

WORKING PAPER **301**

‘Through No Fault of Your Own’:
Asbestos Diseases in
South Africa and the UK

Linda Waldman
April 2008

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Summary

This paper explores people’s experience of asbestos-related diseases in relation to medicine, identity and gender. The paper adopts a comparative approach, examining the experiences of impoverished former asbestos mine workers in South Africa and working class factory workers and ladders in the United Kingdom (UK). These two areas are connected through the activities of Cape plc, a company that dealt with asbestos for about a hundred years, mining in the Northern Cape of South Africa and manufacturing and processing in Barking, in the UK. As indicated in the title, these industrial diseases are not contracted through worker negligence, but rather because of governments’ and managements’ framing of risk and the implementation of safety measures. The first part of the paper therefore contrasts authoritative and emic values through the examination of governmental recognition of risk and people’s own understandings of danger. The second part of the paper examines gendered and identity issues, focusing on how men’s masculinity is both undermined and bolstered through their involvement with asbestos production, while women’s identity is primarily vested in their household and primary caretaker role. Throughout the paper, a comparative anthropological approach focuses on the similarities of ‘meaning’ and subjective interpretations – as contrasted with the country specific medical, legal and political categorisations of disease with which these people regularly engage – highlighting how people experience, interpret and respond to asbestos-related diseases. Using an ‘effects made by gender approach’, the paper also examines how asbestos diseases intersect with identity, leading people to emphasise conventional gender roles.

Keywords: asbestos related diseases, gendered identities, South Africa, UK, comparative framing of disease, pleural plaques, ladders, masculinity.

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The doctor says I have the dust, but its still small and must still grow... the doctor said there's nothing wrong with me, but I can feel that there's a problem in my body.

(Mieta Willemse, Prieska, South Africa)

The pain is very strong, it [is] right through my chest and between my shoulders. I feel like an empty vessel which does not have lungs and a heart inside.

(Lenora Lands, Griquatown, South Africa)

I asked at the clinic, do people not get treatment for mystof [mine dust]? They said, we give pain tablets. There is no special treatment that they give for the dust.

(Katjie Smit; Prieska, South Africa) ¹

It's a cancer, you don't recover ... we live on the pills.

(Paul Wilson, Griquatown, South Africa)

It's so inevitable, you start with five brothers, then three [remain alive], then two, you just live with it mate. You know [that you're going to die].

(Timmy Fortune, Barking, UK)

We are so used [to the diagnosis], we don't take it seriously, rather we take it like ordinary people, healthy people.

(Rik Matlu, Prieska, South Africa)

Once you've got the disease, it's never going to get better, it's just going to get worse.

(Gavin Knowle, Barking, UK)

When they find out they've got the disease, it tears the soul out of most of them.

(Jimmy Croft, Dagenham, UK)

¹ In accordance with the National Health Services (NHS) Central Office for Research Ethics Committees (COREC) requirements, pseudonyms have been used for all participants in this research.

1 Introduction

This paper provides a comparative exploration of people's experience of asbestos-related diseases and how this impacts on their gendered identities. These diseases result from exposure to asbestos. After the two World Wars, in which asbestos had assumed immense strategic importance as a product for insulating war ships, 'manufacturers promoted asbestos as a miracle product, which enhanced the quality, longevity or safety of any commodity into which it was incorporated' (McCulloch 2002: 4). Asbestos was extensively mined in South Africa, Australia, Canada, Russia, Brazil, Italy and Zimbabwe. Asbestos fibre was used in a myriad of manufacturing processes including cigarette filters, mattresses, beer filters, brake linings, buildings and ships (Competition Commission 1973; McCulloch 2002). As a result vast numbers of people have been exposed to some form of asbestos. This paper is concerned with massive exposure to asbestos. It focuses on people who came into direct contact with asbestos; working as thermal insulation engineers (or ladders) installing asbestos insulation, and as asbestos miners or within asbestos processing plants in South Africa and the United Kingdom (UK). Many of these workers were employed by Cape plc, a company which dealt with asbestos for about 100 years, mining in South Africa and manufacturing and processing in the UK. Its activities have left a wake of questions about environmental pollution, asbestos-related diseases (ARDs), compensation and treatment.

This paper examines the legacy of these actions, exploring the lives and experiences of poor, proletarianised men and women in rural South Africa and of working class, politically disempowered men and women in the UK who, despite the very different country contexts, were all exposed to asbestos during the middle of the twentieth century. Asbestos related diseases (ARDs) have long concerned academics and there is a wealth of material on medical epidemiology (Mossman and Gee 1989; Selikoff 1977; Selikoff and Hammond 1975; Selikoff, Churg and Hammond 1964, 1968), on litigation and corporate social responsibility (Meeran 2003; Ward 2002; Newell 2001; Coombs 2002); on historical processes detailing the power of mining companies (Myers 1981; McCulloch 2002) and on the social impacts relating to health, compensation and rehabilitation (Felix *et al.* 1994; Hessel and Sluis-Cremer 1989; Randeree 1998). The literature focusing on social impacts has stressed how people obtain compensation, the difficulties of accessing grants, the frustration of inadequate medical facilities, rehabilitation of the environment and safety procedures, legal processes and medical treatment for severe forms of ARDs (Braun *et al.* 2003; O'Regan *et al.* 2007; Roberts 2002; Gravelsons *et al.* 2004). Much of this material relies on formal definitions of medical and legal categorisations of disease and examines severe cases, failing to investigate how victims themselves interpret and experience less dire forms of ARDs. This paper addresses these absences in the literature, through an anthropological approach that focuses on meaning and subjective interpretations. Using emic perspectives of how people experience, interpret and respond to ARDs, it investigates anthropological topics such as bodily experience, social relationships, kinship and gendered identity. As suggested by the opening quotes, this paper provides a comparative perspective on how people in the UK and South Africa give meaning to their experience of disease. Focusing on collective

responses extends the understanding of ARDs and illness beyond a bio-medical analysis. The comparative perspective demonstrates how people's similar experiences are framed differently in the two countries through the application of different medical, legal and political instruments. The paper thus argues that the political economy of asbestos diseases is intimately connected to how different governments frame these diseases. In so doing, the paper demonstrates the significance of legal processes and compensation for people's identity and shows how illness, although not medically defined as debilitating, can profoundly affect – and be affected by – the social and gendered identity of people.

2 Company and country profiles

The UK and South Africa have a long and intertwined history, characterised by over 100 years of British colonial occupation and racial segregation, followed by a period of dominium in which South Africa acted as a self-governing member of Britain (from 1910 until 1948). South African independence occurred in 1948, with the election of the National Party and, shortly thereafter, its implementation of apartheid principles. However, as McCulloch has shown, relationships between Britain and South Africa continued to facilitate the growth and expansion of UK companies (2002). Cape plc was one such company, which extracted raw materials in South Africa – with scant regard for the safety of its workers – and which processed manufactured goods in London's industrialised zones, showing similar disregard for the resident population until high levels of asbestos disease forced the closure of UK factories in the 1960s (McCulloch 2002; Meeran 2003; Gravelsons *et al.* 2004).

The Cape Asbestos Company Limited was incorporated in England in 1893 with the aim of mining, processing and selling asbestos-related products. It operated several asbestos mines in South Africa, including blue asbestos (or crocidolite) mines, a mill in the Northern Cape and white asbestos (or amosite) mines in the former Transvaal. In 1896 Cape opened its first factory in London processing 'yarn, cloth, millboard, steam packings, ropes and cordage' from asbestos (Competition Commission 1973: 135). From 1899, Cape operated a number of factories in England for processing and manufacturing asbestos products. After an initial period of financial difficulty, Cape's operation was bolstered by the need for fire-proofing materials during the First and Second World Wars (Competition Commission 1973). During these years, Cape produced insulation products, gas filters for respirators, fireproof lining boards intended for warships, specialised brake linings for armoured vehicles and fireproof clothing.

Demand for asbestos products remained high in the decades following the Second World War as expansion occurred throughout the UK. Although some products (such as asbestos yarn and fabric) became less desirable after the 1950s, asbestos insulation board was highly sought after and the market expanded considerably. Cape also extended its production of friction materials, particularly brake linings. As a result, the UK Competition Commission noted in 1973 that: 'Cape is the largest producer of amosite fibres and is responsible for

over 90 per cent of total world production. About 30 per cent of Cape's output comes to the United Kingdom, mainly for use in fire insulation board' (1973: 136–8).

In 1913, Cape established a factory in Barking, London in the UK. The Barking fishing industry had declined during the later half of the nineteenth century and new industries increasingly moved into the area because the Barking Creek and the River Roding offered good river transport. The Cape factory was situated on the banks of the Barking Creek, amidst chemical plants, power stations and heavy industrial plants. These were later followed by oil refineries and hazardous waste storage facilities. In neighbouring Dagenham, industrial development took off with the construction of the Ford Motor Company's assembly plant. In their heyday, Barking and Dagenham were highly cosmopolitan with companies such as Ford Motors initiating new mass production methods and providing good employment opportunities. Male workers in the construction and transport industries were drawn to the area, bringing their families to settle here as shipbuilding, electricity generation, aircraft, chemical and motor manufacturing offered attractive employment opportunities between the 1930s and 1960s. All relied heavily on asbestos.

Today the area remains heavily industrialised, more so than any other London borough. Given the decline in the manufacturing sector, Barking and Dagenham are no longer areas of opportunity. Home to 170,000 people (Audit Commission 2007), the area houses the derelict Beckton gas works, three highly contaminated power stations, one of the largest sewage works in Europe, and a large electrical switching station. It is now crisscrossed with motorways and covered with sprawling council estates. Barking and Dagenham borough has the lowest average income in London with most people earning in the region of £13,000 a year, accompanied by low levels of education (Barking and Dagenham Council 2002).² It is the 'back end' of London, or 'the whipping boy of the A13' as one ARDs sufferer described it. Although the Cape factory has been dismantled and a housing estate now covers the area where Cape unloaded and processed asbestos, Cape's activities have left Barking with a heritage of asbestos pollution. Thus, in addition to the structural conditions described above, 'high levels of long-term illness and men have the third lowest life expectancy in London' (Barking and Dagenham Council 2002: 4) have led some to describe it as a 'mesothelioma blackspot' (Gravelsons *et al.* 2004).

Whereas Barking and Dagenham are urban, industrialised, residential areas in the eastern part of London, Cape's South African involvement – and subsequent environmental pollution in the form of asbestos waste – was located in rural areas. Although Cape owned several mines in different parts of South Africa, my research has focused on the Northern Cape, where I have been conducting anthropological research for the past 20 years, and in particular on the areas of Prieska, Koegas and Griquatown.

