



Biopolitical endpoints: Diagnosing a deserving British nuclear test veteran

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ABSTRACT

This article examines recent claims for healthcare made by British veterans who participated in nuclear bomb testing in the 1950s. Specifically, it focuses on their claims for war disablement pensions, exploring how they seek and challenge medical diagnoses. Detailing three veteran case studies, the article offers an ethnographic analysis of illness narratives. It explores how sufferers attempt to recast and reject the evidential burdens that they face in pension appeals, and identifies three narrative strategies that they deploy aimed at linking somatic realities to political etiologies. I propose the notion of *biopolitical endpoints* to capture how test veterans narratively connect political and medical domains as they seek to enable state culpability and redress.

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Introduction

In the 1950s the British government deployed thousands of Commonwealth servicemen to participate in nuclear bomb testing. Fifty years later many ‘test veterans’, now aged in their seventies, claim to suffer health problems due to radiation exposure. This article focuses on British test veterans’ quests for war disablement pensions, exploring how they seek, receive and challenge medical diagnoses. Recent literature on contested illnesses within veteran cohorts reveals that many veterans seek a medicalised, physical diagnosis for their illnesses (e.g. Brown, 2007; Scott, 1990; Young, 1995). Engaging with this scholarship, I argue that test veterans fight against the biological reductionism of the state’s diagnosis process in order to illustrate the social, moral and political origins of their illnesses. Test veteran narratives suggest specific conceptual tools for conceiving of and resisting biomedical reductionism that may prove analytically useful to wider social science critiques of the biomedical paradigm.

Background

Between 1952 and 1958, during the competitive politics of the Cold War, the British government detonated 21 nuclear bomb tests. These occurred first in Australia on Monte Bello Island and in the

southern deserts at Emu Field and Maralinga. After concerns of nuclear fallout in Australia, the British government chose two Pacific atolls under their jurisdiction, Malden and Christmas Islands, (now part of the Republic of Kiribati), to continue the test programme under the military codename ‘Operation Grapple’ (Arnold & Smith, 2006; Crawford, 1989). The British government estimates that around 21,000 Britons took part, the vast majority armed forces personnel. Most servicemen were present for only one test, but some witnessed up to eight tests. While most tests in Australia were mounted on 30 m towers, in the Pacific, the bombs were detonated two kilometres above the ocean (Muirhead et al., 2003).

Most test veterans did not become concerned about the effects of the nuclear tests until the 1980s. This awareness, many veterans reflected, was influenced by increased media coverage and public knowledge of the dangers of ionizing radiation. Furthermore, collective lay diagnoses emerged as veterans socialised together and tried to make sense of the physical demise of their friends, and the clustering of particular conditions from which they, their wives and children suffered, such as still births, eye problems, stomach and skin conditions, and cancers. In such a context the men’s memories of the tests were collectively re-evaluated to cohere with their emerging beliefs that they had been physically harmed (cf. Brown et al. 2001). After many test veterans were unsuccessful in gaining a military disablement pension, a group of test veterans and widows formed the British Nuclear Test Veterans Association in 1983. In 2006 a smaller group of test veterans and widows forged the Combined Veterans Forum International, joining forces with New Zealand test veterans, to lobby government for policy change. In 2009 a group of around

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1000 test veterans filed a collective claim before the High Court of Britain against the Ministry of Defence (MoD), seeking millions of pounds in compensation. This case is still pending. In these legal and political fora British test veterans must utilize and challenge medical diagnoses in order to claim deservedness.

Diagnosing contested illnesses

Diagnoses are the foundational categories upon which therapies and strategies for wellness are built within biomedical systems (Davis, 2000). Diagnoses create order and expectation out of the flux of experience (Balint, 1964), and render pain and suffering socially visible (Jutel, 2009; Parsons, 1951). Crucially, diagnosis commonly acts as a bureaucratic tool used to determine those bodies deserving of assistance, regulation and care (Dumit, 2006). Illnesses become contested when a definitive diagnosis cannot be established and the etiology and symptoms of an illness cannot be traced through conventional epidemiological, clinical or toxicological paradigms.

Illnesses attributed to environmental exposure are commonly highly contested due to the complexities of such illnesses and the limits of current scientific knowledge. As Brown, Kroll-Smith and Gunter show (2000), patients claiming environmental illnesses struggle to gain recognition due to a range of factors. For example, patients' histories of exposure are rarely recorded by the state or the medical establishment, and are rarely acknowledged as potentially dangerous to human health. Clinical research is only beginning to understand the effects of low-level exposure to toxins, or the synergistic effects of multiple toxin exposures. Moreover, the causes of many illnesses in the modern world, such as cancers, are difficult to determine using statistical or clinical methods, and doctors often lack the knowledge or diagnostic techniques required to link environmental toxins to specific diseases (Lipson, 2004).

