away from traditional thinking which forces illnesses into the either/or category. There is a need to see illnesses not as either psychiatric or physical, but to complicate and contextualize by introducing the social and the cultural forces, which help to produce such illnesses. By showing illness in context we are able to see that GWS and other contested illnesses cannot be fully understood by

explaining them as a form of somatizing: of expressing psychological distress by way of physical symptoms. Nor is it helpful to suggest that they are the result of purely biological processes. Instead, we should see illnesses as a way to express and talk about issues relevant to those it affects. Illness and talking about illness are a means to work out and make sense of life's conundrums.

An anthropological reading of GWS looks at the way in which it is wider than issues contained in the Gulf War. Somatizing metaphors are often the way that distress is expressed and somatic symptoms can be seen as a form of communication. Veterans are expressing very real distress and they are doing so through their bodies. Their symptoms are a kind of language. For, 'sickness is not just an isolated event, not an unfortunate brush with nature. It is a form of communication through which nature, society and culture speak spontaneously.' (Scheper-Hughes & Lock 1987, p. 31). The accounts of sufferers and those around them can be investigated to unravel the way that the illness was both a unique expression and way of making sense of the experiences of a particular group of people as well as a product of wider social issues. GWS is reflective of the culture in which it is found: both that of military culture and the wider culture of twenty-first century Britain. As a mechanism to make sense of life events and misfortunes of a specific group, this illness, however, is unique. It responds to and expresses issues of contagion and loss of masculinity which dominated these men's and women's experiences. Issues of confidence in authority, gender roles, blurred boundaries, notions of trust and the ideas of conspiracy are significant themes emerging from GWS narratives, fed by veterans' experiences of a changing military and of the war itself. By studying GWS and the lives of those it affects, social concerns and anxieties are illuminated.

Anthropology reveals the delicate balance that must be met to fully understand this illness: the need to see GWS as part of larger phenomenon must be tempered with an understanding of it as a unique illness expression. An anthropological account of GWS is a response to the attempt to explain the illness through generalizing. Although necessary to contextualize GWS through situating among its sister illnesses, this is not the end of the process of explanation. Instead, more is needed. There is a need to bring back the specific. If we take GWS as a real illness and take the individual suffering of the veterans as real, then the particular must be examined. An anthropological approach is necessary to the study of this illness because it enables one to explore the nuances and subtleties, which are so central to the illness: it is these complexities that make the illness unique. The illness may not be specific in the medical discourse, but for the anthropologist (and the sufferer) the particulars are central.

Part of veterans' suffering arises out of the way they have chosen or been forced to think of, experience and frame their illness. The focus on the physical cause and physical nature of their disorder is likely to contribute to their frustration. Part of this is the result of the way the GWS debate has been divided between those that think it is real and physical and those that think it is psychological. An anthropological approach reveals we



all, veterans included, must think beyond such mind/body dualism in order for any real progress to be made.

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## 8. ENDNOTES

<sup>1</sup>Although this paper focuses on the case of UK Gulf veterans, the author also conducted fieldwork in Canada and believes that they similarities can be drawn between the UK, Canadian and US case and, thus, literature is used from all three countries.

<sup>2</sup>The majority of interviews lasted 3–4 h and were conducted in the home of the veteran. At times this was not possible, so interviews took place in a café, pub or restaurant. Questions remained broad to give interviewees space to talk about the issues they felt were the most important to them. In the case of advocates/scientists, interviews were normally conducted in their place of work. All of the interviews were tape-recorded and transcribed, by the author, at a later date.

<sup>3</sup>Other documents that were used included: doctors' notes given by the sufferer, symptom lists written by the sufferer, correspondence to and from the sufferer to doctors, pensions representatives, MPs, the MoD and other relevant institutions.

<sup>4</sup>The author observed 18 medical assessments at the Gulf Veterans' Medical Assessment Programme, St Thomas' Hospital, London.

<sup>5</sup>The notion 'idioms of distress' will be explained in depth below. It is a notion first highlighted by the anthropologist Michael Nichter in 1981. They are the cultural sanctioned ways that individuals in a society or group of people have to experience, convey and manage feelings of difficulty.

<sup>6</sup>A 'grand theory,' a narrative about narratives. A meta narrative is a story we tell about ourselves, what we do and what is expected; it is a story that links our smaller stories together and gives us unity, social, psychological and intellectual. An overarching story which provides the frame of reference for all other stories.

