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Risk and the social construction of 'Gulf War Syndrome'

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Fifteen years since the events that are held by some to have caused it, Gulf War Syndrome continues to exercise the mind and energies of numerous researchers across the world, as well as those who purport to be its victims and their advocates in the media, law and politics.

But it may be that the search for a scientific or medical solution to this issue was misguided in the first place, for Gulf War Syndrome, if there is such an entity, appears to have much in common with other 'illnesses of modernity', whose roots are more socially and culturally driven than what doctors would conventionally consider to be diseases.

The reasons for this are complex, but derive from our contemporary proclivity to understand humanity as being frail and vulnerable in an age marked by an exaggerated perception of risk and a growing use of the 'politics of fear'. It is the breakdown of social solidarities across the twentieth century that has facilitated this process.

Unfortunately, as this paper explores, our inability to understand the social origins of self-hood and illness, combined with a growing cynicism towards all sources of authority, whether political, scientific, medical or corporate, has produced a powerful demand for blame and retribution deriving from a resolute few who continue to oppose all of the evidence raised against them.

Sadly, this analysis suggests that Gulf War Syndrome is likely to prove only one of numerous such instances that are likely to emerge over the coming years.

Keywords: Gulf; war; syndrome; illness; health; risk

1. PREAMBLE

> We are on average as resilient as the culture we live in expects us to be.
>
> (Summerfield 2006)

Illness is a private experience. But, although we perceive it subjectively, as individuals, we have come to conceive of it as often having an objective, or real, basis. So, while the experience of being ill is unique and intensely personal, we also understand some illnesses to have certain common or more general characteristics.

Our appreciation, both as individuals and as a society, of the linkages and interactions between these internal factors and their external influences is imperfect. Hence, the identification and treatment of illness, as well as how we address and organize these processes, depend on the state of the society we happen to find ourselves in.

All of these contributory elements are historically contingent and, in some instances, politically contested. And, it is not just the connection of effects with causes, or the definition and remediation of illness that are culturally determined. So too are the assessment and recognition of what is normal—and even of what is an individual.

How we expect people to behave varies according to cultural values and social settings. For instance, when someone hopes or is determined to get well, when they trust those who look after them or have confidence in their knowledge and expertise, then the experience of illness is different to when these conditions do not apply.

This means that illness is also a social phenomenon and—like an individual—a product of its time. If we do not grasp the mood and dynamic of those times accurately, then we are unlikely to understand either the patient or the problem. It is this tension that lies at the heart of the debate surrounding Gulf War Syndrome.

2. BACKGROUND

After the Iraqi invasion of Kuwait in August 1990, approximately 700 000 US troops and 50 000 British troops, along with smaller detachments from other Western allies, were deployed to the Persian Gulf over the period spanning September 1990 to June 1991. This consisted of a five-month build-up culminating in a 39-day air war followed by a 4-day ground war in February 1991 (Hyams *et al.* 1996).

The Iraqi death toll was estimated at around 180 000, brought about by everything from hi-tech 'smart' bombs to low-tech bulldozers used to bury Iraqi conscripts alive in the desert. By contrast, far fewer casualties than expected occurred among Coalition forces—467 were injured among US units, although as

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many as 40 000 had been predicted (Straus 1999)—and morbidity rates were low compared to those in previous conflicts (Writer *et al.* 1996)—around 150, many of which resulted from 'friendly fire' and other mishaps.

Despite the relatively light toll of casualties however, in the years following their return from the Gulf War, troops from America, Canada and Britain have complained of a wide range of symptoms, which many have attributed to their experience in Kuwait and Iraq. Notably, similar symptoms were not reported by French, Saudi, Egyptian, Syrian or Moroccan troops, nor by native Kuwaitis (Hyams 2005). Nobody seems to have enquired about any such complaints among surviving Iraqi soldiers.

The range of symptoms presented by Gulf War veterans is vast. The most common are chronic fatigue, joint and muscle pains, defects of memory and concentration, anxiety and depression, insomnia, skin rashes, chest pain and breathing problems. Others include sensory symptoms, loss of balance, diarrhoea and other gastrointestinal complaints, bladder dysfunction, sweating disorders, burning semen sensation, acute allergies and accelerated tooth decay. Some have claimed that genetic abnormalities in the children of veterans are a delayed consequence of the war.