2 In 2005/2006, 67.3 per cent of working-age people in the UK were qualified to level 2 (GCSE Grade A to C; Intermediate GNVQ; BTEC 1st Diploma or NVQ Level 2) whereas only 50.3 per cent of working-age people had this qualification in the Barking and Dagenham District (http://dcsf.gov.uk/inyourarea/statistics/1a_00AB_14.shtml accessed 5 November 2007)

In 1883, Cape acquired a crocidolite mine in Koegas and a mill for crushing asbestos in the town centre of Prieska. In 1948, Cape transferred its South African holdings to a newly-formed, but wholly-owned by Cape, South African holding company called Cape Blue Mines (Pty.) Ltd (Competition Commission 1973). Cape-owned Koegas, along with Elandsfontein and Blackridge were the largest Northern Cape asbestos mines during the apartheid era (1948–1994) (Hall 1930). Initially, all mining was done manually without compressed air and jackhammers, which meant that a man could take a whole day to drill a 30cm deep hole. After blasting, broken rock was removed using picks and shovels and the asbestos separated by hand. Underground seams were also worked by hand, by candle-light. After the invention of the pneumatic drill, conditions changed with conveyor belts transporting the ore and with primary crushers crushing the rocks, but removing and sorting the asbestos fibres was still done by hand, and primarily by women (McCulloch 2002). By 1977, asbestos production peaked at 380,000 tons, making South Africa the third largest supplier in the world (Kazan-Allen n.d.). Shortly after this, all the Northern Cape mines were closed, either because they were worked out or when, in the late 1970s and early 1980s, it became impossible to continue to ignore the medical dangers of asbestos as asbestos litigation in the United States of America expanded (Jasanoff 1995) and highlighted the links between blue asbestos – as mined in the Northern Cape – and mesothelioma (McCulloch 2002).

When the Koegas mines closed in 1979, many residents living on the mines moved to Griquatown and Prieska (discussed further below). In 1985, Prieska and many other Northern Cape towns were declared ‘dust control areas’ by the National Party Government. Although this meant that the asbestos waste dumps were to be covered with soil (*Distriksrekordboek* 1978), little was done to protect people from exposure to waste asbestos. As Kazan Allen has reported: ‘(l)evels of environmental pollution in some areas are colossal; huge asbestos dumps, including eighty-two in the Northern Cape alone, are scattered throughout the countryside. To date, the current democratic government has spent R44 million (\$7.5 million) on rehabilitation of derelict mines. Estimates that R52 million are needed to complete the task seem optimistic’ (Kazan-Allen n.d.).

Koegas is today a ghost town and an abandoned mine. It is also, however, a site around which former workers and their families have mobilised and initiated a land claim. Many residents of Griquatown and Prieska look forward to being able to return to what they recall as an idyllic rural lifestyle (albeit formerly supplemented by very low mine salaries, see McCulloch 2002). Their desire to do this is premised on the assumption that they have already been exposed to asbestos and that asbestos fibres – which will in time result in ARDs – are already lodged within their bodies.

In contrast to Koegas, Prieska is an economically active rural town positioned on the banks of the Orange River. It has abundant irrigated land that enables the production of irrigated crops, including maize, wheat, lucerne, peanuts and fruit farming alongside high value crops such as pistachio nuts, olives, figs and pecan nuts on privately-owned commercial farms. Sheep farming and game ranching occur on un-irrigated farms. Industrial development includes salt pans, leather tanning, meat production, a cotton mill, the manufacture of cattle food pellets and

a semi-precious stone industry. Former asbestos mine workers and their families have, however, only very limited access to these economic opportunities as racial and class hierarchies established during the apartheid era continue to pre-dominate. Their coloured and/or Griqua identity (discussed in more detail below), coupled with their proletarianised status as former mine workers and lack of access to land or resources means that they experience high levels of unemployment and of poverty, despite Prieska's economic strengths.³

No mining ever took place in Griquatown, although many of the people employed on Koegas and other mining sites came from here and returned here when the mines closed. Griquatown has even higher levels of poverty and unemployment than Prieska, as the primary economic activities of sheep farming, game ranching and a small semi-precious stone industry employ very few workers. Griquatown, like Prieska and most other South African towns, was constructed according to apartheid ideology between 1948 and 1994. Separate residential areas were maintained for whites, coloureds and Africans. Despite repeated government attempts to classify and separate people according to this racial logic, residents moved between these spaces and categories. They crossed the physical residential boundaries and traversed the social boundaries of apartheid-instituted 'race': they went to school together, helped each other survive, married each other, sinned and mourned together. Post-1994 and democratic elections, people are no longer compelled to reside within racially-demarcated areas although the town still resembles an apartheid city in physical and economic terms. The majority of the residents identify themselves as Griqua and/or Coloured and continue to live in Rainbow Valley (the formerly coloured location). These town residents largely survive through state payouts for old age pensioners and disabled people. So prevalent is this aspect of the town's survival that residents refer to Griquatown as the 'pension town'.

3 Recognising risk: banning asbestos

It is now widely acknowledged that ARDs can affect anyone exposed to microscopic asbestos fibres. In their review of ARDs, Mossman and Gee (1989) categorise four types of benign pleural disorders (namely pleural effusion or fluid on the lungs, pleural plaques, pleural fibrosis and rounded atelectasis). Most people suffering from these benign pleural disorders do not experience pain but

3 The Northern Cape experiences high levels of poverty with about half a million poor people, or 61 per cent of the population, living below the poverty income line. This is slightly above the national average in South Africa, which is 57 per cent of the total population living in poverty (HSRC 2004). Although official statistics cite only 14 per cent of the Northern Cape population is unemployed (based on people being actively engaged in the search for formal employment), almost 45 per cent of the population is recorded as economically inactive. This latter figure presents a more active indication of people's unemployment and poverty (Statistics South Africa 2003 cited in Northern Cape State of the Environment Report 2005).

may experience shortness of breath and some discomfort. Three forms of disease, which have more serious and debilitating consequences, are also caused by asbestos: asbestosis and lung cancer are primarily occupational hazards as contracting these diseases is linked to rates of exposure to asbestos whereas mesothelioma (a malignant cancer) is unrelated to dosage and trivial exposure can lead to cancer of the abdominal cavity or lung lining. Mesothelioma is always fatal and people afflicted with this disease face a painful, imminent death. All ARDs have extended latency periods and only manifest themselves in physical symptoms 20–40 years after exposure to asbestos. Recent research on Alimta (pemetrexed disodium) has shown this to be a drug which prolongs life and alleviates the distressing symptoms of mesothelioma, but this is not a cure and all forms of ARDs are ultimately untreatable.

In 1929, in the UK, the Barking Council initiated its first enquiry into the dangers associated with asbestos. By 1930, Members of Parliament were informed of an ‘epidemic of asbestos disease among British asbestos workers’ and this resulted in the 1931 Asbestos Industry Regulations. These regulations determined a ‘safe’ level, calculating that a worker who had between 15 and 20 years exposure had a 33 per cent chance of contracting asbestosis. These ‘safe’ levels were amended in 1960 which increased the legal limit of exposure and as a result increased workers’ chances of contracting ARDs. In 1968 standards were adjusted downwards, and this was later estimated to reduce risk of asbestosis to 10 per cent (London Hazards Centre 1995). Since the 1980s, official policy has prohibited trade, application and supply of blue asbestos (crocidolite) and brown asbestos (amosite). A host of legislation has been enacted to control work environments and asbestos related risks.⁴ Amosite and crocidolite asbestos were banned in 1985/6 (Gee and Greenberg 2002) and chrysotile asbestos in 1999 (Kazan-Allen 1999). These changes in legal exposure levels reflect the politicisation of risk within the UK, the power of the asbestos companies and the uncertain nature of scientific research. These factors have combined to produce what, in retrospect, appears to be a certain arbitrariness in decision-making and policy on hazardous materials and occupational exposure.

In South Africa, research on the medical effects of exposure to asbestos was initially suppressed by the asbestos mining industry, whose actions were closely supported by senior members of the apartheid state who supported the National Party Government’s racial capitalism and sought to protect the foreign exchange generated by asbestos production in South Africa (McCulloch 2002). As a result, many people believed asbestos-related diseases to be natural. As Braun and Kisting explain, ARDs have been understood primarily through the lens of disease causality which focuses on the physiological action of the fibres. This has separated ARDs from its social roots and the associations between workplace organisation, occupational health legislation and disease remained unexplored (2006). Bergland (2001) identifies this as a feature of toxic waste contamination which is ‘imperceptible to the senses’. As such, it is necessary to be ‘constituted

4 Including the *Health and Safety at Work Act 1974*, the *Asbestos (Licencing) Regulations 1983*, the *Control of Asbestos at Work Regulations 1987*, which was amended in 1992, the *Control of Asbestos in the Air Regulations 1990* and the *Asbestos (Prohibitions) Regulations 1992*.

in discourse' before it can be recognised as a problem. The vast majority of Griquatown's and Prieska's adult residents had worked on asbestos mines in the Northern Cape. As children they were constantly exposed to fibres – playing on the asbestos dumps or being breastfed while their mothers cobbled⁵ asbestos fibre. They clearly linked ARDs – known locally as *mynstof* (literally mine dust)⁶ – to the mines, but initially failed to make the connections between the actions of the mining corporations and their own lack of well-being. It was, they believed, a disease about which nothing could be done. In a medical sense, this is correct. Once one has been exposed to asbestos and has procured ARDs, there is no medical cure. In a political and economic sense, however, something could have been done but never was.

The development of an awareness about these political and economic dimensions began in 1979 when, faced with the closing of the asbestos mines and mill and the widescale loss of jobs in Prieska, Prieska's residents formed an organisation entitled the Concerned People Against Asbestos (CPAA). The CPAA focused initially on improving people's access to compensation and local experiences of hardship. In the lead-up to the democratic elections of 1994 and the end of apartheid, a concerted effort to deal with asbestos-related problems emerged as South African civil society organisations and rural communities questioned the dangers of asbestos exposure (Felix 1991; McCulloch 2005). The CPAA broadened its campaign to include environmental and health issues (such as abandoned asbestos dumps and the rehabilitation of mines, the prevalence of asbestos disease, doctors' attitudes and accessibility and the presence of asbestos in ceilings and roofing of houses and schools) and now sought to negotiate with various government departments (such as the Departments of Environmental Affairs, Water Affairs, Health, Housing, Labour and Minerals and Energy) with Trade Unions (the National Union of Mineworkers or NUM). Working with medical scientists to document the levels of asbestos exposure and disease helped the CPAA to see the international dimension of the problem, to make contact with international lawyers and to consider asbestos in terms of human rights and corporate social responsibility. The transition to a democratic government, the introduction of a rights-based constitution and human rights lawyers' visits to affected towns thus also increased people's awareness of the political underpinnings of ARDs (Waldman 2007a).

Post-1994, the democratic South African government has supported activities for legal redress. It has also sought to facilitate environmental rehabilitation and to provide improved health facilities, although financial constraints have made these challenging undertakings. Today, South Africans have little doubt about the dangers of asbestos and all asbestos mining is banned, while the use of manufactured asbestos products is being phased out.⁷ Within the Northern Cape, certain towns and rural areas are acknowledged to have been polluted by asbestos and

5 Cobbing is a mining term which refers to the process of breaking ore into small pieces and sorting out the better quality fibres by hand.

