

Aberfan, Flixborough, COMAH: schools, children and industrial disasters¹

Professor John Preston
University of East London
j.j.preston@uel.ac.uk
Water Lane
Stratford
London
E15 4LZ

Abstract: *Children, and schools, are potent symbols of victimhood in industrial disasters. In the case of historical industrial disasters such as Aberfan and Flixborough, and in terms of preparation for future industrial disasters under COMAH (Control of Major Accident Hazard) regulations, communities are seen as passive responders to accidents. Moreover, following industrial accidents, communities are frequently accused of culpability or profiting from the disaster. There is hence a double pathologisation in play with communities seen as comprising passive victims and manipulative survivors. Using an historical approach, the official accounts of the Aberfan and Flixborough industrial accidents are challenged with a focus on schools and children. Rather than being passive victims of these accidents, schools and children demonstrated agency in terms of their tacit knowledge, reporting potential accidents and recording their consequences. This provides a lens through which to interrogate current policy on industrial safety as it relates to schools and communities.*

Keywords: *Schools, Disasters, Agency, Class, Race, Archives*

¹ The author would like to thank the ESRC who provided funding for this research under grant number ES/K000233/1

Schools and the necrotoxic

Schools, teachers and pupils are frequently implicated in industrial accidents and disasters. Capital can not exist without labour (indeed it is 'dead labour' Marx, 1992, the antithesis of the human, Rikowski, 2002). Plants where dangerous chemical and industrial processes take place are not based in uninhabited areas. They require workers. These plants are frequently located in areas that are on the periphery of modernity, in industrial estates between town and country, 'interzone' areas where the colonial (corporate) and the colonised (workers) meet (Burroughs, 2007). Mark Augé considers these areas to be 'non-places', 'spaces formed in relation to certain ends' (Augé, 2007, 76), in this case for large scale industrial production. Studies show that such accidents are frequently centered on areas of poverty or deprivation (de Souza and de Freitas, 2007), where there are a large number of Black and Minority Ethnic people (particularly in the US, Bullard and Wright, 2012, 10-25) and where there are poor levels of social services. In objective terms children living in these areas have reduced health outcomes (Centre for Disease Control and Prevention, 2005). The nature of processes that take place on these sites takes place on an enormous scale and the chemicals and processes used are of a sublime nature. For children in these areas death exists so close to life, factories using living labour to develop commodities and producing necrotoxic substances. The impetus behind the environmental racism and environmental justice movements is the socially unjust consequences of this geography (Bullard and Wright, 2012, 20-22). The sociology of education has rarely considered

In terms of race and class, popular representations of people in these areas are driven by liminality rather than a necessary identification with urbanity or rurality. Indeed, the industrial working class of these areas are frequently written out of mainstream accounts of class formation (Mac an Ghaill and Haywood, 2011). Industrial regions are considered to be 'dark' or 'black' (even if many of the inhabitants are white) in the same way that cities or areas of cities may have that identification (Bonett, 2000). They are also considered to be 'hard' or 'rough', reflecting a masculinity around industrial work (Willis, 1977; Weiss, 2004). In one sense there is a literal meaning to such identifications. Chemical and industrial pollution in the air or on surfaces frequently means that these areas are 'dark' and 'black'. The poor air quality and nature of industrial work also means that people need to be resilient. However, although these features may be associated with modernity and urbanity, interzone areas are frequently depicted as being on the margins of civilization. Residents in these areas are both classed and racialised as being liminal to the project of modernity, even as this project is built on their labour. People in these areas are often classed or racialised in a position liminal to other national ascriptions. Their region and accents are pathologised as part of their difference. If white, they are classed as the British equivalent of 'white trash' (Wray and Newitz, 1997), as 'chavs' or 'townies' (Preston, 2003). These classed and racialised ascriptions apply even when such communities experience industrial disasters. McLean and Johnnes consider that the classed and racialised ascriptions attached to the Aberfan disaster, for example, were associated with the peripheral nature of that community:-

"Aberfan suffered because it was part of the periphery, not specifically because it was Welsh... if the tips had been at Hampsted or Eton, the government would have taken notice"

(McLean and Johnnes, 2000, 223-225).