Undoubtedly, some Gulf War veterans have become ill, but incidence of disease—with the disputed exception of motor neuron disease among US veterans—matches that afflicting ordinary individuals over time—and often at a lower rate. It is only the reporting of symptoms that was markedly higher among Gulf War veterans—roughly somewhat over twice as likely—than among equivalent military cohorts.

Unfortunately, as it is both relatively easy and quite common to confuse the symptoms of illness for a disease, this has led many to assume—or be encouraged to assume—a putative cause for their condition. It is this that has been labelled Gulf War Syndrome by some. However, almost every scientific, epidemiological and medical study conducted since has found no evidence of an all-encompassing or unique syndrome.

Nevertheless, a large number of possible causes have been put forward as potential agents for such a syndrome at various times. These are as diverse as the symptoms and ailments they seek to explain. They include exposure to depleted uranium, chemical and biological weapons, organophosphate pesticides and insect repellents, multiple immunizations, indigenous infectious diseases, nerve gas prophylaxis, toxic fumes from burning oil wells and even the wearing of protective clothing.

While some have sought to blame the psychological stress of war, others have pointed out that the campaign was a short and successful one and interviews have failed to confirm any excessive pressures. In any case, proponents of Gulf War Syndrome generally prefer some notion of toxic exposure—which appears in their minds to confer greater medical legitimacy—as opposed to psychological explanations.

What is clear is that the resulting debate and confusion has helped to poison relations between military personnel and their political leaders, as well as exacerbating a sense of mistrust and frustration with the health care system and the judiciary. Authoritative dismissals of specific illnesses are unlikely to curtail a wave of claims from purported victims and their legal advocates for—as one commentator noted early on—'Gulf War Syndrome has shifted from medicine to politics' (Greenberg 1996).

3. CHRONOLOGY

Anecdotal reports of disorders affecting US troops who fought in the Gulf first surfaced in the months after the end of the conflict, as veterans began to approach Veterans Affairs (VA) offices about health issues. US authorities expected these to focus on air pollution in Kuwait, although by November 1991 attention shifted to the incidence of leishmaniasis, a disease caused by parasites sometimes carried by sandflies. This led to a ban on blood donations by US servicemen who had served during Desert Shield/Storm—a decision revoked in January 1993 once the number of cases detected had been found to be low (Ministry of Defence 1997).

In January 1992, unexplained chronic illnesses were reported among Gulf War veterans from an army reserve unit in Indiana, USA (DeFraites *et al.* 1992). The idea now emerged that US Gulf War veterans might be suffering from unusual or unexpected health problems. By September 1992, the House of Representatives VA Committee was taking testimony on vaccination issues, while the VA Persian Gulf War Veterans Registry dates from November 1992. The Department of Defense Comprehensive Clinical Evaluation Program was not established until June 1994.

By the beginning of 1993, however, there was still little widespread interest on these matters in the UK. According to the then Ministry of Defence Surgeon General, Peter Beale, 'when troops returned to the UK the daily sickness rate did not increase'. It was only some 18–24 months later that his services 'became aware of a campaign by lawyers to recognise a specific Gulf illness' (Beale 1997).

In January 1993, a US Gulf War veteran wrote to the Queen describing his illness and asking if UK Gulf War veterans were also sick. The Ministry of Defence were asked to reply and indicated that no British Armed Forces personnel suffered from the symptoms described. A similar letter from another US Gulf War veteran addressed directly to the Ministry of Defence was answered in the same way in March 1993.

Then, on 7 June 1993, an item broadcast on the BBC television programme *Newsnight* highlighted the health concerns of US Gulf War veterans (Unwin *et al.* 1999). The first Parliamentary Questions followed within days of the programme being aired and a follow-up item on *Newsnight* appeared on 5 July 1993, featuring the then Armed Forces Minister, Jeremy Hanley MP and some British Gulf War veterans.