6 The local term *mynstof* is used to refer to a wide range of medical categorisations of asbestos disease, including pleural plaque and asbestosis, lung cancer and mesothelioma.

people from a variety of backgrounds have come together to seek solutions. Prieska, in particular, has been prominently featured in the media. The close proximity of asbestos mines, dumps and the former milling of asbestos in the centre of the town have heightened the likelihood of people contracting ARDs; and Prieska residents are ten times more susceptible to ARDs than the national average (Kielkowski *et al.* 2000).⁸ In conjunction with other polluted towns and citizens, the CPAA addressed questions of exposure, risk and reclamation and initiated an international campaign to secure corporate justice. These activities resulted in a transnational court case, with 7,500 South African claimants taking Cape plc to court in the UK. In July 2003, Cape plc transferred £10.5 million to the human rights lawyers representing these claimants, in accordance with an out of court settlement that had occurred on 22 December 2001. This legal success story (see Coombs 2002; Meeran 2003; Ward 2002 and Waldman 2007a) has enhanced opportunities for compensation as other mining companies respond to the threat of litigation (Thompsons 2003; Morris 2004).

Despite attempts by both the South African and the British governments to control – through banning – the use of asbestos and to limit the numbers of people affected with ARDs, the problems persist. This is because of the widespread presence of asbestos – as a waste product from both mining and manufacturing – present in the environments, because people's prior exposure to asbestos makes them susceptible to contracting asbestos diseases in subsequent years, and because of the vast quantities of asbestos lodged in residential buildings, factories and other urban structures. In both South Africa and the UK, asbestos diseases have continued to increase, although future predictions are not available for South Africa which does not officially register occupational diseases (*Mail and Guardian*, 31 August 2005; *The Mercury*, 24 July 2007). In the UK, predictions – widely believed to be conservative – estimate that ARDs will peak between 2011 and 2015 with 2,000–2,500 mesothelioma deaths per annum (Health and Safety Executive 2006).

7 Trade Union Advisory Committee to the OECD, 30 May 2005 (Draft) *OHSE Sust/Dev Country Profiles for Asbestos*, www.global-unions.org/pdf/ohsewpL_6.EN.pdf (visited 16 June 2005).

8 For many reasons, including diagnosis difficulties, lack of adequate technology and difficulties tracing unrecorded migrant workers, it is very hard to estimate the extent of ARDs. Evidence of ARDs are characterised by 'gross under-reporting' and a lack of reliable data (Roberts 2002). Nonetheless, Botha *et al.* argue that in high exposure crocidolite areas (which includes Prieska), the annual mesothelioma and asbestosis death rate for white South Africans was 542 per million as compared to 24 per million in the control area (1986). Kielkowski *et al.* report that the rates for ARDs in Prieska are 366 infections per million men and 172 per million for women whereas national incidence rates for South Africa are 37.0 per million for men and 16.3 per million for women (2000).

4 Recognising risk: emic understandings of danger

In both the Northern Cape towns and in Barking and Dagenham, it is hard to assess how much people knew of the dangers of asbestos at the time of exposure. On the one hand, one commonly hears people assert their ignorance. Katjie Smit, a mother in Prieska for example, says she did not know of the dangers of asbestos and now she worries that she brought the illness into the house through collecting firewood in the vicinity of the mines. On the other hand, some people working with asbestos recognised some of the risks to which they were exposed. South African mineworkers knew that there were possibilities of them contracting *mynstof*. Gert Bogoswe, who worked as a driver transporting asbestos, had, for example, heard that asbestos was dangerous. There was, however, little he could do about it. After being taken for x-rays, his company simply said 'no, you're not sick'. It was only later, when Gert consulted a private doctor, that his diagnosis of *mynstof* was confirmed. Similarly, Paul Myers, who grew up and worked on Koegas mine, described how he took his own precautions, using an *ou lappie* (literally an old cloth) over his nose and mouth, or a 'nosebag' to filter some of the dust. Nonetheless, people's attempts to protect themselves were limited and far removed from scientific work on asbestos diseases. For example, the relationship between smoking, lung cancer and asbestos is well established in the international scientific literature since 1955 (Doll 1955). The risks of contracting lung cancer are, for people who both smoke and work with asbestos, multiplicative (Hammond, Selikoff and Seidman 1979). In other words, a smoker who is exposed to asbestos has a far greater chance of contracting lung cancer with some authors suggesting that the risk is ten times higher (Gravelsons *et al.* 2004). This academic knowledge was however not disseminated within South Africa and never communicated to workers who were encouraged to believe, throughout the apartheid era and contrary to their own experiences, that asbestos was non-hazardous. Many of the Northern Cape residents continued to smoke, initially not associating this activity with the development of *mynstof* and with increased risk. As described above, their political mobilisation around asbestos issues has, over the past 10 years, increased this awareness and many people now recognise that smoking (and, they add, drinking alcohol) facilitates the absorption of asbestos into their bodies.⁹

Laggers and former asbestos workers based in Barking and Dagenham, similarly were aware of the dangers, although they were never officially informed that they were being exposed to danger by their employers or contractors. Nor were they supplied with any safety equipment. As one resident explained, 'we thought asbestos wasn't as dangerous [as it is]. We thought one in a hundred would get it. But others would not – we all have examples of men who worked with asbestos, who smoked, drank and were fine'. Nonetheless, many workers were implicitly

9 Informants suggested that if, prior to an x-ray, one smoked about 30 cigarettes or drank condensed milk or milk, it increased their chances of being diagnosed with *mynstof*. The smoke was said to make your lungs *vaal* (pale, white or bleak) while the milk provided a whiteness and looked like calcification.

aware that there were risks involved and took their own precautions. For instance, many ladders developed a constant dislike of dust and always sought to dampen down any dusty materials before they worked with them. One man described working with calcium silica slabs that had to be cut into wedges and used as insulation: 'I always used to dip them or get a hose to get rid of the dust. I've always had a bit of a thing about dust with everything so dusty. I would take a deep breath and dip it, then come back and breathe'. Others refused to enter very dusty places, drank bottles of milk in order to line their stomachs against the asbestos and wore handkerchiefs over their mouths. In contrast to the South African workers, very few of the ladders smoked precisely because they were aware of the potential connections between smoking and lung cancer (Hammond, Selikoff and Seidman 1979).

In the research sites, in both countries, people developed their own categorisations of asbestos and risk in order to believe they were avoiding danger. These categorisations were based partly on their own experiences, and partly on the ways in which companies promoted asbestos. Thus, in the UK, people living in and around the Cape factory in Barking believed that blue asbestos (or crocidolite) was very dangerous, but that the white asbestos (or amosite) emanating from the factory was safe. The theory that blue asbestos was responsible for the most virulent of forms of ARDs – namely lung cancer and mesothelioma – was a 'particularly successful line of defence' used by asbestos companies in the 1980s. Workers 'whose jobs depended on asbestos were, like the frightened public, glad to embrace the theory' (*New Statesman*, 27 August 1982: 6). By 2006, when my research was conducted, most Barking and Dagenham residents reflected, in disbelief, that they had accepted this explanation and had, as a result, not worried about the dust spewing out from the factory or about their working conditions.¹⁰ By contrast, South Africans who were mining and cobbing blue asbestos in the Northern Cape were not exposed to this argument. As explained above, they understood *mynstof* to be a 'natural' disease. As early as the 1920s, residents of Prieska accepted that if someone contracted 'water on the lungs', they faced imminent death. These symptoms of mesothelioma were, however, undiagnosed and unrelated to the asbestos mines (McCulloch 2005). It was not until the mines closed that people became aware of the extent of danger and – as they had already lost their livelihoods – they were thus more concerned with asbestos left exposed or used in the construction of buildings and homes in the town.¹¹ They assessed risk in terms of fibre length (the longer fibres being

10 Since the 1980s official policy has prohibited trade, application and supply of blue asbestos (crocidolite) and brown asbestos (amosite). A host of legislation controls work environments and asbestos related risks including the *Health and Safety at Work Act 1974*, the *Asbestos (Licencing) Regulations 1983*, the *Control of Asbestos at Work Regulations 1987*, which was amended in 1992, the *Control of Asbestos in the Air Regulations, 1990* and the *Asbestos (Prohibitions) Regulations, 1992*. Amosite and crocidolite were banned in 1985/6 and Chrysotile asbestos in 1999 (Kazan-Allen 1999).

11 Asbestos waste products were commonly used in the construction of Northern Cape roads, buildings, temporary school classrooms, and roofs and ceilings. In March 2000, the CPAA pointed out that no risk assessments had been done on the degree of asbestos used in buildings in towns such as Prieska, Maryvale, Griquatown, Boegoeberg, Niekerkshoop and Danielskuil (Waldman 2007b).

more problematic) and texture (shiny fibres were considered dangerous), giving no indication that they knew about the presence of microscopic fibres. This emic emphasis on length and texture meant that residents were not concerned about the equally dangerous, but microscopic and invisible fibres which surrounded them (see Waldman 2007b). The use of different discourses in each country meant, in both cases, that people continued to work and live with the risks that asbestos created. They considered their conditions to be natural in that the connections between occupation, workplace organisation, occupational health legislation and disease were not explicitly recognised or articulated.

Nonetheless, in both South Africa and the UK, people used these discourses of harm and sought to minimise risk by identifying dangerous contexts and avoiding exposure to asbestos. In many respects, there was nothing people could do about the risk and – when this research was conducted – they felt that there was little point in worrying about current exposure as they had already been exposed. Because of the latency period between exposure and diagnosis, many people felt that they may already have ARDs, even if they had not been diagnosed. They felt therefore that there was little they could do except wait and hope that their good health would continue. In both South Africa and the UK, almost all the people interviewed knew people – usually close family members – who had contracted or died of ARDs. Thus, one thing that people did spend a lot of time doing was discussing their conditions, assessing their health, visiting doctors and debating the degree of compensation they could claim. As discussed in the following section, this meant that the formal, legal categorisation of ARDs – and their accompanying degrees of severity – was of critical importance.

5 Categorising and diagnosing ARDs

Asbestos-related diseases are difficult to pin down, both medically and socially. Primary areas of disagreement concern medical categorisation, diagnosis and the severity of mesothelioma, lung cancer, asbestosis, pleural thickening and pleural plaques. Different medical, legal and governmental understandings of these diseases have been used in South Africa and in the UK during different historical periods. This variability in conceptual framing of asbestos diseases also shapes people's experience of illness, possibilities to claim compensation and has, as discussed in more detail later in the paper, significant impact on their gendered identities.

In October 2007, after a long legal battle, the House of Lords ruled that sufferers will no longer be able to claim compensation for pleural plaques in the UK. The remaining diseases for which people can legally claim compensation in the UK are pleural thickening, asbestosis, lung cancer or mesothelioma.¹² In South Africa, people who suffer from ARDs are eligible to receive a state pension if they have more than 40 per cent damage to their lungs (or what is known as second-degree illness). This provides a small but steady monthly income of R820 per month (approximately £60.00 per month). In addition, former employees of the mines can

receive compensation from the government-run Medical Bureau of Occupational Diseases (MBOD). The MBOD pays compensation for asbestosis, mesothelioma and lung cancer (Myers 1981: 241) and distinguishes between 'first degree' asbestosis or pleural plaque (in the past it used these terms interchangeably) and 'second degree' damage (the presence of asbestos fibres plus additional scarring on the lungs, either from tuberculosis or smoking).