These classed and racialised positionings serve a purpose in terms of the utility to which capital and the state attend to the lives of such individuals. Although paradoxically central to the production process, often paid high wages as a 'labour aristocracy' and the subjects of a small, but significant, corporate welfarism (in terms of sponsoring schools and community projects) the populations of these areas are

seemingly disposable as soon as the chemical winds change. In short, schools, pupils and teachers in these areas are represented as being non-agentic and passive in industrial accidents. They are called unwitting 'victims' of incidents, 'vulnerable' and subject to policies that do not take into account their views. Teachers and pupils around these sites are now placed in 'Public Information Zones' where top down information is provided by corporate off-site plans.

This representation of passivity is far from the truth and in actuality teachers, parents and pupils are agentic in their awareness of the consequences of industrial production for their schools and for their communities. Hence this paper presents a counter-history of pupils and schools in industrial accidents, challenging their positioning as inert 'victims' despite the ways in which they are frequently pathologised and their agency misrecognised.

Misrecognising working class agency in industrial disasters

As discussed above, the positioning of people in industrial areas is frequently intersectional, being a double pathology of raced and classed ascriptions. In terms of power relations, this positioning weakens claims to agency by people in these communities. Skeggs's (2004) concept of misrecognition provides one powerful way of considering the ways in which agency is portrayed in working class, minoritised, communities in many domains, which in this paper is applied to industrial disasters. Rather than consider culture and agency to be an objectively definable concept, Skeggs considers that they are defined in relation to class position. Whereas middle class subjects are often seen to be agentic with respect to their actions, the working class are often seen to be abject, and their agency is only recognised through middle class frames of reference. In this way, working class (and otherwise minoritised) identities are fixed in place (Skeggs, 2004, 131-134). Rather than accept a fixity of working class identities, Skeggs considers how in various fields of activity there is a need for '...a shift in attention from an analysis that assumes that the meaning of things is a property of the object itself (ie the working class are pathological) rather than the response to, or the relationship to the object (ie how they are being defined through the responses and power of others).' (Skeggs, 2004, 118). This analysis does not mean that Skeggs's has abandoned notions of structure. She considers this classification process to occur as part of a class struggle (Skeggs, 2004, 79) with culture representing an important domain of activity and considers economic, as well as culture processes, in the making (and marking) of disrespected whites (Skeggs, 2004, 91).

In an industrial disaster, the agency of the working class, or otherwise minoritised group, becomes visible to those in a position of power, but only in their own terms. The subjects of the interzone areas, who are largely ignored in the media and in academic research, suddenly become intelligible to the middle classes. In these discourses, the working class are recognised as passive victims, or sometimes as heroic political agents, only post-hoc in the disaster. Their agency is identified, and classified, into the senses of agency which are interpretable to the middle class – '...defined through the responses and power of others' (Skeggs, 2004, 118). This is particularly true in the case of teachers and children in these communities who are often considered to be peripheral, both in terms of their class position, and in their supposed distance from industrial production. Their agency is considered as being either victims or heroes after the event but they are not seen as being agentic before or during an industrial accident. What agency is displayed is often considered to be pathologically deficient when compared to activities conducted in middle class areas. For example, street protest in working class areas can be considered to be violent, or vigilantism (Preston, 2008) and working class cultural forms are misrecognised as being forms of entertainment, or pathologised, rather than being seen as resistance or protest (Skeggs, 2011). As considered above, industrial work is often considered to be on the periphery of the economy and society, and despite its central importance in capitalist production it receives scant

attention outside of romantic accounts of the lives of miners and factory workers.

There has been some recent appreciation that misrecognition has led to injustices in past, and will do in potential future, disasters (Clark, Chhotray and Flew, 2013; Michael, 2014; Preston, 2012). However, even academic literature on many past disasters would seem to reflect biases of misrecognition, even neglect. In the case of the Aberfan disaster, which is one of the focal studies of this analysis there is not a large academic literature on the social and community action before or during the disaster. What academic literature that there is largely considers deficit models of ‘trauma’ (Morgan, Williams, Jasper and Lewis, 2003; Lacey, 1972) with very little work on the community implications (Couto, 1989) and little on the wider social implications of Aberfan (McLean and Johnes, 2000 being a notable exception). What substantive work that there is concerning resistance and agency in Aberfan, as would be expected by Skeggs (2004) largely lies outside of the academy and has been produced by children in poetic form (Chadwick, 1967) on websites (<http://www.hiraeth.org.uk/aberfan/>) and documented in various photographic records. In terms of Flixborough, there is even less academic literature outside of that produced by chemists and industrial engineers, and the case has become a footnote in the history of industrial disasters, sometimes literally (Venart, 2007). Given the scale and importance of these two disasters, the academic literature on the sociological aspects has been sparse.