As, at that stage, the Ministry of Defence had no record of any Service personnel, or ex-Service personnel, suffering from unexplained illnesses acquired during Operation GRANBY—the British name for the deployment to the Gulf—the Minister, when pressed, responded by asking for anyone who

believed that they were ill as a result of serving in the conflict to write to him personally.

Despite the publicity, the initial response to this appeal was limited—only 220 Gulf War veterans came forward in the first 18 months—effectively less than 0.5% of the cohort by the end of 1995. Nevertheless, as early as October 1993, a consultant physician, Wing Commander Bill Coker, had been appointed as the single access point for all referrals.

The process was by now sufficiently well established to be known as the Gulf War Medical Assessment Programme. This provided clinical diagnosis to presenting patients with treatment to be handled by standard procedures according to whether the individual was still serving or had returned to civilian life. The programme was not engaged in research or charged with reporting back to the Ministry of Defence, although clearly the data it collected would eventually form important sources of information.

For some reason, interest in the programme picked up somewhat over the course of 1996 and hence, according to Peter Beale, 'numbers increased so that by January 1997, 1100 had been registered'. This figure has risen steadily since, reaching almost 3000 in September 2001 (Chalder *et al.* 2001) over 10 years after the original conflict. In 1996, with initial funding from the US Department of Defense, researchers from the Guy's, King's and St Thomas's Medical School in London established the Gulf War Illness Research Unit. This was to provide a more rigorous analysis on a random sample—over 4000—of the Gulf War cohort, with appropriate comparisons of equivalent cohorts who had not been deployed to the Gulf.

After an initial pilot phase, questionnaires were sent to all participants in August and September 1997. Repeat mailings to non-responders were done between November 1997 and June 1998, with follow-up ending in November 1998. The outcome of this research, reported in *The Lancet* in January 1999—while demonstrating for the first time a significant increase in the subjective experience of symptoms—confirmed the negative response of the numerous surveys that had by then been conducted in the US.

The latter included expert reports by the military, the National Institutes of Health, the Rand Corporation, the Institute of Medicine and a number of prestigious universities, as well as a study by the Centers for Disease Control and Prevention. The mandate of the Presidential Advisory Committee on Gulf War Veterans' Illnesses (the then President, Bill Clinton, took a close interest in these matters) had been extended in 1996, because the US government refused to accept its verdict that it could find no evidence of Gulf War Syndrome. The Committee returned the same conclusion a year later.

Regardless, a number of veterans and their advisors, buoyed-up by sympathetic media reporting as to their plight, have remained thoroughly unconvinced as to this weight of evidence, as well as that which has ensued since which, to date, has cost in excess of $300 million to conduct in the US alone (Clauw 2003).

In concluding this section, it is worth quoting more extensively from one of the leading American researchers with regards to the issue of mistrust that has now arisen;

> Allegations of a cover-up are common responses to difficulties demonstrating a war-related syndrome. From the medical standpoint, this explanation is the least plausible because it is based on the premise that numerous private and government health professionals would participate in a conspiracy. In reality, a concerted clinical and research program has been established in three countries to identify the causes of veterans' illnesses and provide medical care. Physicians and researchers have had no incentive to hide the truth because whoever finds answers to these health questions will receive substantial professional recognition and personal gratification from helping veterans.
>
> (Hyams & Roswell 1998, p. 339)

4. CONTEXT

The purpose of this paper is not to review the medical evidence, which is examined elsewhere in this journal, but rather to explore other determining factors—in the main social, cultural and political—to the debacle. Many researchers now believe the standard medical and scientific avenues of investigation have been rigorously researched and that it is time to move elsewhere in searching for an explanation (Wessely 2001). None of this is to suggest that there do not remain a disproportionate number of veterans who are genuinely ill, or at least perceive themselves as such.

It is worth noting from the outset that the Gulf War of 1991 occurred at a time of unprecedented change in the history of the twentieth century. It was the first post-Cold War conflict and the period immediately preceding this, as well as that which ensued, have been marked by remarkable transformations in social, cultural and political values, perceptions and mores.