In both South Africa and the UK, apparent similarities and overlaps between the definitions of asbestosis and pleural plaque raise questions about medical definitions and legal categorisation of compensation. Medically, the various forms of ARDs are considered to be different kinds of diseases, rather than as variations in degrees of severity. Pleural plaques are not seen as being related to other, more severe forms of ARDs such as lung cancer or mesothelioma. Pleural plaques are billed as benign and inert and, as a result, are said to be unlikely to lead to further damage of the lungs. People suffering from these 'benign' pleural disorders are expected not to experience pain but may have some breathlessness and discomfort (Mossman and Gee 1989; Rudd 2002). UK doctors, in particular, produce a convoluted argument in which pleural plaques are seen as evidence of exposure to asbestos and it is this exposure – rather than the presence of pleural plaques – which leads to other asbestos diseases:

Pleural plaques are not thought to lead directly to any of the other benign varieties of asbestos-induced pleural disease, nor to pose any risk of malignant change leading to mesothelioma. Their presence may indicate, nevertheless, a cumulative level of asbestos exposure at which there is an increased risk of mesothelioma or other asbestos-related disorders. On average, in the absence of any other evidence about exposure, it is reasonable to assume that subjects with plaques will have had higher exposure to asbestos than subjects without plaques. The frequency of development of other complications of asbestos exposure in persons with plaques is not a function of the presence of the plaques, but of the asbestos exposure that caused plaques.

(Rudd 2002: 344)

12 This prolonged process requires that a claimant's employers were insured, although compulsory insurance in the form of employers' liability was only introduced in 1972. Many ladders and other workers were in fact exposed to asbestos long before this date. The Financial Services Compensation Scheme is intended to cover those cases where both companies and their insurers have gone out of business and which therefore cannot be sued. The Scheme pays 100 per cent if the claim was covered by compulsory insurance, and about 90 per cent for cases of exposure before 1972 which are not covered by compulsory insurance. People can also claim from the government Department of Works and Pensions which administers two schemes, namely the Industrial Injuries Disablement Benefit and the Pneumoconiosis etc. (Workers' Compensation) Act of 1979. The Industrial Injuries Disablement Benefit is for patients who contracted the disease while in employment after 4 July 1958. The Medical Board assesses each case and only provides compensation when disability is judged to be greater than 14 per cent. This generally excludes cases of pleural plaque and pleural thickening. The Pneumoconiosis etc. (Workers' Compensation) Act provides a fixed rate of compensation (determined from scales for age and degree of disability) for workers whose employers are no longer in existence. Compensation can be obtained for diffuse pleural thickening, asbestosis, lung cancer and mesothelioma. This compensation can also be awarded to widows and other dependants who may claim after the death of the worker (FFW n.d.; FFW summer 2006).

Asbestos sufferers however do not draw a distinction between pleural plaques and other forms of asbestos disease. They do not accept, as Rudd argues, that other asbestos-related complications are not related to the presence of plaques. Their experience of ARDs, and hence their emic interpretations, emphasise the interrelated nature of these diseases. In both South Africa and the UK, people I spoke to were very clear that they saw the disease as progressive and inter-related: the following represent a small selection of the comments I heard.

It doesn't stand still. The mine dust grows, it constantly gets worse. It's a dust which spreads in your lungs.

(Sarah Johannes, Griquatown, South Africa)

Everyone begins with pleural plaque, its verkalking [sedimentation, becoming like stone] ... on the lungs. It goes to asbestosis, then to pleural asbestosis, and to cancer – and it ends here. It happens to everyone, it ends with mesothelioma and you die.

(Flip Barends, Griquatown, South Africa)

It's one sickness, it's the same for everyone, it's just the stages. Everyone ends up with cancer.

(Maria Berends, Griquatown, South Africa)

They diagnose us in the beginning with pleural plaque but it becomes asbestosis or mesothelioma either in the hospital or in the following weeks.

(Jimmy Croft, Dagenham, UK)

They say pleural plaques are not life threatening, but what it develops into is.

(Ben Smythes, Barking, UK)

In 2000, Wikely argued that, in Scotland, the absence of any 'clear statutory guidance' meant that medical practitioners were exercising individual judgments when making their diagnoses of asbestos diseases. He further suggested that asbestosis was a term used to cover a 'range of conditions of varying severity', which allowed doctors to make more or less conservative diagnoses, based on 'difficult questions of judgement' (2000: 116). This is contrary to much medical opinion, which represents the diagnosis of the various ARDs as clear-cut and unambiguous. Nonetheless some medical personnel at the Griquatown hospital recognised the difficulties of diagnosing asbestos-related conditions, saying that 'as soon as you diagnose it [*mynstof*], it's basically at the end stage [mesothelioma and imminent death]'. Diagnosis is complicated by the delay between exposure and the onset of asbestos diseases, by the extremely rapid deterioration experienced by mesothelioma sufferers and by the specialist skills – which are not always available in South Africa's rural areas – required to read x-rays. In addition, high rates of tuberculosis (TB), asthma and allergies are characteristic of the area, and made worse through smoking tobacco or hemp rolled in newsprint and breathing woodsmoke from cooking fires in the homes. This leads doctors to begin by testing for TB. Matters are further complicated by the links between TB and HIV/AIDs and the stigmas associated with these diseases. As

there is no real treatment for people with ARDs, particularly the less severe forms of disease, medical staff see little point in investing significant time and expense on identification of this disease. Indeed, patients themselves are often reluctant to travel away from home for testing and can ill-afford the minimal fees associated with ambulance transport and hospital costs (Waldman 2007b). Thus, as a Medical Sister at the Griquatown hospital explained, 'if you've had TB once, then it stops with TB. Doctors and hospitals don't bother to look for further explanations; they don't explore life histories or work histories'.

Medical diagnoses are also intertwined – and in the process reified – by the compensation associated with particular forms of ARDs. The MBOD's approach, outlined above, has been to compensate 'first degree' asbestosis (also called pleural plaque) and 'second degree' infection (asbestos infection plus additional damage to the lungs, either from tuberculosis or smoking) as well as for lung cancer and mesothelioma (Myers 1981). As a result, most workers expected – and received – compensation in the form of two bulk payments.¹³ The first compensation payment was generally made after a person had been diagnosed with first-grade asbestosis, with a second payment if and when the disease progressed to mesothelioma or if the person contracted pulmonary tuberculosis. This MBOD categorisation, differed from the UK legal and medical system. In interviews with me, senior medical specialists in both South Africa and in the UK commented on the laxness or 'generosity' of the MBOD criteria. One leading UK research physician of lung cancer who examined 500 of the MBOD records, observed that people who had received ARDs compensation had 'loads of other things'. Another medical professor from the Respiratory Unit at Johannesburg Hospital had worked in the Northern Cape on ARDs, and explained that smoking and tuberculosis are the primary causes of pulmonary disease. He therefore believed it possible for people to 'smoke their way into receiving an MBOD payment'.¹⁴

UK asbestos sufferers also stress that their experiences and beliefs diverge from medical definitions of disease. Like South Africans, they blame a host of other symptoms on the presence of asbestos in their lungs. Bobby Jones said, for example, 'I disagree with Dr Dunne's diagnosis. He said I won't get asbestosis, it's not that bad. But why am I like this [coughing, breathless] now'? Similarly, lagggers argue that the presence of pleural plaques on their lungs is an indication of their extensive exposure to asbestos. The lagggers insist – contrary to medical opinion – that the pleural plaques indicate the presence of other, worse diseases dormant in their lungs. They support this argument by pointing out that men they know and work with are initially diagnosed with pleural plaque, but inevitably die of mesothelioma and lung cancer. These men also believe that doctors are misdiagnosing them, seeking deliberately to underestimate the significance of their disease: 'pleural plaque is a trick, they diagnose us with pleural plaque to pay as little as

13 In order to claim compensation, one had to be able to show evidence of mine employment. As the mines had not kept records and many workers were illiterate, a few former employees completed the application forms and vouched for applicants' former employment on the mines.

14 However, research in the Northern Cape noted significant undiagnosed and uncompensated instances of ARD (Hopley and Richards n.d.).

possible'. Irving White, for example, was 'compensated for pleural plaque, but he has scarring of the lungs, which I see as asbestosis, he has asbestosis and mesothelioma', said his friend James Long. As was the case in South Africa, some UK doctors were simply not interested in exploring the possibility of ARDs. Anne Longmore for example, told her doctor that she had worked with asbestos, but he 'didn't want to hear'. Gavin Knowle spoke of how doctors at East Ham Chest Clinic recognised that people had ARDs, but because they thought of pleural plaques as being symptom-less and non-progressive, they failed to tell their patients.

Other Barking and Dagenham residents were told by medical specialists that they were not suffering from anything other than pleural plaque and that they should have no symptoms from this. Often patients did not agree with medical diagnoses. For example, Gavin's friend went to the hospital with swollen fingernails.¹⁵ He was told that it was not asbestos-related. Gavin disagreed. 'I know the signs, I know its asbestos'. Sometimes, as demonstrated in the following case, patients were informed that their case was not serious, but informal opinions voiced by other medical staff persuaded them otherwise. Mildred Smythes explained how her husband, Max Smythes (who had worked for Cape for less than a year when he was 15 years old) had been to see Dr Dunne complaining about pains in his chest. On his second visit, arranged because Max could not accept Dr Dunne's conclusion that he was not suffering from an asbestos-related condition, they saw a woman doctor who examined the x-rays before meeting Dr Dunne. Mildred looked at the x-rays with this doctor and asked about some marks on the x-rays: 'what's that? It looks like when the snows first come, like little flakes'. The doctor explained, 'it is because of the asbestos'. Mildred queried this, saying: 'But Dr Dunne says he hasn't got asbestos'. The doctor replied confidently, 'I'm sorry but that's asbestos'.

Caroline Collins, another Barking resident whose mother and aunt worked at the Cape factory, has also been diagnosed with pleural plaques. She has difficulty breathing which, her doctor insists, stems from emphysema. Caroline feels differently and says 'I disagree with my lawyer that it [pleural plaque] does not affect your breathing. I have scarred lungs, damaged lungs. It must affect me; I don't have the same normal breathing air capacity'. Peter Bill's experience illustrates similar disagreements with medical staff. He went to two doctors, one of whom claimed he did not have an asbestos-related condition whereas the other did. Ian Bayley's local hospital first identified his problem as asbestos-related fibrosis. He was then referred to the London Chest Hospital where he was diagnosed with Alivarius which is a dust-related disease, but not linked specifically to asbestos. But Ian 'knew' that he had asbestosis because he had worked as a lagger's assistant and his manager had asbestosis. He wrote to the doctor at the London Chest Hospital and requested another appointment. After seeing him for 'one minute', the doctor said, 'it's definitely Alivarius and that he 'hadn't worked with asbestos for long enough'. Ian went back to his local hospital

15 Known as 'clubbing', this involves a thickening of the fingers and a softening and rounding of the fingernails. It is associated with a range of heart and lung diseases, but many non-medical people see it as particular to ARDs.

which specified that his condition was 'definitely asbestos-related'. The contradictory information made him angry and very depressed. Ian and his wife simply didn't believe the doctor's verdict that he was not suffering from ARDs. As a result, Ian told his wife that after his death he wanted a post-mortem: 'I want it to be stated on my records that I had this disease'. After his death, Ian's wife requested an autopsy which she believes found evidence of asbestosis. Although she has never looked at the autopsy, she was paid compensation which she believes confirmed that Ian had an asbestos-related disease. She commented that receiving the compensation made her feel better as it was a formal act of 'acknowledging that he's got it', but also that, as explored in more detail below, spending the money after his death made her feel guilty.