In moving beyond the portrayal of the working class of Aberfan as victims or heroes Skegg's would consider that autonomous working class accounts of the disaster would be a way of resisting middle class appropriations. The working class '„resist appropriation, and continually threaten to expose and ridicule the use of their culture. The pretensions and inaccuracy of the new middle class formations are being continually undermined' (Skeggs, 2004, 187). Working class agency is therefore not simply a matter of purposeful action, or voice, but as a response to classed and racialised conditions of class conflict.

Methodology

The approach used here in examining the relationship between schools and industrial accidents is one of mixed methods involving archival research, official reports and interviews. By their nature, industrial accidents are idiosyncratic, and in making a chronology I follow a plausible narrative thread. I take an ‘iconic’ incident (the Aberfan disaster of 1966) as being indicative of representations of parents, teachers and pupils in industrial accidents. From this (and the Flixborough, Serveso and Buncefield incidents, which are also discussed below) I consider how children, schools and communities are represented. Finally, I examine the ways in which individuals in another iconic area (Canvey Island) are used as a ‘scale’ of the magnitude of disasters.

In this analysis, I was influenced by two broad approaches to qualitative data. Firstly, Marx’s analysis of industrial dangers to children and adults (Marx, 1997). This analysis used a range of qualitative data (Factories Acts, official reports) to construct an argument concerning the nature of capitalist production using ‘official sources’. Even within these official sources, Marx locates the inevitable horror of capitalist production in its perpetual struggle for profits. Although my expectations are somewhat lower than Marx, I also aim to identify counter-narratives within the official discourse. Secondly, the counter-historical approach of critical race theory (Solazarno and Yosso, 2002) that employs arguments that reveal alternative interpretations of historical events. In this case, the counter-historical approach is along a race / class nexus, that includes white marginality, rather than involving a racial binary, or other racialised distinction.

The usual research approach when considering the activities of marginalized groups is an oral history,

or ethnographic approach, to giving 'voice to the voiceless'. However, documentary evidence can also provide an alternative approach to this theme of empowerment and we should perhaps re-evaluate the utility of this approach. Journalists may misinterpret individual accounts, but in their desire to give an 'angle' to a story they can uncover accounts that may not be unearthed by less utilitarian oral historians. Official enquiries may provide a partial, and biased, account of the event but the evidence gathered for such enquiries, such as police statements, can provide a different angle. This paper uses documentary evidence from two sources. Firstly, reports, documents and ephemera concerning the Aberfan disaster stored at the National Archive of Wales at West Glamorgan. Secondly, reports and police statements arising from the Flixborough disaster stored at the National Archives, Kew, London. The approach to this data was to consider the perspectives of those associated with schools, and school age children, to these disasters. In particular, I aim to identify areas of agency and voice, as well as examples of pathologisation, in official accounts. Following Skeggs (2004) considerations of misrecognition, it is important not to overclaim the difference between voice and agency. According to Skeggs, it is frequently only the middle class subject who is recognised as being agentic, engaged in personal and political projects. Working class activities are frequently misrecognised as being merely cultural (Butler, 1997), concerned with the production of 'voice' rather than with political change or anger. In this analysis, I therefore do not make a sharp distinction between those activities which are indicative of 'voice' or 'agency'. Letters to newspapers, scrapbooking, song and black humour are all ways in which working class protest presents itself, and a lack of overt political organisation should not relegate these activities to the cultural realm

Aberfan 'Like moles being asked about the habits of birds'

"Then in the silence a miner comes out of the foulness and says he's just entered a classroom and seen pinned to the wall a child's essay - "Thursday 19th. The day is dull. That was the day before the disaster" (Sunday Express, London, October, 1966, 7: D/DZ 748 / 1: Newspaper cuttings relating to the Aberfan disaster 1966)

In this section I will examine the Aberfan colliery disaster of 1966. In particular, I will focus on the role of teachers, pupils and children of Aberfan as being concerned, aware, alert and agentic citizens rather than passive victims of the disaster. I also consider the classed and racialised representations of the community in Aberfan (around conceptions of innocence, obliviousness, victimhood in terms of the children and in terms of deceptiveness in terms of the working adults).