<sup>7</sup>Burning semen syndrome has been dismissed by the medical community as a symptom of GWS. Studies have shown that this is an example of symptom reporting not reflecting biomedical reality. Indeed, this is just the sort of difference between anthropological inquiries and medical inquiries. The US Department of Defence, however, funded an expensive study looking into the immunology of burning semen syndrome, on the hypothesis that it is a quasi allergic phenomenon in which women have become immunologically sensitized to their husband's semen.

## REFERENCES

- Bakal, D. A. 1979 *Psychology and medicine: psychobiological dimensions of health and illness*. London, UK: Tavistock Publications.
- Barsky, A. 1988 The paradox of health. *N. Engl. J. Med.* **18**, 414–418.
- Barsky, A. & Borus, J. 1995 Somatization and medicalization in the era of managed care. *J. Am. Med. Assoc.* **274**, 1931–1934. (doi:10.1001/jama.274.24.1931)
- Bass, C. 1990 Introduction. In *Somatization: physical symptoms and psychological illness* (ed. C. Bass). Oxford, UK: Blackwell Scientific Publication.
- Bass, C. & Murphy, M. 1996 Somatisation, somatoform disorders and factitious illness. In *Seminars in liaison psychiatry* (ed. E. Guthrie & F. Creed), pp. 103–156. London, UK: Royal College of Psychiatrists.
- Beck, U. 1992 *Risk society*. London: Sage.
- Cassel, E. 1982 The nature of suffering and the goals of medicine. *N. Engl. J. Med.* **306**, 639–645.
- Chalder, T., Hull, L., Unwin, C., David, A., Hotopf, M. & Wessely, S. 2001 Prevalence of Gulf War veterans who think they have Gulf War syndrome. *Br. Med. J.* **323**, 473–476.
- Defence Analytical Services Agency, Ministry of Defence 2004 '1990/1991 Gulf conflict—UK Gulf veterans mortality data'. 15 January. <http://www.dasa.mod.uk/natstats/gulf/intro.html>.
- DiGiacomo, S. 1992 Metaphor as illness: postmodern dilemmas in the representation of body, mind and disorder. *Med. Anthropol.* **14**, 109–137.
- Dressler, W., Balieriro, M. & Dos Santos, J. 1998 Culture, socio-economic status, and physical and mental health in Brazil. *Med. Anthropol. Q.* **12**, 424–446.
- Dumit, J. 1997 When explanations rest: "Good enough" brain science and the new biomedical disorder. [http://www.gmu.edu/departments/krasnow/abstracts\\_frames/abs97/dumi9702.html](http://www.gmu.edu/departments/krasnow/abstracts_frames/abs97/dumi9702.html) (accessed 14/02/2006).
- Dumit, J. 2000 When explanations rest: 'good-enough' brain science and the new sociomedical disorders. In *Living and working with the new biomedical technologies: intersections of inquiry* (ed. M. Lock, A. Young & A. Cambrosio), pp. 209–232. Cambridge University Press.
- Dumit, J. 2006 Illnesses you have to fight to get: facts and forces in uncertain, emergent illnesses. *Soc. Sci. Med.* **62**, 577–590.
- Durodié, B. 2006 Risk and the social construction of 'Gulf War syndrome'. *Phil. Trans. R. Soc. B* **361**. (doi:10.1098/rstb.2006.1827)
- Eisenberg, L. 1977 Disease and illness: distinctions between professional and popular ideas of sickness. *Cult. Med. Psychiatry* **1**, 9–23. (doi:10.1007/BF00114808)
- Firth, R. 1985 Degrees of intelligibility. In *Reason and morality* (ed. J. Overing), pp. 29–46. London, UK: Tavistock Publications.
- Garro, L. & Mattingly, C. 2000 Narrative as construct and construction. In *Narrative and the cultural construction of illness and healing* (ed. C. Mattingly & L. Garro), pp. 1–49. Berkeley, CA: University of California Press.
- Gellner, E. 1973 The savage and the modern mind. In *Modes of thought* (ed. R. Horton & R. Finnegan). London, UK: Faber & Faber.
- Gellner, E. 1974 Concepts and society. In *Rationality: key concepts in the social sciences* (ed. B. Wilson), pp. 18–49. Oxford, UK: Basil Blackwell. [1962]
- Hacking, I. 1992a *Severals (Review of Braude 1991)*. London review of books, pp. 21–22. London: LRB Ltd.
- Hacking, I. 1992b Multiple personality disorder and its hosts. *Hist. Hum. Sci.* **5**, 3–31.
- Hacking, I. 1995 *Rewriting the soul: multiple personality and the science of memory*. Princeton, NJ: Princeton University Press.
- Helman, C. 2000 *Culture, health and illness*, 4th edn. London, UK: Hodder Arnold.
- Hunt, S. C., Richardson, R. C. & McFall, M. 1999 RE: the Gulf War syndrome controversy. *Am. J. Epidemiol.* **150**, 216–217. [letter; comment.]
- Hunt, S. C., Richardson, R. C., Engel, C., Atkins, D. & McFall, M. 2004 Gulf War veterans' illnesses: a pilot study of the relationship of illness beliefs to symptom severity and functional health status. *J. Occup. Environ. Med.* **46**, 818–827.
- Hyams, K. C., Wignall, F. S. & Roswell, R. 1996 War Syndromes and their evaluation: from the U.S. Civil War to the Persian Gulf War. *Ann. Intern. Med.* **125**, 398–405.
- Ismail, K., Everitt, B., Blatchley, N., Hull, L., Unwin, C., David, A. & Wessely, S. 1999 Is there a Gulf War syndrome? *Lancet* **353**, 179–182. (doi:10.1016/S0140-6736(98)11339-9)
- Ismail, K. et al. 2002 The mental health of UK Gulf War veterans: phase 2 of two phase cohort study. *Br. Med. J.* **325**, 576.