There is no doubt that the bulk of medical attention is focused on the more extreme forms of ARDs. Here doctors have little difficulty recognising the stressful experience and emotional difficulty associated with diagnosis. Clayson points to the 'burden' of medical interventions for mesothelioma patients: the fact that people experience unpredictable pleural effusions,¹⁶ emergency admissions, traumatic interventions, have to visit multiple hospitals and consultants, often end up seeing junior doctors, that the internet provides a confusing array of 'best' medicine and that sufferers often don't know enough about their own situation (2006). She argues that mesothelioma patients are particularly vulnerable to suffering. They have to live with uncertainty and, contrary to other diseases, this is a downward path with few stable periods. Patients have no sense of mastery over mesothelioma. In addition, many people suffering from asbestos diseases know all about the symptoms and experiences associated with it and expect the worst. However, my research showed that in both South Africa and the UK people not diagnosed with mesothelioma also experienced very acute experiences of suffering and that this distress was often associated with the process of diagnosis. As described above, the failure of medical staff to diagnose ARDs, particularly in the less acute forms of disease, increased people's concern and stress. Lee-Anne Fortune in Griquatown commented that:

Some nights I am so concerned, if I could only know what it is. I really thought that if they said it's asbestos, then I would get treatment. It makes me worry, I would like to know what causes the pain. They say it is not cancer of the chest ... you can feel it easily, it's under the chest and behind my shoulder, it's a lameness and then the pain moves forward again.

Ultimately for many South Africans and UK victims it was not only about the compensation money and the clinical process, it was fundamentally about the recognition and acknowledgement – from their doctors and society in general – that they had ARDs. Given this, it is not surprising that many people spoke about their pain and the lack of diagnosis as a burden: 'it's a ... tiredness and a thick, heavy pain that won't go away. It's like you have something inside you, like a stone that's lying behind your shoulders' said Annette Diamant.

16 Pleural effusions are a build-up of excess fluid in the pleural cavity, a fluid-filled space around the lungs which prevent the expansion of the lungs, impair breathing and are extremely painful.

6 Treating and fighting ARDs

Medical facilities in the rural areas of South Africa are not nearly as well-resourced as those in the UK's East London.¹⁷ Nonetheless, facilities, expertise and financial resources are not enough to help asbestos sufferers and, even in places like Barking and Dagenham, medical treatment for all forms of asbestos disease is limited. In Barking and Dagenham no specific medical intervention is used for people with pleural plaque where some doctors have been reported 'not to believe in pleural plaques'. People in Griquatown and Prieska are provided with vitamin pills (known as 'strength pills', 'water pills', 'salt pills' and so on) by the clinic, with the aim of building up their strength and general health. This absence of specific care leaves asbestos sufferers to find their own ways of treating the disease and of fighting ill-health. In the arid, semi-desert environment of the Northern Cape, South Africa, the dryness of the air is seen to aid asbestos sufferers. Basie Pieterse explains, for example, that ARDs develop more quickly in wet climates. 'If you contracted it here, you must stay here. If asbestos gets wet, it grows, it becomes longer and it doesn't break. It takes lots of moisture. Asbestos is a wetness which swells, grows and blocks your lungs'.

Many people from South Africa – and from the UK (described below) – made this association between asbestos, moisture and dryness. In their accounts of the disease, asbestos fibres lodged in their bodies were seen to have alien-like qualities and a sense of agency over which people themselves had no control.¹⁸ They argued that the fibres, if dry, would form a cocoon and develop a hard outer layer. But because asbestos continually needed water, it would draw moisture from the person's body. These emic interpretations of illness and its agency matched people's physical symptoms: particularly an incessant cough and ever-present phlegm that constantly made them thirsty. People therefore sought to keep the asbestos within their bodies moist and they did this through drinking a combination of herbal remedies and western medicine. Gert Bogoswe, for example, commented that 'when it burns and dehydrates me, honey helps to keep it moist'. Most people used local plant remedies – such as *Wynryk* (*Ruta graveolens*), *Wildeals* (*Artemisia Afra*) and *Kankerbos* (*Sutherlandia Fruitescens*) – because the bitterness of these plants was believed to help the body's pain, cleanse the body and strengthen the blood. Almost everyone drank cough syrup of some kind or other because this 'kept the lungs moist' and because 'other medicine did not have this oiliness'. One particular brand, Scots Emulsion, was said to be effective in 'building the lungs up, the lungs are too flat [weak or compressed by the plaques]'. In addition, people drank a combination of honey and Zambuk (a salve comprised of oil of eucalyptus, camphor, thyme, and

17 Residents of Barking and Dagenham also experienced financial constraints and inadequate medical facilities. Ian Bayley became really sick in 2004 and was permanently confined to bed. Initially the respiratory nurse came to visit every six months or so, but then financial cutbacks meant that she stopped visiting.

18 Balshem similarly describes this alien-like quality in her work amongst residents of a Philadelphia cancer 'hotspot'. Her informants described cancer as a 'great big thing that's eating up your whole insides' and as being like a 'pacman gobbling up your insides' (1991: 158).

sassafras, that is not designed to be taken internally); cooking oil and vinegar; or fish oil and vinegar because ‘the oil takes the burning away and makes it moist’ while the vinegar, like the herbal remedies described above, provides the bitterness to relieve pain, cleanse and strengthen the body. Most people also used various forms of salve designed for muscular pain – such as Zambuk, Deep Heat, or Tiger Balm – which they rubbed on their bodies in an endless pursuit of relief from their discomfort.

Residents of Barking and Dagenham echoed these emic concerns about the disease. They, like the people of Griquatown and Prieska, associated notions of moisture and dryness with asbestos. The association between asbestos and moisture is evident in Malcolm Barker’s description: ‘asbestos grows in your lungs like a reef, like a coral island ... It turns like a stone when they take your lungs out’. People also wondered if asbestos mutated their genes and could be passed on to their dependents. This is partly because of how they conceptualised their bodies fighting the asbestos fibres lodged within them. Many residents argued that their physical bodies went through stages that affected their ability to resist disease. If someone was very young when first exposed to asbestos, he or she was more likely to contract ARDs because young bodies were considered to be more vulnerable and less able to resist asbestos fibres. If the person was older when exposed to asbestos, then ARDs would progress more slowly as his or her resistance was stronger. Understandings of bodily resistance to disease were, however, not only aligned within an age spectrum. Some lagers understood their bodies to go through periods of regeneration, similar to the way one’s skin is constantly shed and replaced, based on a seven year cycle. These regeneration processes were attempts, by one’s body, to return to its more youthful condition. This process or regeneration was stressful because, in seeking to refresh and reinvigorate itself, the body also created new vulnerabilities associated with youthfulness and, in so doing, reduced its established resistance to ARDs. Indeed as one lager said: ‘I worry every seven years’. In this emic understanding, individual bodies acquire an agency and ability to determine the extent to which ARDs progress, as opposed to the biomedical, clinical argument suggested above. It was notions such as these which explained why some men lived to 90 without showing any symptoms of asbestos while others died in their early thirties. The application of this emic model, in which older people were more able to fight the disease but still experienced cyclical moments of vulnerability, enabled individuals to explain why other family members or friends may have experienced ARDs while they themselves showed no symptoms or vice versa.

South African ARDs sufferers sought to fight ARDs by staying healthy. They tried to eat more vegetables and men tried, despite their difficulty breathing, to get regular exercise by going for walks. As Rik Matlu commented, ‘the further you walk, the worse it [your breathlessness] gets, so you just walk more slowly’. This attempt to stay fit and healthy was echoed in Barking and Dagenham. Ben Smythes, who was diagnosed with pleural plaques, described how his doctor instructed him to ‘keep the elasticity of me lungs’ through exercise. ‘He said I should use the stairs, push myself to the limit, jog. This is what I’ve done’. Indeed Ben has taken the doctor’s message so seriously he hasn’t had a holiday in 15 years. ‘I’m frightened that if I stopped, if I didn’t keep going, I wouldn’t start again’. In addition, Ben has flu injections every year to ensure that he does not get sick

and have to retire to bed. He does not do any thing that might cause him additional stress. He has not moved house, he tries to be relaxed at all times. This is because he was warned by the doctor that being stressed may 'bring it on' and that, in order to keep ARDs at bay, he should not change the rhythm of his body. 'It is very important, it was drummed into me that stress can change me condition. I have trained myself to have peace of mind'.

Despite these tremendous efforts, Ben is unable to win his battle with pleural plaques. No matter how much he tries to stay fit, to remain calm and relaxed, ultimately – and in contradiction with the medical model – he believes that he is going to succumb to other more severe forms of ARDs and to die. This knowledge is derived from his personal monitoring of his body – despite trying so hard to stay fit and unstressed, at his last medical he noticed that his breathing capacity has declined – and from his association with other Barking and Dagenham ladders suffering from ARDs. Similarly, in South Africa, where ARDs affect extended families and communities, collective knowledge of what it means to have ARDs is widespread. In the Northern Cape – as well as other former asbestos mining areas in South Africa – '(v)irtually every resident has a relative or friend who is sick or who has died from what the residents call "asbestos"' (Braun and Kisting 2006: 6). The widespread damage done by asbestos mining and production has recently been confirmed in a study which found that 'asbestos pollution from an industrial source greatly increases mesothelioma risk. Furthermore, relative risks from occupational exposure were underestimated and were markedly increased when adjusted for residential distance' (Maule *et al.* 2007: 1067). Working in the area around Casale Monferrato in Italy where an asbestos factory had been active from 1907 to 1985, researchers demonstrated that environmental pollution from industrial sources has an effect of 'alarming magnitude' on surrounding residents who are exposed to a third of asbestos workers' risk. Even 10 km away from the factory, the relative risk was 'still remarkably high' (Maule *et al.* 2007: 1069). As a result, ARDs are experienced as simultaneously personal and collective experiences. In the following section, the collective nature of asbestos diseases and the manner in which these diseases influence – and are influenced by – people's gendered identity is explored.

7 Asbestos disease and identity

Thus far, there have been some suggestions that disease and identity are gendered (men fight asbestos diseases through fitness and exercise, women worry about transferring the risk to the home and their families), but not a full exposition on this complex relationship. In general, researchers have explored a range of ways in which science and medicine interact with gendered personalities. They have focused on the relationship between the scientific industry and gender; on gender and technology (Kohlstedt and Longino 1997; Lohan 2000); on how social and moral values permeate into medical science and the social history of medicine (Warner 1995), but they have not adequately explored the gendered identities that arise when men and women engage with medical science as it impinges directly on their bodies (with the exception of the literature that explores new reproductive technologies).¹⁹ Anthropologists have ignored the inter-

relationship between occupational health, gender and identity, although there is medical material on how disease affects men and women differently (Davies *et al.* 2004). In what follows I examine how industrial diseases impact on men's and women's lives in Barking, Dagenham, Griquatown and Prieska. Drawing on the concept of 'effects made by gender' proposed by Henwood, Parkhill and Pidgeon (2006), I demonstrate that, in both South Africa and the UK, women's identities in the context of ARDs are strongly located in the home and are reinforced through women's domestic role. Although women's experiences of ARDs are obviously devastating, the disease reinforced women's location within the home and did not directly challenge their household roles as wives and mothers. In contrast, men's positive masculine identities were inherently tied up with work and therefore with exposure to asbestos, but men's masculinity was simultaneously threatened through the negative associations with illness (especially in the UK) and through ethnic conceptualisations of men's responsibilities (in South Africa).