In western settings, service personnel and veterans have experienced a range of contested illnesses, due in large part to the experimental and risky nature of military action (Shriver, 2001). Veterans must overcome barriers in gaining recognition for uncertain illnesses not faced by other citizens due to the state sanctioned secrecy of military regimes (Brown, 2007), the significant power of Defence departments to shape medical research (Shriver, 2001), and laws that lessen veterans' rights to seek legal redress (Scott, 1988). Vietnam and Gulf War veterans have been two veteran cohorts to receive significant scholarly attention (e.g. Brown, 2007; Scott, 1988 & 1992; Shriver & Waskul 2006). Even with established veteran social movements in the US and UK, these veterans struggle to gain state recognition, healthcare and compensation. When patients and experts disagree over diagnosis, patients often resist medical authority and forge collective action aimed to decentre medical expertise (Brown et al. 2001). At the same time state mechanisms commonly objectify and bureaucratise the measures of illness and suffering, delegitimising the realms of self-reporting and assessment from which concerns arose and through which the contested illness became socially visible (Das, 1996; Petryna, 2002).

Because medical studies have not been able to corroborate personal and collective illness experiences, Vietnam and Gulf War veterans distrust the medical establishment, viewing it as biased and unresponsive. At the same time, studies show, it is from the realms of conventional biomedicine that veterans most desire a definitive diagnosis that will count as irrefutable scientific and legal proof. Such scholars thus frame veterans' demands as fraught quests for biologized diagnoses within untrusted scientific and political territory (e.g. Brown, 2007).

This trend can be seen in studies of Vietnam veterans, which show that their advocacy for PTSD has proved crucial in moving troubling psychic and physical experiences from the 'subjective'

body into 'objective' medical manuals of disorder (Scott, 1990; Young, 1995). In their quest to gain recognition for Agent Orange related illnesses, Vietnam veterans have focused on proving the biological causal links between the dioxins of Agent Orange and disease (Scott, 1992). Gulf War veterans have fought to shift diagnostic categories from focusing on psychological domains toward the physical body. Gulf War veterans thus have rejected explanations of their illnesses as resulting from stress or PTSD. Such individualised psychological explanations, they argue, delegitimise their claims to collective toxic exposure, and negate their assertions of physical illness by implying suffering is 'all in their minds' (Brown, 2007; Shriver & Waskul, 2006; cf. Nettleton, 2006; Phillips, 2010).

The first empirical question that this article interrogates, therefore, is *whether British nuclear test veterans also seek medicalised and biologised diagnoses*. In contrast to the literature reviewed above, this article examines how veterans' beliefs regarding political culpability are grafted onto biomedical explanations of veteran illnesses; how the search for causation and the attribution of responsibility are inseparable acts in the daily work of seeking diagnoses. By focusing on subjective understandings of etiology, this article demonstrates that test veterans narratively seek to deny biologically reductive diagnoses of their suffering.

The article's second question seeks to gain analytical purchase from the first by asking *how this case study can advance our understandings of the relationship between biomedical and political etiologies in lay diagnosis*. Many scholars of contested illnesses demonstrate that the search for medical proof is tied up with demands for political recognition and redress. For example, in their study of Gulf War veterans, Brown et al. (2001) provide a useful model for understanding contested illnesses and the medico-political process that veterans face in challenging dominant epidemiological paradigms. They distinguish several distinct stages in which sufferers: 1) identify an illness, 2) share their experiences and forge collective action, 3) search for treatment and a clear etiology, and 4) attribute responsibility and demand redress. This provides a useful overview model of the contested illness paradigm by categorising the strategies and actions of the actors involved into discrete yet interlinked stages. Yet in ethnographically distinguishing the search for treatment/causation from the attribution of responsibility, medical and political manoeuvrings are treated as distinct logics and acts and the subjective means by which participants draw connections between these domains is less visible for analysis.