For instance, in a recent book reviewing the controversy in the UK surrounding the introduction of the MMR (measles, mumps and rubella) triple-vaccine, the medical commentator and general practitioner, Michael Fitzpatrick, identifies these times as having been marked by a 'resonance for an apparently endless series of health scares' (Fitzpatrick 2004). These have included anxieties expressed about issues from mobile phones to toxic chemicals and genetically modified organisms.

In particular, Fitzpatrick shows that concern as to the introduction of the new vaccine predated the publication in *The Lancet* of the now infamous paper suggesting a possible link between MMR and childhood autism by Andrew Wakefield and his colleagues at the Royal Free Hospital in North London in February 1998. So, while inoculation rates declined steadily subsequent to this event, Fitzpatrick points to the fact that this 'was not the only factor'. He and others suggest that a heightened sense of individual insecurity was already finding expression in a popular mood of risk aversion and a culture of litigation affecting broad layers of society (Furedi 1999).

Tracing the full origins of this changing social climate would require considerably more space than is available here. Nevertheless, a growing number of fears expressed across a wide range of issues, both

scientific and social, serve as a useful marker. One of the most significant of these—the debate surrounding the possibility of the transmission of bovine spongiform encephalopathy, commonly known as 'mad cow disease', to humans in the form of variant Creutzfeldt–Jakob disease—gained particular notoriety at the time of the announcement in the House of Commons by the former British Health Secretary, Stephen Dorrell, in March 1996 that there may be such a link.

Coinciding with, and feeding into, the rise in registration of former veterans to the Gulf War Medical Assessment Programme, the affair was held to symbolize the breakdown of trust in politicians, scientists and industry, and in part was undoubtedly responsible for cementing the downfall of the then Conservative administration at the general election the following year.

It is worth noting, however, that this episode too, serves more as a confirmation of existing trends rather than being their cause. Famously, as early as May 1990, the then Agriculture Minister, John Selwyn Gummer, had been widely ridiculed for publicly attempting to feed his young daughter Cordelia a hamburger in order to placate concerns as to the safety of British beef. Clearly then, awareness of these issues focusing more on image than insight, as well as a growing mood of mistrust and cynicism in authority were evolving well before the Gulf War.

The reasons for this are complex, but they relate in part to a number of processes that have been widely commented on and that evolved gradually over the course of the latter half of the twentieth century. These include a gradual process of disengagement from political life, a disconnection in the web of social existence and growing disenchantment with science. These were propelled to the fore and accelerated considerably through the period of transformation and confusion surrounding the end of the Cold War.

A number of social commentators have described the mechanisms whereby the breakdown of existing forms of collectivity and systems of social meaning left the public feeling more isolated and insecure than previously. Harvard professor Robert Putnam has described this process as an erosion of 'social capital' (Putnam 2000). Worse, those in positions of authority also appear to have suffered from a similar existential crisis, combined with an absence of any evident political direction and conviction (Laïdi 1998).

5. RISK

In 1992, the book 'Risk Society', by the German sociologist Ulrich Beck, was translated into English (Beck 1992). Beck's ability to discern some of the changing contours of the political landscape transformed this into an unexpected best-seller. Originally published in 1987, Beck sought to suggest that the world was now confronting the limitations of the industrial age. For Beck, and others, such as the British sociologist Anthony Giddens, risk had become reflexive or, in other words, humanity now had to deal with the new 'manufactured risks' of its own creation.

Certainly, more and more social problems have begun to be examined through the prism of risk. But the question remains whether this is due to people having to confront a growing number or quantity of risks, a transformation in the type or quality of risks, or whether they are somehow simply more conscious of risks. Elsewhere I have argued that it may be more productive to understand these issues as deriving not so much from a risk society, but rather as revealing a 'risk perception society' (Durodié 2005).

The gradual erosion of collective forms of social association, both in the formal sphere of political participation, as well as in the informal sphere of everyday life, has had a remarkable impact upon how people view themselves and the world around them. As the academic and social commentator Frank Furedi has noted, even the way we use the word 'risk' has been transformed to reflect this growing disengagement. A word that was often used as a verb with positive connotations, as in 'to take a risk', has increasingly become a noun understood largely in negative terms, as in 'to be at risk' (Furedi 1997).