- Jones, E. & Wessely, S. 2004 Hearts, guts and minds: somatisation in the military from 1900. *J. Psychosom. Res.* **56**, 1–5. (doi:10.1016/S0022-3999(03)00626-3)
- Jones, E. & Wessely, S. 2005 War Syndromes: the impact of culture on medically unexplained symptoms. *Med. Hist.* **49**, 55–75.
- Kirmayer, L. 1984 Culture, affect and somatization. *Transcult. Psychiatry Res.* **21**, 159–188.
- Kirmayer, L. 1988 Mind and body as metaphors: hidden values in biomedicine. In *Biomedicine examined* (ed. M. Lock & D. Gordon). Dordrecht: Kluwer.
- Kirmayer, L. 1992 The body's insistence on meaning: metaphor as presentation and representation in illness experience. *Med. Anthropol. Q.* **6**, 323–346. (doi:10.1525/maq.1992.6.4.02a00020)
- Kirmayer, L. 1996 Confusion of the senses: implications of cultural variations in somatoform and dissociative disorders for PTSD. In *Ethnocultural aspects of post-traumatic stress disorders* (ed. A. Marsella, M. Friedman, E. Garrity & R. Scurfield). Washington, DC: American Psychological Press.
- Kirmayer, L. 1999 Rhetorics of the body: medically unexplained symptoms in sociocultural perspective. In *Somatoform disorders: a worldwide perspective* (ed. Y. Ono, A. Janca, M. Asai & N. Sartorius) *Keio University Symp. for Life Science and Medicine*, vol. 3. Tokyo, Japan: Springer.
- Kirmayer, L. & Robbins, J. M. 1991 *Current concepts of somatization: research and clinical perspectives*. Washington, DC: American Psychiatric Press.
- Kirmayer, L. & Young, A. 1988 Culture and somatization: clinical, epidemiological and ethnographic perspectives. *Psychosom. Med.* **60**, 420–430.
- Kleinman, A. 1980 *Patients and healers in the context of culture*. Berkeley, CA: University of California Press.
- Kleinman, A. & Kleinman, J. 1985 Somatization: the interconnections in Chinese society among culture, depressive experiences and the meanings of pain. In *Culture and depression: studies in the anthropology and cross-cultural psychiatry of affect and disorder* (ed. A. Kleinman & B. Good). Berkeley, CA: University of California Press.
- Kosko, B. 1994 *Fuzzy thinking: the new science of fuzzy logic*. London, UK: Harper Collins.
- Lakoff, G. & Johnson, M. 1980 *Metaphors we live by*. Chicago, IL: University of Chicago Press.
- Lambert, H. & McKeivitt, C. 2002 Anthropology in health research: from qualitative methods to multidisciplinary. *BMJ* **325**, 210–213. (doi:10.1136/bmj.325.7357.210)
- Lee, H., Gabriel, R., Boulton, J. P., Bale, A. & Jackson, M. 2002 Health status and clinical diagnoses of 3000 Gulf War veterans. *J. R. Soc. Med.* **95**, 491–497. (doi:10.1258/jrsm.95.10.491)
- Lipowski, Z. 1988 Somatization: the concept and its clinical application. *Am. J. Psychiatry* **145**, 1358–1368.
- Littlewood, R. 1998 *The butterfly and the serpent: essays in psychiatry, race and religion*. London, UK: Free Association.