The facts of the disaster are that on 21st October 1966 40,000 cubic metres of solid and liquefied debris exterminated 116 children (most of them between the ages of 8 and 10) and 28 adults in the village of Aberfan, South Wales. The disaster, which was the United Kingdom's worst peacetime accident since WWII, is frequently used as a reference point for public protection at industrial sites. The disaster occurred due to the excavation of coal from the Merthyr Vale Colliery. Debris from this colliery had built up to form huge tips (actually piles) of debris. In the official enquiry reference was made both to the naturalness of the process of waste and of the supposed obliviousness of the community:-

"58. Tips are the discard of the coal mining industry. Constituted of industrially-rejected material, hitherto they have largely been banished from thought. "In one sense", as was rightly observed by Mr. Alun Davies, Q.C. on behalf of the Merthyr Tydfil Corporation, "it can be said that the responsibility for the tragedy of 1966 is the *accumulated responsibility of generations*. When the first tramload of material was deposited on that steep mountain slope, it could be said that the responsibility started." (HMSO, 1967, 31, my italics)

“Rubbish tips are *necessary and inevitable* adjunct to a coal mine, even as a dustbin is to a house” (HMSO, 1967, 10, my italics)

As can be seen in the above quotes, waste is taken to be an inevitable and necessary part of the process of production and that this naturalness means that responsibility is both ignored and diffused. The enquiry considers that the tip was ‘banished from thought’ and that rather than a corporation or person being responsible that this was the ‘collective responsibility of generations’. This conception that the local population was oblivious was extended more generally:-

“17. We found that many witnesses, not excluding those who were intelligent and anxious to assist us, had been oblivious of what lay before their eye. It did not enter their consciousness. *They were like moles being asked about the habits of birds.*” (HMSO, 1967, 11, my italics)

This anthropomorphism is particularly telling as ‘moles’ are depicted as blind, tunneling animals (and ‘moles’ is used as a representative character as a miner in fiction. The counterexample (birds) are a different species. Such representations are key to eugenic depictions of working class whites in terms of being a ‘breed apart’ from others (Bonnett, 2003).

However, rather than being unaware of the potential dangers of the tip there was acute awareness of the dangers arising from it from workers and the National Coal Board (McLean and Johnnes, 2000, pg.28, pg.62). Less commonly considered is that this knowledge also extended to children and schools. Children, for example, knew that there was water in the tip:-

“Children built bathing pools in dammed-up beds of the streams that came down the mountainside from the vicinity of Tip 7. One boy, Robert Short, who described the construction of such a pool in 1963, said that he and his friends used to dig holes “with shovels and bits of stick” at the foot of Tip 7 and “water used to bubble out”. He added that the tip slide of that year “slipped all over the ground and over our pond” (HMSO, 1967, 20)

It was also part of the everyday experience of children that there was silt flowing from the tip:-

“....it was pathetic to see the children who had to go to school from The Grove. On many occasions these children had to walk over the top of the tips, which constituted a grave danger because of ropeways, the rope working the haulage taking the tram to the tips...It was most pathetic to see the amount of slurry, or whatever you call it, silt, that was coming down from the mountainside into these various parts of Aberfan” (Councillor J. Williams, Aberfan Council) (HMSO, 1967, 21)

Parents and teachers were also acutely aware of the danger:-

Merthyr Vale Ward Labour Party were aware and in a letter to Merthyr Tydfil Town Clerk wrote:- “This weekend flooding at this spot, which still continues, despite the strenuous efforts of council workmen, is a source not only of great inconvenience but very real danger, particularly to children....At the same time as this letter was sent, or shortly thereafter, the parents of children living in The Grove brought a petition to Miss Jennings, the head-mistress of the junior school (who herself later became one of the victims of the disaster) complaining of the danger caused by this flooding to pupils coming to school from that area” (HMSO, 1967, 22)

The Mother's who gave in the petition, and Miss Jennings were to face tragedy in the disaster:-

Ten months Ago, Miss Ann Jennings, the 64 year old head mistress of Pantglass junior school who died in the Aberfan disaster, accepted a petition from two mothers. It complained of the black, slimy mud and floods through which their children had to walk to school.