The 'effects made by gender' approach was conceptualised by Henwood *et al.* in an attempt to explain why men and women respond in stereotypically gendered ways – with men expressing lower levels of concern – to environmental and technological hazard surveying. They sought, however, to avoid essentialist or universal, normative explanations which overlook the 'parallel, historical, trajectory of greater fragmentation, multiplicity, and fluidities in men and women's social identities and subject positions' (2006: 5). Instead of seeing men's and women's understandings of technology and risk as 'naturally' associated with particular genders, they argue that gender itself acts on men's and women's identities in ways that propels them towards gender-normative positions. The 'effects made by gender' approach enables the researcher to identify contradictory processes in which gender both powerfully regulates men's and women's social and cultural experiences; and simultaneously fails to regulate these experiences. Thus they argue that the 'marking out and contestation of the meaning of gender is one of the effects made by gender' (2006: 15). From this perspective, women's articulation of moral, caring values in relation to environmental and technological hazards is related to the ways gender acts to exclude them from men's discourses of technology, science, engineering, control and power. And similarly, men feel unable to voice doubts about the inherently positive potentials of technology, science and engineering or to show their lack of enjoyment of scientific mastery for fear of appearing 'gender inauthentic'. Such an approach expands theoretically on the work of Moore (1993) who argues that discourses of gender draw sharp distinctions between men and women, but then offer a range of positions that correspond or reject these stark positions. Individuals can selectively position themselves differently within this spectrum at different contexts and times. Thus, as suggested by Henwood *et al.* 'different ways of knowing may lead people to construct risk problems in ways that are recognisably gendered' (2006: 23). This paper applies this 'effects made by gender' approach to the understanding of asbestos diseases and how this intersects with people's identity. It argues, in the

19 See for example Rapp (1999); Handwerker (2003); Becker (2000); Franklin and Ragoné (1998); Lublin (1998); Clarke and Olesen (1999); Rosser (2000); Edwards (2000); Franklin and Lock (2003) and Franklin and McKinnon (2001).

following sections, that people interpret their own and other family members' experiences of ARDs in stereotypically gendered ways, focusing more on men's and women's ostensible roles within society than on their own complex, multi-faceted and fluid identities.

People's experience of ARDs provides an appropriate context in which to examine the 'effects made by gender' because it is not a disease that individuals experience in isolation. Although the disease is not transferred through bodily contact or sharing of body fluids, the microscopic presence of asbestos fibres in the air, on people's clothes and in the vicinity means that there can be widespread effects from any one person's exposure. In both South Africa and the UK, people experienced environmental exposure, where their mothers or fathers had worked in the factories or mines and come home with asbestos on their clothing and from general environmental pollution produced by the factories and mines. As is evident from the sections above, this collective knowledge of asbestos disease and its effects shapes individuals' responses to diagnosis. Almost everyone in Griquatown and Prieska, and many people in Barking and Dagenham, have family members who have died from ARDs. They know what it does to individuals and to their families. Their accounts of their experiences often focus on how the disease has destroyed their families. Nonetheless, as demonstrated above, in both the Northern Cape and London, families – and particularly male members of families – benefited historically from the economic opportunities presented by asbestos. In South Africa, although apartheid policy imposed racial restrictions on families' co-residence, men working on the asbestos mines in South Africa were able to live with their nuclear families (McCulloch 2002) as opposed to other South African mine workers who were housed in single-sex hostels for 11 months of each year. In addition, and seemingly despite the shocking conditions,²⁰ the workers and their families residing on, or in the near vicinity of, asbestos mining sites came to be referred to as 'one family'. They visited each other, knew each other, despite sometimes being of different ethnic and racial classifications. Ida van Wyk commented nostalgically that:

Koegas was one big family, we lived very close to one another, everyone supported each other. We had many advantages. We did not have pay for water or for our houses, we received food hampers. We also shared toilets, we shared communal spaces and kept them clean together. It was a better living than farm people, the money was more, the living standards were better.

Even once the mines closed, people moved in groups to the towns and continued to live in close vicinity to one another. They also maintained their connections with the former mine community through attending the funerals of Koegas residents and workers. Whenever someone from Koegas died, people came from the Cape, from Johannesburg and from as far afield as Namibia to bury the person.

20 McCulloch documents terrible living conditions in Koegas: rampant scurvy and tuberculosis, no mine housing, no provision for rubbish removal and no rations. In the 1950s, many workers became seriously ill – possibly with asbestosis – and were unable to work. As they had nowhere to go, they remained at Koegas. The widows of these men were relocated to Marydale in the mid-1960s and settled in a place which became known as the 'the lung location' and as a place of misery (2002: 114).

The historical association with the mines and with strenuous, dangerous work remained a source of pride for men who still asserted these positions and status at workers' funerals. Working on the asbestos mines had been a way for them to earn an income, to assist their families and to assert their masculine identity. Although difficult, many of these male workers were able to earn enough to support their families through a combination of asbestos mining and other livelihood activities (such as selling wood, farm labour, sheep shearing and building). Healthy men working on the mines were considered to be the primary income earners, and they fulfilled their masculine role as providers, and household heads (McCulloch 2002). As a friend commented at Bankie Gouws' funeral, his voice ringing out with conviction and strength: 'We were miners'! There was no doubt that working on the mines was a powerful experience. It enabled the men to secure their roles as husbands and providers within their nuclear families and to maintain extended 'family' relations with the community resident on the mine. Men working on the mines emphasised their strength and independence and this pride continued after their diagnosis of ARDs. Johannes Mbeka was, for instance, described by his children as a '*kwaai*' (literally strict, angry and intimidating, but also strong and proud). He did not want assistance in completing his forms for asbestos compensation and he did not wish to discuss his compensation. As his daughter recalled after this death: 'He argued that he works for his money, he doesn't want to beg for money, he doesn't loaf, he works for his money. He was a proud old man and didn't want to struggle'. Because this pride is vested in a combination of work and strength, and because of the need to fight the disease through action, many men continued working as long as possible. For example, Struis Berends said: 'I can't work in the way I did in the past. Now I have to work very slowly. But if you do nothing, it gives the disease a chance to climb into you. I do something so that I can fight it a bit'.

Similarly in Barking and Dagenham, the idea of 'the family' was broader than that conceptualised in a nuclear family and incorporated an extended, largely patrilineal, descent group. This family ideology has grown out of living in the East End of London and was specifically linked to the Cape asbestos factory (and other large firms such as Kitchings). These large corporations were believed to be 'like a family' – an image which the companies actively encouraged. This paternalism was, as Abercrombie and Hill point out, primarily 'an economic institution concerned with ... organizing a productive unit and regulating relationships between subordinates and the owners of the means of production' (1976: 413). In providing workers and their families with additional resources, paternalism created a work ethic in which workers felt personally and morally committed to their companies. In addition, as many employees were related to one another through kinship and marriage, the companies acted as hubs of social activity: they had good sports facilities, held social events and sports days, celebrated Christmas and provided parties and gifts for their employees and their families. Until the late 1960s and early 1970s when some companies ceased to operate, and others became increasingly contractual in their relations with employees, the companies were the primary employers in Barking and Dagenham and they looked after their workers in a paternalistic manner.

There is no such paternalistic relationship between companies and employers in Barking and Dagenham today. Nonetheless, the ideology of an extended family

has retained its significance for many segments of the local population. For example, many ladders living in Barking and Dagenham stem from the families that moved to the area in the 1920s and 1930s to take advantage of industrialisation. One of the key comments made by ladders, when asking them about their fathers, was: 'He was a proud man'. These were proud men because of their ability to support their wives and families through their work as ladders. For elder ladders, the role as a family patriarch extended beyond the nuclear family. These men were also proud because they were bringing young men into the industry, protecting them and supporting them and – for many – because of the physical strength and fitness maintained through ladding.²¹ The responsibility of 'breadwinner' and the moral dependability towards young men in the community thus reflected the significance of the patriarchal family and community structure.

Despite the widespread tendency in literature to see identities as multiple, hybrid, fluid and fractured (Connell 1987; Moore 1993), and despite the presence – in wider society – of alternative visions that construct men as nurturing and intimate which contradict stereotypical views of masculinity (Henwood *et al.* 2006), the masculinity of these London men was solidly grounded in their experiences as Dagenham ladders and as family providers. Like their fathers, these men identified as workers, husbands and fathers; they were fundamentally concerned with their ability to bring in money and, through this income, to support their families. Thus, as Timmy Fortune commented, 'our father made us a family unit, this has continued to his sons'. In both the UK and South Africa, the men's identity reflected Gilmore's suggestion that masculinity is shaped through the ability to have children, to protect one's dependants and to provide for one's family (1990) or what Collier refers to as the 'positive' behaviour of men (1998).²²

8 Undermining masculinity

However, as is clear from the earlier sections of this paper, working with asbestos, whether in South Africa or in the UK, always holds the risk of illness. ARDs have decimated families and individuals have suffered enormously, both from the diagnosis of ARDs and from a combination of non-diagnosis and unexplained symptoms. In both South Africa and the UK, men's identity was bolstered during the periods when they were working with asbestos and 'unaware' of the consequences. From the 1950s, when the oldest men interviewed began working, to the early 1980s, when asbestos was banned in the UK and mines began to

21 Many of the ladders followed their fathers into the trade and all of them did an apprenticeship, usually lasting about five years. During this time, strong bonds were formed between the apprentices and the ladders. A ladder would often look out for his apprentices; protecting them from bullies, from exploitative or dangerous jobs and helping them find secure work once their learning was complete.

22 Collier is responding to a tendency in the literature that views hegemonic masculinity as predominantly negative, associating men with dispassionate, autonomous, neglect of the family and violent, antagonistic behaviour. Connell and Messerschmidt (2005) point out, however, that this tendency is associated with personality trait theory and that other interpretations of hegemonic masculinity acknowledge that men's behaviour can work to women's advantage.

close in South Africa, men's identity was bolstered in similar ways – through the establishment of a masculine identity that emphasised work, danger and technology in conjunction with provision for the family and extended patriarchal relations within a community. From the early-1980s onwards, when men in South Africa experienced massive unemployment as a result of the closure of the mines; and when workers in both South Africa and London began to experience the physical sensations they associated with ARDs, their masculinity was fundamentally undermined. Although these experiences and time periods were broadly similar, the conditions of work and safety legislation varied greatly between the two countries. Consequently, the manner in which their identities were undermined contrasted radically. In the UK, men's sense of masculine identity was undermined by the diagnosis of disease and by the increasing economic marginalisation of their profession (discussed in more detail below). In South Africa, questions of ethnic identity coupled with people's economic situation destabilised men's sense of masculinity.