- Lock, M. & Scheper-Hughes, N. 1996 A critical-interpretive approach in medical anthropology: rituals and routines of discipline and dissent. In *Handbook of medical anthropology: contemporary theory and method. Revised edition* (ed. C. F. Sargent & T. M. Johnson), pp. 41–70. Westport, CT: Greenwood Press.
- Nichter, M. 1981 Idioms of distress: alternatives in the expression of psychosocial distress, a South Indian case study. *Cult. Med. Psychiatry* **1**, 9–23.
- Obeyesekere, G. 1981 *Medusa's hair: an essay on personal symbols and religious experience*. Chicago, IL: University of Chicago Press.
- Obeyesekere, G. 1990 *The work of culture: symbolic transformation in psychoanalysis and anthropology*. Chicago, IL and London, UK: University of Chicago Press.
- Overing, J. 1985 Introduction. In *Reason and morality* (ed. J. Overing), pp. 1–28. London, UK: Tavistock Publications.
- Racy, J. 1980 Somatization in Saudi women: a therapeutic challenge. *Br. J. Psychiatry* **137**, 212–216.
- Scheper-Hughes, N. & Lock, M. 1986 Speaking “truth” to illness: metaphors, reification, and a pedagogy for patients. *Med. Anthropol. Q.* **17**, 137–140.
- Scheper-Hughes, N. & Lock, M. 1987 The mindful body: a prolegomenon to future work in medical anthropology. *Med. Anthropol. Q.* **1**, 6–41. (doi:10.1525/maq.1987.1.1.02a00020)
- Shorter, E. 1992 *From paralysis to fatigue: a history of psychosomatic illness in the modern era*. New York: The Free Press.
- Showalter, E. 1997 *Hystories: hysterical epidemics and modern culture*. New York, NY: Columbia University Press.
- Sontag, S. 1978 *Illness as metaphor*. New York: Doubleday.
- Sperber, D. 1985 Anthropology and psychology: towards an epidemiology of representations. *Man* **20**, 73–89.
- Trimble, M. 1982 Functional diseases. *Br. Med. J.* **ii**, 1786–1790.
- Unwin, C. *et al.* 1999 Health of UK servicemen who served in the Persian Gulf War. *Lancet* **353**, 169–178. (doi:10.1016/S0140-6736(98)11338-7)
- Wessely, S. 2001 Ten years on: what do we know about the Gulf War syndrome? *Clin. Med. (JRCPL)* **1**, 28–37.
- Wessely, S., Nimaun, C. & Sharpe, M. 1999 Functional somatic syndromes: one or many? *Lancet* **354**, 936–939. (doi:10.1016/S0140-6736(98)08320-2)
- White, L. 2000 *Speaking with vampires: rumor and history in Colonial Africa*. Berkeley, CA: University of California Press.
- Wilce, J. (ed.) 2003 *Social and cultural lives of immune systems*. London, UK and New York, NY: Routledge.
- Wilce, J. & Price, L. 2003 Metaphors our bodyminds live by. In *Social and cultural lives of immune systems* (ed. J. Wilce), pp. 51–80. London, UK and New York, NY: Routledge.
- Young, A. 1982 The anthropology of illness and sickness. *Annu. Rev. Anthropol.* **11**, 257–285. (doi:10.1146/annurev.an.11.100182.001353)
- Young, A. 1995 *The harmony of illusions: inventing post-traumatic disorder*. Princeton, NJ: Princeton University Press.