Our understanding and use of the word 'risk' reflects our own confidence—or lack of it—in the potential of human will and agency to transform society. Increasingly divorced from social solidarities and trusted networks, which used to provide a framework of meaning, people become inclined to view events as out of control or inevitable. Being disconnected from society allows subjective impressions of reality to grow unchecked, or unmediated, through active membership of a wider group or trusted community, lending itself to problem identification and risk inflation.

These developments have had a quite devastating and stultifying impact. The breakdown of social collectivities has, in the absence of any coherent replacements, enhanced the sense which isolated individuals have of themselves, as being frail and vulnerable. It should be noted that this social transformation is additional to, distinct from and more recent than, the usual psychological variations that have been noted by many as determining how an individual perceives risk—such as whether an activity is undertaken voluntarily or can be controlled and the degree of understanding or dread that people have of it (Slovic 2000).

An exaggerated perception of risk also lends itself to increasing demands for greater regulation and social control. Accordingly, people have increasingly looked to those in authority to enhance their sense of security by mitigating the worst effects of particular products and activities, as well as legislating against those they hold responsible for these. Lacking any broader vision or direction of their own, the elite have willingly embraced this new agenda (Furedi 2005), repackaging themselves as societal risk managers—particularly around the issues of health and security.

The erosion of social forces also enhances the sense that people have of the significance of scientific and technological developments upon their lives, way beyond their true impact and importance. Over the course of the twentieth century, groups who had previously grasped the progressive capabilities and liberatory potential of scientific advance for driving social transformation now viewed this with growing suspicion. But behind the crisis of faith in science lies

a collapse of confidence in humanity, driven by a breakdown of social networks. Ironically, this means we now expect scientists to be held accountable by politicians and committees who increasingly are not.

Being less connected also leaves people less corrected. Views and values which, in the past, would have been filtered and scrutinized through various layers of knowledge and insight, come today to form unchallenged personal frameworks for understanding the world. Individual obsessions often grow into all-consuming worldviews that are rarely held to reasoned interrogation or debate. Today, what would once have been considered to be mere opinion or anecdote can become inextricably and existentially bound to a person's emotional identity.

In such a climate, confronting people with robust evidence that might contradict their perceptions is felt by many to be patronizing. Such an approach could damage the fragile mandate of those in authority. Hence, a more inclusive process of risk management and a demand for public dialogue also appear to have become the norm (Durodié 2003*a*).

Unfortunately, the more such concerns are highlighted and treated at face-value, the more difficult it becomes for the authorities to satiate the insecurities they thereby give credence to. Recognition of social concerns readily becomes their driver. Hence, alongside disengagement and alienation has come a concomitant disillusionment and mistrust in all sources of authority, whether political, scientific or corporate, as these are invariably unable to live-up to the new expectations they themselves have helped to shape. This corrosion of trust—in outlook if not in practice (O'Neill 2002)—has also accelerated the replacement of healthy scepticism by an uncritical cynicism.

In numerous situations today, the public have become accustomed—and encouraged—to assume the worst and presume a cover-up. Many policy advocates have become risk entrepreneurs in this regard. But a focus on worst-case scenarios also lies at the heart of the precautionary approach that is now held by governments to be a necessary aspect of effective risk management procedures (Durodié 2004). This encourages the rise of rumours and conspiracy theories in those situations where people do not consider their views, opinions and claims to have been addressed adequately.

Finally, these developments have also fed into new demands for the attribution of blame and compensation. The vast majority of veterans, while expecting war pensions to which they are entitled, have been loathe to pursue such litigious avenues, seeing them and the media campaigns that surround them as antithetical to military culture. Nevertheless, there is a powerful expectation for redress across society that also attaches blame for misfortune, irrespective of the weight of objective evidence to the contrary.

6. SYMPTOMS

Numerous surveys confirm that many people who consult their doctor present symptoms which cannot be explained according to recognized disease categories. It appears that such complaints are especially common in public services—the armed forces and the police, health, education and local government. The common features of these occupational groups today are low morale and a widespread sense of being overworked, underpaid and undervalued.