In terms of ethnic identity, most Griquatown and Prieska men classified themselves as either 'coloured' or 'Griqua' or both depending on the context.²³ These were, in hierarchical South Africa where race had mattered enormously for many years, identities which were associated with many negative qualities. 'Coloured identity' was a construction of the apartheid government which included everyone who was neither obviously 'white' nor 'black'. It was thus a definition which defined people through negatives: in terms of what (1948–1994) they were not. The Griqua had been subsumed under the apartheid government's broader racial category of 'coloured', which included the diverse conglomerates that resulted from people's interactions during the colonial era and other categories of people, such as Malays, not easily identified as either black or white. Griqua identity today is thus complex and heterogeneous, combining many different traditions and overlain by, and entwined with, apartheid planning and racial discrimination (Waldman 2006a). In Griquatown, ideas about Griqua identity, place and social status are entwined in the notions of *boorlings* and *inkommers*. *Inkommers* are newcomers to Griquatown (literally in-comers) and are coloured elites. *Boorlings*, or people born in Griquatown, are by contrast, 'nothing people'. Over the years their identity has been changed and manipulated. Apartheid governance saw them, quite simply, as coloured (President's Commission 1983).²⁴ Their Griqua heritage was largely dismissed by the Griquatown Council and by the central

23 At the end of the twentieth century, the Griqua comprised a diverse category of people, historically seen as the 'mixed-race' descendants of indigenous Khoi (nomadic pastoralists), autochthonous San (nomadic hunter-gatherers), escaped slaves, Boer frontiersmen, Africans (predominantly Tswana) and European settlers. The name Griqua – which refers to the indigenous Khoi resident in the Cape Colony in the seventeenth century (called π Karixurikwa, Chariguriqua or /Karihur) – was adopted in 1813 when the London Missionary Society persuaded the heterogeneous collectivity at Klaarwater (Griquatown) – then called 'Bastaards' (literally bastards) – to change their pejorative name (Halford 1949; Nurse 1975; Ross 1976).

24 According to the President's Commission investigating the needs and demands of the Griqua, 'a Griqua is a coloured and a coloured is a Griqua on the grounds of the definition that "a coloured is neither white nor Black nor Asiatic", and thus all the other coloureds must be classified in this class' (1983: 76).

government. In addition, the process of proletarianisation had led to increasing impoverishment, with *inkommers* occupying positions of status and formal leadership. The *boorlings* were thus reduced to defining themselves in terms of place: where they were from (or origin). Former mineworkers and their families who were resident in places such as Koegas have been absorbed into this hierarchy as *boorlings*. Their Griqua heritage, practice of Griqua traditions and origins in small Northern Cape towns coupled with their impoverishment makes their alignment with *boorlings* appropriate. This ethnic identification means, however, that there are few positive attributes (other than religion and work on the mines) around which men can assert their masculinity.

In Griqua cultural ideology, the categories of Griqua *boorling* and coloured *inkommer* assume primary importance and are gendered in ways which undermine men's masculine roles as household heads and providers for nuclear families. Although Griqua society is not structured along matrilineal lines, Griqua ethnic principles establish women as 'true' *boorlings* while men are considered *inkommers* to the nuclear family, but *boorlings* of the broader Griqua kin group. In ritual, men are positioned outside the home, because, whereas women are ideologically bound to the house, men are free, sexually unrestricted and expected to act accordingly. All husbands, regardless of their ethnic origins, are considered to be *inkommers* to women's families and, as such, cannot command much respect. Furthermore, as *inkommers*, not much is expected of these men. *Inkommers* cannot be relied upon to do what sons born to the house will do (see Waldman 2003).

These ethnic categorisations are not as strong in Prieska which offers people many other forms of identification. Although Prieska is comprised primarily of people who identify themselves as Griqua and/or coloured (many of whom are related to people in Griquatown), the population of Prieska is more diverse, with greater Xhosa influence and the *boorling/inkommer* categories more diluted. While both Prieska and Griquatown suffer from unemployment and rely heavily on state pensions, Prieska offers more employment opportunities than Griquatown. As Prieska is located on the main railway line from Namibia to Cape Town, it is easier for people to travel to and from the town and many Prieska residents have attended university in Cape Town. Although Prieska residents can identify as educated nurses, teachers and government representatives (a category reserved for *inkommers* in Griquatown), as politicians active in the African National Congress and other political parties, as successful farmers, builders and as entrepreneurs, former asbestos mine workers are excluded from these identities because of the lack of education and low working class status. They are thus primarily unemployed. This means that, for former mine workers in both Griquatown and Prieska, there are few sources of positive identification available to them. Status, for them, remains linked to their dangerous work on the mines and, ironically, in their ability to bring in asbestos compensation and disability pensions. Gender relations, structural conditions of employment, and the manner in which ARDs are recognised and compensated thus combine to reinforce men's gendered identity as one which is bolstered through their association with technology and their powerful mastery over the physical world.

For many men who worked on the asbestos mines, there is – ironically – a degree of status associated with the receipt of *myngelde*. Asbestosis sufferers are considered to be rich, albeit briefly, and hence valuable to their families. As mentioned above, former mine workers can access MBOD compensation, which provides two crucially significant and substantial payments. For example, during the late 1970s and early 1980s, asbestos compensation varied from R6 000 to R30 000, depending on an individual's racial status, position held and employment duration (Myers 1981: 241).²⁵ Once an individual has been diagnosed with ARDs and is awaiting MBOD compensation, he is entitled to various economic 'privileges' with shop keepers advancing credit and encouraging men to open accounts (although the extortionate interest rates make these dubious benefits). In addition, people classified with second-degree damage to their lungs can register for a state disability pension or *ongeskik* pay of R820 per month. This provides a reliable source of income which enables families to survive and which is relative lucrative in the economically depressed environments of Prieska and Griquatown. Thus, although no longer active as miners and not working, the official government framing of pleural plaques as a form of disability allows these men to claim compensation and – in so doing – to continue to fulfill their masculine role as household providers.

Issues of identity and disease in the UK were similarly gendered, although ritual and ethnic identities were less significant. Here, because of men's work as ladders, it was their identities as masculine providers and, through this, their work relationships and associations with technology that were threatened. Although doctors advised that men with pleural plaques could continue to work, the way in which men responded to this information was not straightforward and did not accommodate this medical understanding of disease. As soon as a ladder was diagnosed with pleural plaques, he felt his ability to work and hence his identity to be challenged. As one Barking resident put it, 'When you get told you've got pleural plaque, you don't want to take money out of the family coffers, don't want to buy a pair of overalls', because of his belief that he will no longer be able to bring in an income. As suggested in this comment, so devastating was the news that it called for immediate changes in the men's lives. It was the diagnosis of pleural plaque – and hence the acknowledgement that you had 'the disease' – that caused distress and disruption. Prior to the diagnosis, and despite sensations of inexplicable pain, men fought the disease by refusing to acknowledge that they had it. Many men avoided – in so far as it was possible to do this – having regular medical checkups²⁶ and avoided discussing their (inevitable) contraction of ARDs. By not recognising the disease inside their bodies, they could pretend that things were still fine. As soon as they acknowledged the presence of asbestos in their lungs, they were – because of the way they interpreted the disease and because of their disagreement with medical models of ARDs – forced to consider their imminent deaths. They refer, for example, to Timmy Fortune's father who

25 During the apartheid era, Coloured and White workers were classed together with different compensation requirements for African workers (Myers 1981).

26 Medical examinations are only a contractual requirement when working for big companies or when applying for a license to strip asbestos. As most of the ladders now work as independent contractors, they are not required by law to have regular check-ups.

was told that he was fit to work as a logger one year before he died, six months later doctors said he could do light work. His rapid decline and death illustrates what every logger knows: once you have pleural plaques, you are going to die. As Ben Smythes put it: 'he's got a cancer inside him that could explode at any minute'. Jimmy Croft explained in more detail: 'The disease progresses very quickly from pleural plaque to pleural thickening and asbestosis. You are incapacitated; you can't work, and have to live off the state. Because you can't work, you don't have any money'.²⁷ The underlying idea being expressed here is that receiving assistance from the state undermines men's masculinity. Welfare systems in advanced industrialised countries such as the UK are, as Gordon has argued, inherently gendered and are created to reinforce male-breadwinner families by providing – only temporarily – for the collapse of these families and by encouraging men back into the workforce as quickly as possible. Assumptions about masculinity thus make it 'unthinkable for able male welfare recipients not to work' (1990: 11). The characterisation of masculinity as breadwinning and independent is therefore reinforced through the welfare system. In addition, the contractual nature of the loggers' work means that they cannot benefit from the usual social protection mechanisms available. They have no sick benefits, no injury compensation, no personal insurance against unemployment and therefore no means of surviving other than relying on the welfare system. Thus, if they are not working, they are not earning. Men who had been the mainstay of the family, proud men who had assisted 'everyone' financially, found that they could no longer afford their own cigarettes once they stopped working.

For these reasons, loggers resident in Barking and Dagenham tended to initiate legal proceedings and to claim compensation as soon as they were diagnosed with a legally-recognised disease. Although they could request either provisional damages or go for a full and final claim, all the men interviewed favoured the full and final claim. They argued that, 'If you go for an interim payment, it doesn't help you when you have a future incapacitation. Therefore we go for a full and final settlement – if you get £20–30,000 you can invest it and use it when you have to stay at home and can't work'. In addition, if they waited until they were sick, it would be too late: 'you're in debt by then, living on handouts'. The logic behind this was that the men aimed to use the compensation money to establish themselves in a new line of business which would enable them to continue to provide for their wives and families. In practice, however, the payouts that men received were minimal.²⁸ Payments issued in 2005, when it was still possible to claim for

27 People can also claim from the government Department of Works and Pensions which administers two schemes, namely the Industrial Injuries Disablement Benefit and the Pneumoconiosis etc. (Workers' Compensation) Act of 1979. The Industrial Injuries Disablement Benefit is for patients who contracted the disease while in employment after the 4 July 1958. The Medical Board assesses each case and only provides compensation when disability is judged to be greater than 14 per cent. This generally excludes cases of pleural plaque and pleural thickening. The Pneumoconiosis etc. (Workers' Compensation) Act provides a fixed rate of compensation (determined from scales for age and degree of disability) for workers whose employers are no longer in existence. Compensation can be obtained for diffuse pleural thickening, asbestosis, lung cancer and mesothelioma. This compensation can also be awarded to widows and other dependants who may claim after the death of the worker (FFW nd; FFW summer 2006).

pleural plaque, were in the region of £3,500–£4,000 for provisional damages and full and final settlements received £6,000–£7,000. Clearly, this is insufficient to establish a new line of business. Given this, there was no possibility of maintaining their identity as men, as providers for the family or as proud patriarchs of extended families.