Now Miss Jennings is dead and so are Victoria, the 10 year old daughter of Mrs. Katherina Symonds and Anthony, the eight-year old son of Mrs. Florance England, the two women who presented the petition. (Cutting from unidentified local newspaper in child's scrapbook in National Archive of Wales, SWMM5/4/34)

Previously a former headmaster, Mr. W.J.Williams had protested "One day they'll dig us out of there." (Daily Mail, Saturday October 26th 1966: D/DZ 748 / 1: Newspaper cuttings relating to the Aberfan disaster 1966)

As the above quotes show, there was an acute awareness of the danger of the tip amongst the predominantly working class pupils, parents and teachers in Aberfan. Rather than being '...moles being asked about the habits of birds' they not only had an awareness of the impending disaster but also they were minded to politicize this through letters, petitions and public meetings. This disjuncture between the views of the community and their portrayal as unaware and innocent in the disaster led some to conclude elements of the community (particularly workers) had 'covered up' the extent of the waste at the tip. Evidence to support this assertion is not forthcoming, however. In the report on the official enquiry there is only conjecture that individuals may have kept quiet about the impending disaster:-

"60. Those who expressed their fears regarding the stability of the disaster tip were brushed aside by National Coal Board Officials. Other may have entertained doubts about it, but the reflection that to stop tipping could bring about the closure of the Merthyr Vale Colliery may well have led to the quick suppression of those doubts, so vividly remain in the South Wales valleys the grim memories of long years of widespread unemployment" (HMSO, 1967, 31)

In the conclusion of the report to the tribunal Mr. Tasker Watkins Q.C.states:-

"If this evidence is accurate, the local officials of the Union preferred to overlook the appreciated danger of a tip slide lest complaint should place in jeopardy the livelihood of a large number of men in the Taff Valley. " (HMSO, 1967, 111)

As Mclean and Johnne's (2002, 50) state "So ingrained was British Corporatism that the Tribunal devoted a section of its report to discussing whether the NUM should be held partly to blame for the disaster"

However, at least one miner considered that they had some responsibility for the disaster in a letter to a local paper after the disaster:-

"Sir- the hunt is on – a scapegoat must be found for Aberfan. The real culprits should now confess. The responsibility rests with the miners and examiners and in particular with my own generation of miners. My generation 40 years ago drew up the plan to make mining safe. Part of our plan was for the stowage of waste. Almost 20 years ago that plan was put into operation. Had we as miners seen to it that that plan was carried out there would have been 15 to 20 years

less waste to fall on the children of Aberfan. We have stood by with hardly a protest as the huge mounds grew on our mountains – although there were empty spaces left underground. Every miner and ex-miner knew this and yet in a democracy we failed to speak up. Let us not squeal now. By not speaking up against this wrong we are guilty of the murder of the children of Aberfan. The least we can do is admit our own guilt.

G. Nichols, Tonypany”

(Western Mail, Wednesday, October 26th, 1966: D/DZ 748 / 1: Newspaper cuttings relating to the Aberfan disaster 1966)

This culpability by the unions was disputed by the National Union of Mineworkers who considered that officials such as Members of Parliament had not sought their views when considering the risks from the tip. (HMSO, 1967, 33). There were also media reports immediately afterwards that miners had informed the NCB about the risks:-

Warnings that the tip was unsafe seem to have abounded, but although there may have been some action to alleviate the danger it was obviously not enough. The charge-hand at the top of the tip, Mr L. Davies, aged 47, who has worked there for 25 years, says that the Board's statement that the tip was regularly inspected is nonsense. He said: “They come up only when something is wrong.”

Mr Davis, who earns £12 17s a week says he was worried about sliding which had been going on for several months.