Sufferers and advocates of contested illnesses do narratively draw links between biomedical and political arenas. For example, in his study of asthma advocacy in the US, Brown (2007) demonstrates how the asthma social movement places asthma within a social justice frame, casting it as the direct result of unequal social structures (see also Hamdy, 2008). By offering a close reading of participant narratives, this article builds on this approach. It identifies several specific logics that link notions of power with bodily experience in lay explanations of illness, and which centre on notions of moral culpability. In a similar vein to studies that utilise and develop analytical frameworks of biopower and biological citizenship (e.g. Foucault, 1990; Gammeltoft, 2008; Petryna, 2002; Rabinow & Rose, 2006; Ticktin, 2006), this study explores how social inclusion and exclusion are linked to somatic experience through political configurations. In this case, the linkage is consciously propagated by participants themselves.

Methods

This article takes its data from an ethnographic study of New Zealand and British nuclear test veterans and their claims for compensation conducted from 2009 to 2011. I have interviewed 51 test veterans or their widows, and 11 scientists, medical experts,

government officials, veteran advocates and legal representatives involved in test veterans' claims. Participants were initially recruited through the leaders of test veteran groups, and then through a snowball technique. Interviews were in-depth and semi-structured, lasting between one and three hours. They were recorded and transcribed. Interview questions for veterans encouraged them to reflexively recount their life stories from their enrolment in the armed forces until the present, focusing on the bomb tests' effects on their lives and health, and their experiences claiming medical and legal redress. Interviews were conducted in veterans' homes or in officials and experts' offices. The study also draws upon approximately 60 hours of participant observation at test veteran meetings and social occasions. Data was coded using categories that emerged from the participants' own explanations and narratives, which has shaped an analysis based on emic meaning systems. In this article pseudonyms have been used to provide confidentiality. This project has received ethical approval from the Victoria University Ethics Committee.

While this broader body of data informs this article, here I focus on three British veteran case studies and draw upon their interviews. I have interviewed each of these veterans or widows twice and have spent further time informally with each of them in their homes, at gatherings or in veterans meetings. The veterans in this small sample cannot be robustly representative of the broader test veteran community. Yet I have selected them in part because their experiences resonate strongly with the perspectives expressed by the majority of interviewees, and they do provide a cross section of the types of actors involved: widows and veterans; servicemen from the Army and Air Force; those suffering from a range of illnesses; and professional servicemen versus those who served their compulsory national service. These three participants' evocatively rich descriptions of experience also set them apart as suitable for a narrative analysis.

This article arises out of a commitment to the ethnographic method that reveals the flux and flow of everyday lived experience (Brewer, 2000). The aim of providing only three case studies is therefore to provide sufficient space to bring participants' subjective perspectives into sharp relief, to place interview extracts within the context of wider life histories and experiences, and to reveal the participants' struggles for recognition as temporally anchored processes that build, transform and unfold over time. This article also engages with the realm of narrative. As Parkhill, Pidgeon, Henwood, Simmons, & Venables, (2010:45) argue, through the narrative method participants' "judgements, and decision making processes, their values and subjective preferences...[are] rendered more visible by them being embedded in meaningful, contextually and morally rich, value-laden and affectively charged stories." The narrative method also demonstrates the inter-subjective dimensions of experience, as it is through verbal and written speech acts that bodily experiences are discursively shaped into collective narrative forms (Kleinman, 1988). The narrative method is particularly potent when discussing contested illnesses as it reveals the multiple meanings that compete to define the body and its place in the world. As Henry shows, "the body itself is a site of contestation as those with competing claims over meaning try to inscribe their own versions of reality onto individuals" (2006:385). Sufferers thus often work to create a coherent illness narrative that places all of their experiences within one ordered explanatory framework (Cohn, Dyson, & Wessely, 2008; Kilshaw, 2009).

What makes a diagnosis count?

To be eligible for a war disablement pension, British veterans must prove that their injury was sustained or aggravated by service. A war disablement pension provides a tax-free weekly payment

and priority medical treatment. Gaining a diagnosis that enables such state support is a fraught process for test veterans, and very few succeed in easily meeting the states' requisite levels of proof. Most test veteran interviewees were initially rejected in their application for a pension, and continued to fight on in pension appeal tribunals.

Test veterans must provide three levels of proof to gain state recognition for their illnesses. First, a test veteran needs to gain a *biomedical disease label* from sanctioned medical experts who write assessment reports and from state officials who list illnesses on their pension files. For many veterans, illnesses remained medically unrecognised and socially invisible. The second type of proof required is *exposure*. Test veterans need to demonstrate that they were individually exposed to harmful levels of radiation during their service. As this article's case studies demonstrate, a lack of records that measured individual exposure rates for most veterans makes this impossible, and is a common complaint for contested illness sufferers (Brown, Kroll-Smith & Gunter, 2000). The third stage of proof required is *causation*. Veterans must prove a link between the first two factors - exposure and disease - in the form of a scientifically legitimised and politically recognised etiology. Proving that their ill health is connected to their service is difficult for most veterans for reasons that affect many contested illness sufferers. Many of their disorders and diseases are latent, manifesting up to 50 years later. Furthermore, there are no distinct and clear biomarkers of radiation exposure (cf. Schuck, 1987; Scott, 1988).