Nor is Gulf War Syndrome a problem unique to the military. Its symptoms overlap with numerous other similar supposed syndromes, such as multiple chemical sensitivity, irritable bowel syndrome, chronic fatigue disorder and repetitive strain injury (Wessely 2005). Many of these are likewise blamed on possible environmental hazards that are difficult to assess or quantify, such as low-level radiation, chemicals, food additives, pesticides and pollution (Aceves-Avilla *et al.* 2004). This has even led some to propose that these syndromes should be labelled 'illnesses of modernity' (Petrie & Wessely 2002).

New syndromes can give everyday symptoms a medical-sounding label and so make them a legitimate explanation for illness, absence from work and claiming benefits. They also offer a target for litigation and a potential source of compensation, both moral and financial. Notably, the *Diagnostic and Statistical Manual* of American psychiatry expanded its list of abnormal behaviours from 60 in 1952 to 384 (plus 28 'floating' diagnoses) in 1994.

Foremost among this ever-expanding list of new syndromes has been post-traumatic stress disorder (PTSD). Originally framed as applying to particular individuals in extreme circumstances—the category PTSD was advocated and fought for by anti-war lawyers and psychiatrists wanting to offer moral exculpation and financial compensation to veterans of the Vietnam war (Shephard 2000)—it has expanded rapidly ever since to encompass everyday happenings such as accidents, verbal harassment and workplace disputes (Summerfield 2000).

A common feature of these syndromes is the perception of damage to the so-called immune system, resulting from vaccinations, toxins or radiation. But the immune system is more a physiological concept than an anatomical entity. In that sense it appears to have become a metaphor for the heightened sense of individual vulnerability people now sense in the contemporary period (Martin 1994).

In addition to misunderstood symptoms, causes are sometimes misdiagnosed. Veterans can fall prey to the *post hoc* fallacy, confusing correlation with causation. Just because one event occurred after another event does not mean it is a result of that event. Careful study has demonstrated that some veterans carried illnesses before they ever set foot in the Gulf.

A striking example of this was the case of American army reservist Michael Adcock, the first death widely attributed to Gulf War Syndrome. He died in 1992 of lymphoma, which his family blamed on what had happened to him in the Gulf, and testified to that effect before Congress (Fienberg 1999). In fact, Adcock had started to show symptoms of lymphoma 6 days before deployment to the Gulf. As lymphoma usually takes more than 10 years to develop, it effectively excludes any link to the Gulf War.

There are numerous other examples of misguided diagnoses. Irrespective of this, the number of veterans

receiving payments for PTSD has grown rapidly from approximately 120 000 cases in 1999 to 216 000 in 2004. Now, the US government is wanting to review 72 000 cases in which veterans have been diagnosed with severe PTSD, claiming that mistakes and fraud have inflated the numbers (Benjamin 2005).

Predictably, and understandably under the circumstances—considering how expectations have been raised and society gradually reorganized around such syndromes—numerous outraged veterans and their supporters have seen this as a callous attempt to curtail expenditure. They are unlikely to be satisfied by any outcome other than that which they have already assumed.

Nevertheless, it is also worth noting that, for whatever reason, more days are now lost at work from people self-reporting themselves as suffering stress than were lost by people going on strike at the height of the period of trade union militancy in the late 1970s (Marsden & Hyland 2004). This shift from an active engagement in society—however disagreeable it may have been for the authorities at the time—to virtual passivity, reflects the changing patterns of political and social engagement described earlier. There could hardly be a better index of how our cultural outlooks and expectations have shifted over recent times.

7. ADVOCATES

In a world marked by the demise in political participation, organization and debate, individual campaigners can have a disproportionate impact on particular issues. Some commentators have also noted how, in the absence of a coherent political opposition, the media have increasingly tried to assume this role. Both these phenomena are evident in the Gulf War Syndrome story.

Apart from those who helped establish the category of PTSD there are many other instances of interested parties impacting on the debate significantly. For instance, subsequent to the *Newsnight* programme that helped establish concern about Gulf War Syndrome in the UK, the *Today* newspaper decided to turn this into a major campaign and carried a series of articles on various aspects of the subject.