(Herald of Wales, Sunday 29th October, 1966: Other cuttings SWMM5/4/34)

One miner expressed it eloquently. He paused in his digging into the black filth and shook his head wearily saying: Why, why? Then shaking his fist at the mountain he said “That damn thing shifted in 1964, we bloody well told them then that one day the whole blasted lot would come down – and it has, hasn't it. And there's nearly 200 of our babies gone with it

(Herald of Wales, Sunday 29th October, 1966: Other cuttings SWMM5/4/34)

From the evidence provided above we can consider that the account of innocence and naivety in the account of Aberfan which dominated both official and media accounts was far from the reality of daily life in the village. In terms of this iconic industrial disaster the victims were agentic. Even though there was good reason for workers to keep safety concerns to themselves (due to fear of unemployment) we can see that they were well aware of the problems at the tip. Although racialised and classed ascriptions of the white working class of Aberfan are made in terms of their innocence (of not being aware of the disaster) and their deviousness / culpability (in not reporting problems with the tip) this was far from the reality of life leading up to the disaster. There was an acute awareness by the children, parents and teachers of the school of the problems of the tip. However, “Despite the searing findings of the Tribunal, nobody was prosecuted, dismissed or suffered a pay cut” (McLean and Johnnes, 24).

Flixborough: ‘maximum advantage from the disaster’

Despite efforts by the NCB to remove the fallout from Aberfan from the public consciousness in the wake of the disaster there was some movement towards considering the consequences of industrial production for communities. One recommendation of the official report was to extend the remit of

safety around mines to include the local community:-

“The ambit of the Mines and Quarries Act, 1954, is restricted by its long title to “the management and control of mines and quarries and for securing the safety health and welfare of persons employed thereat; to regulate the fencing of abandoned and disused mines and quarries; and for purposes connected with the matters aforesaid”.....It follows that there is no obligation on the Inspector of Mines, in the exercise of its powers of securing the enforcement of the Act, *to have regard to the safety of the general public...We recommend that this limitation in the Act be removed and that the owners and managers of mines, and also the Inspectorate of Mines, should be required to consider the safety, health and welfare of all persons going about their lawful business in the vicinity of a mine, including the safety of their property.* (HMSO, 1967, 129, my italics)

This statement concerning the responsibility of industrial owners towards a community was to come into sharp relief on 1st June 1974 when an explosion at the Nypro chemical plant killed 28 people and injured 36 others. Although schools were, fortunately, closed on the date of the explosion (it was a Saturday) a number of children were injured, or were otherwise involved in the accident. In a report into the causes of the Flixborough disaster on behalf of Nypro (U.K.) Ltd. dated 3rd Jan. 1975, prepared by L.H. Manderstam and partners (U.K.) Ltd., 23rd January 1975 (EF/12/16) it is reported that the explosion caused damage estimating from 15 tons of TNT to 45 tons of TNT (the equivalent of a Fuel Air Burst Weapon – the Russian ‘Father of All Bombs’) and the explosion of 1.4 tons of cyclohexane (pg.3), a chemical that if breathed in causes damage to the central nervous system.

The official report (EF/12/16) into the Flixborough disaster also gives a number of witness statements, primarily from adults, which provide an official account of the disaster. These avoid mention of injury to persons, concentrating on the technical causes and consequences of the disaster, although it is acknowledged that there are divergent views on the cause of the explosion from correspondence between government and academic scientists (LAB104/411). However, children and teachers were caught up in the explosion, a fact which is given scant coverage in the official report. Records and statements from Humberside Constabulary reveal the ways in which they were injured in the explosion and that some of them took a pro-active role in recording what had happened (TS/84/31), and, in an era prior to facebook and twitter, took time to document its effects:-

“After two or three seconds...(after the explosion)...I saw a sheet of flame appear over the top of the works. I felt the heat and then I saw two chimneys blow straight down. The blast then hit my home and there was a lot of noise. One minute I stood at the window watching this and the next I was sat on the floor on the other side of the room. I could see the window had blown in and I had multiple cuts to my head, face, arms, hands and body.”

(14 year old boy, TS/84/31)

“I went to the front window and looked out and as I did so I could see Nypro works. I could see smoke coming from an old army car park towards the Wharf. I had never seen smoke coming from the (sic.) place before. I could hear the alarm going and I could hear like a bumping noise. Then I saw flames shoot up into the sky. They went very high. Then there was a flash and the next thing I knew was that I was covered in glass with a television on top of my legs. When I looked all the windows were caved in. I was bleeding from my face and my hands.”