Meeting these three levels of proof for many test veterans proves insurmountable. Yet even when veterans and their wives succeed in gaining pensions for certain illnesses, they regard the diagnostic process as flawed. As the three case studies below demonstrate, the explanations they seek and offer for their illnesses merge medical causation with stories of power, corruption and neglect in order to portray causation as a moral entity.

Three lives: living with contested illnesses and the search for proof

Adam

I interviewed Adam's widow Kim in her small flat at a Royal Air Force (RAF) housing estate near London. She explained that it had seen better days, but she was grateful they provided it as a widow's entitlement. Framed photographs of family members cluttered her mantelpiece. A black and white photograph of her husband – young, handsome and in crisp uniform – sat centre stage. Adam was squadron leader in the RAF. In 1958 he captained a flight that collected atmospheric samples from within the mushroom cloud of one Christmas Island test. He stayed in the fissioning vapour for six minutes, and received a radiation dose of 13,000 rad, the equivalent of 6500 X-rays she tells me. Kim took a crumpled photocopy from her wallet that shows a record of his dose that she explained took some persistence to acquire from the Public Office archives.

After his exposure, Adam was shortly sent home, but was delayed in Fiji for three days with severe vomiting, she explained. Despite being ill on his return he received no medical checks. He did not speak of his service to his family. Like all test veterans, he was bound by the Official Secrets Act (1911–39), which lasted until 1984. This meant that, as witness to a covert government operation, he and other test veterans were legally forbidden from disclosing details of the tests, even to their wives. By 1976 Adam was 44 and had been for 17 years suffering from acute sinusitis, mood swings, anxieties and depression. Despite a promising future career in the international Aerospace industry, he committed suicide. From her armchair Kim recounted the period leading up to his death as one in which Adam desperately sought answers to his psychic pain.

He used to hold his head and say “Oh My God what is happening in my head.”...and I felt so helpless and I said, “Darling the doctor can help with the pain.” And he looked at me and he said, “You don’t understand it is agony, but it isn’t pain and I can’t explain it except that it is a like a dark cloud...it is as if it is coming from under the floorboards, it is encasing just me”. So we went to a psychiatrist, an excellent one...and for the last session...Adam and I sat there and [the psychiatrist] said “Squadron Leader, I have to tell you that I have never felt so helpless in all my life.” And my stomach lining went straight down to my boots, because he was our last hope. And he said...“You see in medical terms you are not a manic depressive, you are not a psycho whatever it was, you are not a split personality...there is no medical term for what is happening to you...and I have no idea what is the matter with you, but I do know you are not mad and you are not insane and I know you are suffering agony and I can’t help you.” And you see the awful thing is...even if it had occurred to me or him that this could be radiation damage that we hadn’t known about...we actually would not have been able to tell the psychiatrist because of the thirty year secrecy act...and the poor boy [Adam] came out of there and he went downhill very rapidly...there was no help anywhere.

Kim did not learn of the potential health issues surrounding radiation for two decades. When she began to question government officials about her husband’s exposure she was told that his suicide was in no way precipitated by his service. He had, they insinuated, been sickly and psychologically unwell since childhood, a diagnosis that contradicted family and friends’ memories of him, and the assessment he had received during the competitive entry tests for Air Force pilot training. While the MoD gave Kim a house and a pension without barrier, and admitted her husband had received unsafe levels of radiation (much of it at his head), they would not admit any liability for his death. Kim continues to believe that the level of radiation he received to his brain was lethal to his mental state. She suspects that he had a brain tumour or a disruptive chemical imbalance.

I think if we had known, if the MoD has said to us honestly and immediately, “look, you have been heavily irradiated, heaviest to the brain, if there are any problems, you know, we will watch you, we will examine you...he might have had enough ammunition from knowing what was causing it to have said...I am not going bonkers...and he might have lived.