The standard of their reporting varied widely and at the time this forced the Ministry of Defence to become reactive to media activity as some of the underlying concepts were not well understood and serious misconceptions could arise. This kind of campaigning journalism is not restricted to Gulf War Syndrome though. It too is a product of the new political and social landscape, as has been rigorously examined elsewhere in relation to campaigns relating to mobile phone radiation (Burgess 2004).

Other policy advocates, including members in both the Houses of Parliament, have raised a series of Parliamentary Questions relating to the possibility of illnesses among veterans and their families having been driven by organophosphate poisoning. In doing so, they have sought to harness these developments onto their pre-existing campaigns and concerns, effectively providing the latter with a new lease of life in a manner akin to the activity of many other campaigners.

Factual errors by both the UK Ministry of Defence and the US Department of Defense in answering questions combined with concessions brought about by a sense of the need to countenance any possibility of exposure to toxic agents, no matter how implausible, simply made things worse.

The impact of this over-zealous desire to be seen to be open and transparent, as well as engaging in a dialogue with families as to their concerns was evident in relation to the possibility of US troops having been exposed to nerve gas and other chemical agents as a consequence of the post-war demolition of an Iraqi munitions depot at Kamisayah in March 1991.

Official estimates of those affected were steadily increased from none to 400, then 5000, 15 000 and possibly substantially more. Yet even now there remains serious doubt as to whether any troops at all had been in the vicinity of this incident. Understandably, such shifts, regardless of evidence, have simply enhanced the sense of those who thought the facts were being kept away from them in the first place and simply served to compound the mistrust surrounding these issues.

Finally, as with other similar debates, a small number of maverick scientists and interested entrepreneurs also helped fuel matters. Regardless of their dubious credentials and publication track-record, as well as the inability of other scientists to replicate their results, governments regularly leapfrogged the usual scientific research process and standard funding procedures, allotting some of them substantial grants in their desperation to come up with any solution.

Predictably, this only served to fuel some of their bizarre claims. And sadly, veterans and others who would profess to have lost their faith in the ability of scientists and clinicians to be objective and understand their concerns were nevertheless quite prepared to place their trust in these rival experts, so long as they confirmed their claims. Unfortunately, as wide layers of society now appear to consider expertise and experience to be elitist and knowledge to be biased or unattainable, such beliefs are to be expected.

8. CONCLUSIONS

Every conflict seems to have its own syndrome. But, the internal battles fought over the recognition of Gulf War Syndrome suggest far deeper problems for society. Military morale depends on a sense of mission and domestic support (Durodié 2003*b*), but nowadays principled values and beliefs are noticeably absent. In an age marked by a breakdown of solidarities, troops also have a far more individuated experience of war. Perceptions of risk, sickness and stress loom in their minds, as well as those of their commanders and other officials at home. When everything around them suggests that war will make them ill, it is not surprising that claims of post-conflict illness are on the rise.

As a society we also now feel less able to justify individual sacrifice in the name of a collective aim. With a growing absence of any sense of what it is that they are being asked to fight for, pain and illness are less likely to be accepted and endured. What's more, as the definition of disorders widens, while the primacy of

values such as resilience and composure are eroded, many more people present symptoms to their doctors today than ever before, often in pursuit of financial remediation or moral recognition. Values, belief, purpose and understanding are important in fighting, winning and surviving war. It is not courage and ability alone that determine such matters—but rather conviction and will.

In the mean time, much of what passes for public health concerns and research today forms part of a broader agenda—consciously or not—serving to reconnect a nervous elite with the public by addressing their presumed insecurities. Unable to demonstrate a conclusive link between particular problems and their assumed causes, governments fall back on advocating preventative strategies or restraint, as well as endless research into purported risk factors to demonstrate their concern.

But, far from being scientifically driven and medically resolvable it seems evident that it has been the various social and cultural transformations outlined previously that have shaped these changes, as well as the individuals who are also a product of these times as are the illnesses that they now present.

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