(13 year old boy, TS/84/31)

“I was at home when I heard an explosion. I got on my cycle and went to see where the explosion had come from. I realised it was from Nypro factory. I had with me my Zenith B 35mm camera and I took eleven photos of the Nypro plant. I took these about fifteen minutes after the explosion. I have handed the untouched negatives to D/Sgt. Kirk. The police may develop these and produce negatives from them. I would like the negatives back when the police have finished with them”

(16 year old boy, pupil at local comprehensive school, TS/84/31)

“I am a school master...I was in my kitchen, that immediately faces north, when I saw a sheet of flames coming from the Nypro works in Flixborough...I immediately went for my camera and took three photographs from the balcony of the Nypro works”

(School teacher, TS/84/31)

However, as in the case of Aberfan, the residents of Flixborough and beyond were considered to be deceitful. For example, there were various claims that residents were attempting to gain maximum advantage from the disaster in terms of repairs to property. Various local authorities accused Flixborough householders of turning a disaster to their advantage. A letter from R Golbring, from the Yorkshire and Humberside Regional office, 30 August 1974 considered that:-

“...some owners – it is alleged – are taking advantage of the situation to include more work than repairs to blast damage. This is causing difficulties and consequent delays – with the paying agencies’ (HLG118/2039)

Additionally, in a note prepared by P.I.Wolf, Regional Controller Housing and Planning, Leeds 1 on 27th August 1974:-

“Both the council and the NFBTE (National Federation of Building Trade Employers) say that a few residents have not behaved well. Recent examples include beleated payments to builders even though the compensation has been paid to the resident and one householder is attempting to acquire a far better house at public expense....Once again, the Council and the NFBTE claim that there have been few complaints to the press, but there has been exaggeration’ (HLG118/2039)

Buncefield and the ‘Canvey Factor’

Following Flixborough, and a significant chemical disaster in Seveso, Italy in 1976 in which over 17,000 people in the village were exposed to a leak of over six tones of 2,3,7,8-Tetrachlorodibenzodioxin (TCDD – a substance similar to Agent Orange) the European Commission introduced a set of directives that were eventually adopted by the British Government. In their latest form these became known as the COMAH regulations (Control of Major Accident Hazards) regulations (1999, amended 2005). This set of regulations applies to the production, storage and distribution of chemical and industrial products. Part of the COMAH regulations is to protect the general public. On top of this, there is a duty upon organisations covered by COMAH to inform the general public of their activities and to construct an emergency plan for warning and informing the community in case of a major incident. Individuals in the ‘Public Information Zone’ (PIZ) of a COMAH site can be expected to receive information concerning what to do in case of an incident from the operator of the site. According to the Health and Safety Executive (2012) this advice should also include schools:-

“Anyone whose presence in the PIZ can be predicted, such as residents or workers at other premises, can be sent the information individually by post or by other means, eg by the development of educational packages in schools and colleges, and the use of videos.” (Health and Safety Executive, 2012, 16).

Indeed, schools are considered to be an ‘off-site’ population of particular concern and that in drawing up off-site plans, providers should take into account:-

“The density and types (vulnerability) of off-site populations (dwellings, hospitals, schools, etc.) and types of environmentally sensitive receptors” (Health and Safety Executive: COMAH Safety Report Assessment Manual, Accessed 2013)

This special vulnerability of schools was also highlighted in a report following the Buncefield disaster of 2005 in which a number of large explosions occurred at a Hertfordshire oil terminal, the biggest explosion ever recorded in peacetime Europe. The report highlighted a need to take into account ‘societal risk’ when constructing chemical plants involving the possibility of mass casualties particularly the proximity of schools to such sites. In the case of Buncefield, for example, schools were as close as 3km to the site of the explosion (fortunately the explosion occurred on a Sunday when children were not at school). The report advises that primary schools should be built in zones where there is a marginal possibility of receiving ‘dangerous dose’ from a chemical accident. However, houses (and presumably secondary schools and colleges) can be built in areas where the risk is higher (Health and Safety Executive, 2008). In fact, in some areas the risk of an industrial accident is so high that they are now used as a benchmark for disasters. Canvey Island in Essex is home to some of the most concentrated and deadly industrial and chemical processes in the United Kingdom as well as being an area with some of the poorest and transient residents in the country. The ‘Canvey Factor’ is used as a measure of the consequences of disaster. A petrochemical accident in Canvey would kill 1,500 people instantly. This inhuman scale is used as a comparator for other risks such as those arising from building nuclear power stations.