The undiagnosed nature of her husband’s condition and the perceived mis-diagnosis of what caused his suicide was, for Kim, only one piece of the tragic puzzle. The loss of Adam devastated one of her daughters. “Within twelve, eighteen months of Daddy’s death...she just collapses really...she had become an alcoholic and then she became a drug addict.” For a long time Kim preoccupied herself with caring for her daughter’s children, the wellbeing of several she felt had now also been badly affected by the legacy of Adam’s death. For Kim, Christmas Island had ripple effects beyond that which a medical diagnosis would trace. The links of illness were seen to travel along intersubjective vectors, just as they were physiological in origin.

I will never forgive them. And I will never forgive them for fighting this case [in the High Court]. [We] knew nothing and trusted implicitly in the fact that our country would look after us, our MoD would take care of us. They wouldn’t let any harm come to us, but they did...and I am living with the effects on little Ann and Kate and Nancy [my daughter and grandchildren]. Our agony continues to go on. After fifty odd years it is still going on. And they will still not say, ‘sorry’ or ‘thank you and look, we are going to look after you.’

Kim’s story of her husband’s death illustrates her struggle to make sense of the tragedy, and reach a diagnosis that is meaningful within the context of her wider life narrative. Her diagnosis weaves together a range of factors beyond the medical and somatic, ultimately seeking to explain his death in relations to policies of denial and to cast moral blame and responsibility for redress on the state.

Peter

Peter’s home office was stacked with neat folders documenting the test veterans’ claims and his own medical history. From these he regularly drew information to write letters to MPs and newspapers. Prominently displayed above his computer was a framed photograph of a delighted group of test veterans, wearing their association blazers, outside the London High Court. Kim stood in their midst popping a bottle champagne. It was taken, he explained, just after the veterans won the right to sue the Ministry of Defence in 2009.

Peter’s personal narrative was polished and punctuated with injustices, one after the other, each linked by a clearly conveyed rationale of government conspiracy. From 1965–6, at the age of 19, he served at Maralinga for the Royal Air Force loading planes. While the British had concluded their major bomb tests by this time, he explained, the desert area of their base was now surrounded with radioactive sand that blew into every inch of their barracks and coated their bodies each day. Unaware of any potential harm, the men carried out their duties without any thought of danger. It was only years later, after meeting other test veterans, that Peter came to attribute his illnesses to Maralinga.

His personal narrative slipped easily into a collective story, as he wove into his account the injustices that other veterans have faced, linking them to his own. He expressed a sense of responsibility to account for social suffering beyond the confines of his own body. When asked about radiation exposure, he began with the stories of others. He explained to me that when seeking a pension veterans have struggled to demonstrate exposure on multiple levels due to a lack of record keeping of military service. For some veterans, he explained, the ‘MoD say, “Well, you weren’t even there.” They did it to someone who was in the Navy, they said “you didn’t go to the nuclear tests”! So he sent them a photograph of him on one of these Royal Navy ships, with a great big mushroom cloud in the background!’ While some servicemen wore dosimeter badges, Peter explained that for rank and file servicemen these were never labelled and were routinely “thrown in a collective bucket” so that individual exposure was never traceable. Peter also believed that important evidence of exposure was not only left unrecorded, but actively manipulated. Peter explained that the British military worked hard to conceal the true extent of environmental radiation.

What the British used to do, they used to give the Australian people radiation field charts, to show what the radiation levels was at the test site, where the bombs went off, but they used to, before they used to give it to them, they used to let them hang around for a few days before they handed them over, so they didn’t really get an accurate reading from them. They were three or four days old by the time the Australian safety people and scientists were given the actual film things...They faded daily, so a lot of the radiation dose on those had dissipated.

Left with no clear evidence of exposure upon which they can rely, test veterans instead focus on the spectre of incorrect, destroyed or doctored documents that discredits any official claims of safe radiation exposure. Rather than treat the question of exposure as a medical and technical issue, it is refigured as a question of power and knowledge.

In the last months of Peter’s service at Maralinga, he was sent to a military hospital to receive treatment for an inflamed iris,

a condition from which he has continued to suffer. In his pension claim, the timing of the onset of this condition was crucial in proving causation. The easiest way that the Veterans Agency understands, frames and accepts etiological responsibility has been a scientifically crude measure: if the illness arose *during* service, then it is often attributable to service. While this meant that Peter's pension claim was successful, it did not enable the type of causation that he desired. Peter reflected that,

I'm one of the lucky ones. I put that down solely to the fact that...the health problem I had, actually started while I was there. So they couldn't say that it wasn't linked to there. They still deny it was anything to do with [the tests]...I pestered them after I got it, I said, "Look, you say this is attributable to service, and you're denying that it's attributable to my service at Maralinga. That's a load of nonsense." So I wrote to them for another eight months. Letters to MPs, and eventually I got a letter back from ... John Major. It went right up to the Prime Minister! [He said] the usual things, you know, 'the fact that you were in the air forces at Maralinga from these dates doesn't necessarily mean that your illnesses are attributable to your services in the British Nuclear Weapons Test programme'. The wall's closed, and they won't actually take the final step. That's all I'm interested in achieving is to get them to admit they caused it.