Once diagnosed, many men stopped working and withdrew from the trade union and fortnightly ladders' meetings. This meant that they lost touch with their lifelong friends and from 'family', separating themselves from their support structure. The men retreated from the company of other ladders because of the strong focus on asbestos diseases at these meetings: discussion centred on who had been diagnosed, who had not, the current status of various ladders' claims, who had died and whose funerals had been (or had to be) attended. Although the mood was generally jovial and the ladders were full of ironic humour when discussing these issues, there was a strong recognition that they were all vulnerable and likely to be personally affected in the future. Ladders who had been diagnosed found themselves being constantly watched by the other ladders for symptoms. Every time they came to the meetings, they were reminded of their own situation and they heard about other ARDs sufferers dying. Disclosure of a diagnosis was thus closely related to the destruction of the social person, through a process of self-rupturing that pre-empted the disruption of the body.

In withdrawing from their support structures, they are also disengaging from technology which is a central tenant of their positive identification. Faulkner suggests that engineers' intimate identification with work and its associated technology provides engineers with a 'separate reality' and prevents them from asserting more positive identities when amongst non-engineers (Faulkner 2000). Thus, on the one hand, men's positive association with technology, fitness and strength, is undermined by ARDs and this leads ladders to withdraw from their own social circles. On the other hand, the 'effects made by gender' inhibits the establishment of other masculine identities and the ladders are unable to articulate a masculinity that does not reinforce men's positive association with technology.

9 Asbestos diseases and women's identities

Women in South Africa and the UK were in remarkably similar positions to one another, but with different ideological and economic justifications. For South African and Griqua women, their ethnic identity gave them a centrality within the home and ritual superiority over men. Nonetheless, many of these women worked on the mines, often in situations labelled as 'less dangerous' jobs. Although less overtly dangerous in the sense that women were not working underground, firing

28 From the mid-1980s, the amount awarded in damages rose significantly from £1,250 in 1986 (as a provisional damage) to between £12,500 and £20,000 as full-and-final settlements.

dynamite or doing hard manual labour; their role in cobbing asbestos fibre (often while supervising children and breastfeeding babies) was inordinately dangerous for them and their families. As a result, many South African women suffered from more severe forms of ARDs, such as lung cancer and mesothelioma.

Nonetheless, women in Griquatown and Prieska did not shape their identity according to this work in the public sphere. This was partly because they were seldom formally acknowledged as workers on the mines. Instead their work was seen as supplementary to the main mining process and their employment was informal, generally linked to that of their husbands. In addition, bringing money into the family was something they did out of necessity rather than something which was central to their role as women, as mothers and as Griqua. Because they had worked on the mines, they were – like their husbands and other male workers – able to claim compensation from the MBOD. This was part of their identity as mine people. As Elizabeth Pieterse from Prieska comments:

I was born on the mines, I grew up on the mines. I cobbled asbestos fibre, [travelling] from mine to mine and stayed on the small mines. No, we are mine people, all of us. We worked on the mines because we were mine people. Grandmothers, uncles, aunties all lived there. We only lived on the mines.

Unlike comments from male mine workers, Elizabeth's account – like that of many other women interviewed – was all about living on the mines and about the extended family members resident on the mines. Her identity was not located in the hard, dangerous work of miners nor was it centred on the ability to bring in money and provide for her family. Although other research in the Northern Cape shows that even married women aspire towards independence and can achieve a great sense of status when earning their own money (Waldman 2006b), in relating their identity to asbestos diseases women consistently focused on their roles as household keepers and as nurturers in society. This is in keeping with stereotypical gendered discourses which do not see women as engaging in heavy labour, dangerous work or with technological machinery. Despite the fact that many women did do these supposedly-masculine activities while working and living on the mines, they articulate a positionality which is in keeping with Henwood *et al.*'s 'effects made by gender' approach (2006).

In the UK most women's exposure to asbestos has been environmental (London Hazards Centre 1995, Cancer Research UK n.d.). A few women interviewed had worked at the Cape factory, involved primarily in clerical work and not in direct contact with asbestos fibres. This does not, however, mean that women were not susceptible to ARDs. Cancer Research UK estimated that, of the 2100 cases of mesothelioma diagnosed in 2003, about 400 were women. A study by Cancer Research UK and the UK Association of Cancer Registries (UKACR) examined cancer figures between 1995 and 2004 and found that women's incidences of mesothelioma had risen by 38 per cent during this time (cited in Thompsons 2007). Moore and Lenaghan (1995) argue that UK women's experience of ARDs has been overlooked by the medical and legal system as 'a combination of ignorance and prejudice in the medical, social and legal professions' leads to inadequate investigation of women's exposure to asbestos. This constrains women from claiming compensation and denies them recognition of their

condition. The London Hazards Centre points out that, underlying women's lack of diagnosis, is the erroneous assumption that cancer or asbestosis is caused by substantial exposure to asbestos (London Hazards Centre 1995). For those women who have not worked at the factory, their risk of contracting ARDs stemmed from their husbands', fathers', brothers', friends' or boyfriends' contact with the mineral. It was through men bringing the dust home that these women were exposed to asbestos and contracted ARDs.²⁹

In contrast to their husbands who argued that they had to put 'their house in order' (pay the mortgage, replace worn or damaged structures, purchase new furniture and so forth) so that their families would be 'provided for' after their deaths, UK women said that they had to 'redirect their lives'. Although some of the women interviewed were wage earners, in no instance were they the primary income earner. For the most part, women earned about half of what the men were earning. Although these women had complex identities which comprised, at least in part, their working lives and other individual experiences, they were also married to men who were strong household heads and who took control of the family. Thus, in relation to ARDs, they articulated a primarily working class identity locating themselves as housewives in their homes. After the early demise of their husbands due to asbestos diseases, these women spoke of their difficulty in re-establishing themselves. Having always had someone with them and providing for them, and someone they had to care for domestically, women found this new independence 'difficult to absorb'. Tracy Carole commented that she had to 'redirect her life' as she had been married for forty years and had always had her husband with her.

Some women also expressed their guilt in relation to husband's exposure to asbestos and subsequent compensation. Melinda, Ian Bayley's wife, said that she felt 'guilty' about Ian's death. She felt that he had moved into Barking, become a lagger's mate and been exposed to asbestos, because of her. Prior to meeting her, he had been a steward on a liner. 'It's my fault, if he hadn't met me he'd have gone back to sea'. Although, as discussed above, men were interested in compensation primarily to 'put their houses in order' and support their families, women who received compensation after their husbands' deaths felt ambivalence: on the one hand the compensation provided a formal acknowledgement that the disease had really existed; on the other hand, women felt guilty about their independent spending of money that stemmed from their husbands' ill-health and subsequent death. 'The compensation made me feel better [it is a form of] acknowledging that he's got it [a form of ARDs]. It would have been alright getting

29 Perhaps it was for this reason, because acknowledging the problem involved recognising the part that men have unwittingly played in their families' lack of well-being – albeit precisely because of their desire to provide for the family – that lagers seldom discussed these matters with their wives). Very few men interviewed admitted discussing asbestos dangers with his wife. Conversations around these matters were kept to a minimum and comprised only of absolutely essential issues such as the outcome of doctor's appointments and legal processes. Very seldom did husbands and wives discuss the implications of a certain diagnosis, the possibility of contracting more severe forms of ARDs or the risks to other family members.

compensation while Ian was still alive. We could have done stuff with the money, made him more comfortable. Now the money makes you feel guilty, spending money because he died’.

10 Conclusion

Men and women are affected differently by ARDs, but both men’s and women’s experience of disease challenges the medical and legal discourse which categorises disease according to perceived bodily experiences and places a financial value on this experience. This detailed examination of people’s reactions to disease – including diseases medically categorised as benign – demonstrates deep anxieties about bodies, health and relationships. Ultimately people’s identities are intimately tied up with their ability to maintain relationships and to be socially connected. Contracting pleural plaques may not register on doctors’ consciousness as debilitating, painful or distressing. Similarly, pleural plaques do not impress lawyers in terms of inhibiting people’s working ability. But, as demonstrated in this paper, the ramifications of this disease are felt socially and emotionally in ways not addressed in medical and legal discourse. The failure to officially recognise people’s experience has diverse ramifications as people seek to rationalise and explain their bodily symptoms and emotional unease, to define risk and exposure in their own terms, to find their own sources of medication and devise ways of staying healthy in ways that continue to add meaning to their lives.

In both South Africa and the UK, women did not shape their identity according to work in the public sphere. Instead, their identity was vested in their household and primary caretaker roles. This meant, in effect, that women were in some ways shielded from the devastating impact of asbestos diseases. Even when they were directly affected by the disease, through occupational exposure, their identity and sense of self was not directly undermined. For women in the Northern Cape of South Africa, supporting the extended families and facilitating ritual and ethnic roles – through work and symbolic ritual activity in the home – were very significant activities which enhanced women’s positive identity and status. For both UK and South African women, the identification of ARDs did not disrupt their roles or identities. Instead the additional roles of caring for sick relatives or taking care of their own diseased bodies fitted ‘naturally’ into their gendered roles. Although all these women had other composite identities, when interviewed in relation to their personal bodily experiences of ARDs and their encountering of this disease as married women whose husbands were exposed to asbestos, they demonstrated conventional gendered alignments with the nurturing role of women.

Men’s inability to sustain a masculine identity associated with technology led, however, to a social withdrawal which preceded physical bodily deterioration. This social withdrawal was demonstrated bodily by men who had been diagnosed with ARDs. They were seen to change in personality, withdrawing into themselves. Referring to men in the UK, Jimmy Croft said: ‘they all get the same attitude, they jump at anything, they look out the window, they don’t talk, they go into themselves’. Referring to men in South Africa, Basie Pieterse pointed out that: ‘it’s as though he has a film over his eyes, as if he doesn’t see. Nothing makes sense to

him. He sees the world as though he is looking through a window'. The 'effects of gender' framework explains why men working on the asbestos mines in South Africa or as ladders in the UK located their sense of self firmly within their work, their strong physical strength and in being able to provide for their families, despite different legal frames and historical working conditions. For both these sets of men, working with asbestos was a positive form of identity, but it was one which was simultaneously threatened by the risks of ARDs. Although people in South Africa and the UK experienced similar physical symptoms, the use of a comparative perspective shows that the legal, political and medical framings of disease make an enormous difference to how people experience illness. It is these structural conditions which define the possibilities within which men and women can resist, claim compensation and seek recognition for their industrial work experiences. The failure of the UK legal and medical institutions to recognise pleural plaques as an industrial disease is a social disaster for the men who worked with asbestos and who are now diagnosed with pleural plaque. The loss of work, coupled with being ill and the lack of alternative masculine identities is a complex combination of forces which undermine their very being. In contrast, the more lenient categorisation of pleural plaque as 'first stage' asbestosis in South Africa provides former mine workers with an opportunity to access MBOD compensation and possibly, in time and with sufficient evidence of lung damage, to receive an income through a disability grant. Supplemented by the compensation received by Cape plc after transnational litigation and the possibility of future compensation as other mining companies respond to the threat of international litigation, *myngeld* or money received in compensation for asbestos diseases has a significant status attached to it. In contrast to the UK ladders who are unable to continue to provide for their families because of their 'disability', it is precisely because of their disability that former South African asbestos mine workers can continue to assert their masculine status and gendered role as family provider.

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