After his service in Maralinga, Peter experienced his health gradually 'go downhill'. "I was medically, from being an A1 fitness, able to serve anywhere in the world doing heavy lifting...I was downgraded to just being able to do a desk job." Unexplainable stiffness, swelling and pain plagued his health for the 5 years before his discharge in 1974. At this time his medial status was officially changed.

They miraculously, just before I went out, upgraded me medically. Because they said the condition I was in had gone into a period of quiescence. And they said they're now upgrading me. And they did that, as I found out later, to avoid medically discharging me, because they would've had to pay me more money. So I've really got it in for them, to be quite honest...It is the basic immorality of the whole thing. You know you think, why should they get away with it?

Never secure with the medical diagnosis of a recognised and explicable illness label and etiology, Peter struggled to control how the military categorised his body. As a consequence, he has felt vulnerable to the manipulation of a fiscally rational military bureaucracy. When asked how veterans should proceed to gain recognition for their illnesses, he did not mention the medical system. "We've always believed that the solution to this...it is a political problem. We've been politically excluded from justice. And that is why we keep contacting, hammering the politicians all the time." Like Peter, many veterans narratively frame both the etiology of and the solution to their ill health as firmly rooted in the halls of power.

David

I interviewed Sally at her home in the English Midlands a year after her husband David's death. While now at peace with his passing, the injustice that she felt he endured in his final years rang clearly in her story. David was an 18-year-old barber from the Midlands, when he was called up for his compulsory national service on Christmas Island with the Royal Air Force. He left in late 1959, after the last British test and during the final 'clean up' phase of Operation Grapple. He returned home a year later after a week of hospitalisation in Hawaii with what his widow described as "very, very bad stomach cramps." The doctors had diagnosed it as resulting

from salt loss through sweating. As time passed, David met other test veterans and joined the British Nuclear Test Veteran Association. In hindsight, David began to consider the diagnosis of salt loss for a week-long bout of severe stomach cramps as "farfetched", connecting it instead to the range of stomach problems suffered by other test veterans with whom he talked. Here the sharing of stories and memories acted to build a lay diagnosis based on an emerging collective 'illness narrative' (Kleinman, 1988). David's widow, Sally, described to me his worsening health over time.

His skin problems increased. In that he got more over his body...it wasn't nice...at first they just thought it was eczema...but then as time progressed, his skin became very thin...The dermatologists...couldn't or wouldn't put a name to it. But the terms that the dermatologist actually said, "your skin has been cooked, and it's not by the sun."

In 2002 he received a lump sum one-off war pension payment of £4300. Sally read to me a letter from the Veteran's Agency stating that, "We've accepted the following diagnosed conditions as being caused by your service. We call this attributable to service: Keratosis of the skin". Sally explained that his condition had never been diagnosed as keratosis by their own dermatologist or GP. "At no point in this particular claim, do they link that to anything to do with the nuclear fallout. And in fact, there is a letter somewhere, that says the claim, 'attributable to service', was due to 'over exposure to sunlight.'" This was a convenient and ill-fitted label, she believed, a necessary bureaucratic step in activating the release of his payment. By contrast the diagnosis that Sally and David sought was one that would indict the state for failing to protect its citizens from harm.

As detailed military records regarding the men's exposure are not available, the veterans seek out medical and scientific studies that can, by proxy, prove a probable and theoretical link between exposure and illness. For some veterans - too ill to work, or retired - seeking this knowledge became a purpose for daily life. Sally reflected on how her husband had carried out, "an awful lot of research about cancers, about radiation fallout, ingested, all that sort of stuff". When he found out about a study by a Japanese physics professor on illnesses in Hiroshima, "he got up in the middle of the night to phone this man at work." At his final pension appeal for a rare form of pancreatic cancer, David presented the Professor's study as evidence of probable cause. Sally explained that, "He hung on for this tribunal. And it was quite emotionally distressing to see that something that...for him was crucially important, life holding important...at this point he is struggling with walking, he was a very ill man." Yet a bureaucratic mistake in the tribunal's scheduling meant his case, which required a full day, had less than an hour to be heard. Moreover the Judge had never received the copy of the Japanese study that David had couriered to the tribunal, and felt unable to make judgement until he had time to carefully consider the evidence. Sally attempted to reschedule the tribunal at their home, as David was now on morphine and barely conscious. Despite a promise from the tribunal that it would be arranged, Sally did not hear back. David died several weeks later before the case could be concluded. "There was no compassion shown to David or to us at all," Sally remarked. While the pension system had not offered the diagnosis that David sought, his death brought an uncertain confirmation.

The local GP did the death certificate and he looked on the back and saw that there was a box to tick which said: "Is this injury related to work?" So he ticked it. He had known David for a long time and had heard him talk about Christmas Island. He knew that David attributed it to Christmas Island. In a few weeks I got a call from the Coroner's office and he said "I'm terribly sorry but

there's been a mistake with David's Death Certificate." And I found out that whenever someone ticked that box they have to have an inquest. So, they thought with the death being cancer, that it was a mistake. So, there was an inquest...the Coroner ruled an "open judgement". He told me before had he was really sorry and he knew it was like sitting on the fence, but he would be setting a precedent if he agreed to accept that it was work related. Never before in the country had a Nuclear Test Veteran's death on their certificate been attributed to work, and there was probably consequences for him doing that for his career because he is a public servant. But an open judgement means that it could be reheard in the future if new evidence came to light.

Here the medical system is intimately linked to the political sphere, and medical diagnoses seen as the result of a process that fuses biological evidence with practices of power. To conclude her interview, Sally reflected on what David had most wanted from the pension system, and the personal toll that such a quest took on her.

Before he died, David said to me, the words he used, "will you promise me you will carry on my fight for justice?"...All he wanted was for someone to say, "We got it wrong, and yes, we now know the effects." And so, so our lives were very, my life at times was almost unbearable, unbearable because of his fight for Christmas Island.

For David, and Sally who now carries on his case posthumously, gaining the right diagnosis was a process within which illnesses came to express more than biomedical frailty. The right diagnosis would confer wider moral obligations of culpability, social responsibility and redress.

Discussion

In these accounts veterans and their widows desired a diagnostic practice that not only affirmed the somatic nature of the illness, but also asserted a politically and morally configured notion of culpability (cf. Cohn et al., 2008). In navigating the three types of proof that the state requires in order to gain pensions, veterans attempted to broaden the work of diagnosis so that it could account for what Sherine Hamby describes as "political etiologies" (2008), and thus contain an admission of guilt for a dangerous experimental regime that put men's bodies at risk, and which neglected to care for them afterwards.

These three cases demonstrate that veterans and their wives attempt to broaden diagnostic processes to include political etiologies through three types of narratives and moral arguments. First, when talking about the cause of their illnesses, veterans did not make sharp distinctions between biological cause and social blame. Veterans and their widows traced causation back through toxic substances to the state agents who enacted a risky experimental regime. Causation was thus ultimately understood as a reflection of human agency. David's main motivation in seeking a pension was his desire for the government to admit "they got it wrong", while Peter ultimately wanted the government to "admit they caused it." A meaningful diagnosis is thus one that not only morally attributes blame in the past, and also implies the enactment of redress in the future.

Second, participants linked uncertain diagnosis to other subsequent illness outcomes. Kim did not only blame radiation for her husband's death, but linked his suicide to the state's policy of secrecy and neglect that obstructed her husband's search for a supportive diagnosis. They also trace the effects of radiation along inter-subjective routes to demonstrate how suffering travels through family lines. Kim narratively crafted a genealogy of ill-health from her husband to her daughter and granddaughters that emphasises social loss and psychic anguish,

while Sally described her husband's increasingly frustrated search for justice as a terrible burden on both of their wellbeing.

Third, veterans traced the political elements of scientific and medical practices, arguing that medical evidence cannot be understood outside of the political arena that shapes and enables it. Peter thus framed the question of evidence for radiation exposure as a distinctly political issue. He argued that any useful evidence of exposure does not exist due to state corruption and negligence, and that *this* fact, not the lack of radiation records, should be the evidence that counts in diagnosing deservedness. Sally argued that her husband's death certificate bears witness to the bureaucratised origins of diagnosis practice that reflexively concedes its links to authority (cf. Shriver, White & Kebede, 1998).

These three narrative devices can be subsumed within one overall explanatory frame that seeks what I shall term *biopolitical endpoints*. In scientific terms, a *biological endpoint* refers to the stage when an illness manifests and is observable, as somatic effects become apparent after, for example, hazardous substance exposure (e.g. Adams et al., 2002). It thus speaks of visibility, tangibility and acceptability, as well as fruition. Veterans argue that the official state diagnostic process pries apart the biological and the political, reducing their illnesses into discrete entities disconnected from their accusations of state neglect, misconduct, and even corruption. This rupture renders effective a state diagnostic technique that requires causation and exposure to be measured only in certain biomedical terms, bracketing moral questions of culpability in order to verify a diseased body. In submitting to this governmental logic, veteran bodies can become part of a disabled population deserving of state support. In doing so, however, test veterans felt they were expected to accept erroneous biomedical explanations of their illnesses that were apolitical and individualizing, a process that discounted their claims to collective suffering.

This study contributes to a wider body of research on veteran illness claims, which has shown that many veteran lobby groups act to both highlight and reject 'political forces' in dynamic ways. Such research demonstrates that these groups often desire a biologized and physiological explanation of their illness, and actively work to excise 'political influences' from the diagnostic process (Brown, 2007; Scott, 1992; Shriver & Waskul, 2006; Young, 1995). While some activists become frustrated when scientists attempt to curtail discussions regarding the 'political obstacles' that exist in the production of usable exposure records, science is still the realm of legitimacy from which answers must be sought (Brown, 2007). In contrast to these findings, this study demonstrates that while not denying the biological *nature* of disease, test veterans place great emphasis on revealing the political *cause* of their diseases. In the quest for biopolitical endpoints, they seek a diagnosis that contains within it a historical narrative about a nation's shame and a state's admission of guilt; the biopolitical endpoints that veterans demand are ones that enable them to assume the status of a collective who have endured a grave injustice, and who should now be entitled to public recognition, state resources, a service medal and an apology.

Conclusion

This article has examined the narratives of three veterans and their wives, detailing the experiential realities of those bearing the evidential burden of state diagnostic processes. These cases demonstrate how biomedical categories of proof are subverted by test veterans and their families to include a more relational set of evidential questions: how has suffering affected the veterans and their families, and causally, *who* is morally to blame for their exposure to risk? Literature exploring veteran claims for service-related illnesses has evocatively shown how veterans come to understand the politicized nature of their claim-making

and the contested nature of science. Yet research categorizing veteran claims and actions tends to focus on their demands for biomedicalisation and distinguishes their quest for medical proof from their political search for responsibility and redress (Brown, 2007; Scott, 1992; Shriver & Waskul, 2006; Young, 1995). The narratives examined here, by contrast, demonstrate the value in building analytical categories out of our participants' own explanations, in this case out of the range of ways that participants constitute questions of proof and suffering that speak of their social and political origins and effects.

Returning to the driving question of this article, how this case study can advance our understandings of the relationship between biomedical and political etiologies in lay diagnosis, some broad conclusions can be drawn. Scholars must be attentive to how our participants conceptualised their illnesses through specific and evolving lived experience, in order that we craft subtle models of lay diagnosis. Scholarly models that discuss 'the political sphere' versus 'the medical domain', as Brown's (2007) work demonstrates, may reflect conceptual divisions utilised within patient advocacy groups, which legitimise certain forms of knowledge and practice while denying others. But as analytical categories guiding our scholarship they can also cleave connections that our participants actively work to reveal. Social science analysis that replicates such divisions can pry apart realms of experience in ways that support the underlying power dynamics of mainstream diagnostic techniques, a process that inadvertently works against the provocative analytical power of some contested illness sufferers' claims. Participants' evocative accounts detailing their daily quests to make unseen illnesses socially visible, I argue, offer the richest means by which such connections might be conceived.

For test veterans, the biopolitical endpoints that they seek to expose in the diagnostic process link damaged bodies directly to the state apparatus and its quotidian acts of power: from a lack of medical monitoring, to doctored radiation records and crude pension rules that ignore latent diseases. As Das and Das show (2007), subjective experiences of illness are always embedded within the social, political and familial realm that make the body a site of negotiation with the surrounding world. The experiential and intersubjective realm of illness shows us that social suffering and somatic suffering are for many patients intimately interlinked or indistinguishable (Kleinman, Das & Lock, 1997). Biomedical assumptions have been thoroughly critiqued within the social sciences and "the historically rooted and culturally constituted nature of mind-body and other dualisms, biological reductionism, and scientific rationality have been repeatedly pointed out" (Ware, 1992:356). This article suggests that our participants' embodied critiques of biomedical reductionism can prove useful in identifying a range of analytical frames by which a more holistic diagnostic method might be conceived.

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