Conclusion

The portrayal of schools and pupils as ‘victims’ in industrial disasters not only underplays their agency but also misrecognises it. This portrayal reduces the role of young people both before and after the disaster, and is often an excuse for corporate misrecognition of the problems which communities have already identified. Moreover, there is often a double edge to the portrayal of victimhood in that populations are accused with culpability in disasters (in the case of Aberfan) or of profiting from the disaster (as in Flixborough). Rather, pupils, parents and teachers living near industrial and chemical sites have an extraordinary insight of their dangers and the precariousness of their existence. This is potentially dangerous for the chemical industry if it is dependent upon passivity, rather than resistance, for its continuation. It is far easier to classify such individuals as vulnerable, and when required culpable, than to consider them as agentic citizens who have the power to challenge official accounts. This is contrary to current policy as information in ‘Public Information Zones’ (PIZs) is distributed on a top down basis. There are no channels for two way communication between pupils and teachers and the owners of chemical or industrial plants. ‘Risk’ is something that is imposed upon the population with no negotiation. Given the didactic and obtuse advice given to those living in PIZ’s there is little opportunity to engage even with minimal preparedness.

In political terms, this (mis)representation and (lack of) recognition, or misrecognition, exists in welfare regimes involving both nationalized (the National Coal Board, NCB) in the case of Aberfan

and privatized (in the case of Canvey Island) industries. It must be considered, finally, that the processes of industrial and chemical production considered in this article are ones in which humanity (in terms of production, or in terms of human consequences) is considered to be (albeit probabilistically) lower than that of the process of value production. Indeed, both the Aberfan and Flixborough disasters were caused by the companies concerned aiming to save money on waste disposal and repairs. A Marxist analysis would consider that such suffering is naturalised as part of capitalist production. Indeed, the horrors experienced by children in factories were analysed by Marx from reports of official inspectors from the government, rather than the report of Trade Unionist or activists. However, the occlusion of these communities on a daily basis is achieved through processes of racialisation, frequently within whiteness. However, although these macro factors are important, this analysis suggests that a more nuanced understanding of agency and subjectivity of children in disasters is necessary to go beyond sentimental, or judgemental, understandings of disasters.

References

- Augé, Marc. 2007. *Non-places: introduction to an anthropology of super-modernity*. London: Verso.
- Bonnett, Alistair, 2000. *White Identities: Historical and International Perspectives*. London: Prentice Hall.
- Bullard, Robert. and Wright, Beverley. 2012. *The Wrong Complexion for Protection: How the Government Response to Disaster Endangers African American Communities*. New York: New York University Press.
- Butler, Judith. 1997. "Merely Cultural". *Social Text*. 52.3 (Fall/Winter)
- Burroughs, William. 1997. *Interzone*. London: Penguin.
- Centers for Disease Control and Prevention. 2005. *Third National Report on Human Exposure to Environmental Chemicals*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Environmental Health.
- Chadwick, Dorothy. 1967. *Aberfan: a book of memorial verse produced by children*. Ilfracombe, Devon: Stockwell..
- Clark, Nigel., Chhotray, Vashuda and Few, Roger. 2013. Global Justice and disasters, *The Geographical Journal*, 179,2, 105-113.
- Couto, Richard. 1989. Catastrophe and Community Empowerment. *The Group Formulations of Aberfan Survivors*, *American Journal of Community Psychology*, 17, 236 – 248.
- National Archives of Wales: Daily Mail, Saturday October 26th 1966
- de Souza Porto, M. F. and de Freitas, C. M. 1996. Major Chemical Accidents in Industrializing Countries: The Socio-Political Amplification of Risk. *Risk Analysis*, 16: 19–29.
- Health and Safety Executive. 2008. *Recommendations on land use planning and the control of societal risk around major hazard sites*. Bootle: HSE.

Health and Safety Executive. 2012. *Competent Authority Guidance for inspectors on emergency arrangements for COMAH establishments*. Bootle: HSE.

Health and Safety Executive: COMAH Safety Report Assessment Manual (Accessed October, 2013) <http://www.hse.gov.uk/comah/sram/s2-7.pdf>

HMSO, The Tolerability of Risk from Nuclear Power Stations; HMSO (Accessed October, 2013) (<http://www.hse.gov.uk/nuclear/tolerability.pdf>)

Lacey, Gaynor. 1972. Observations on Aberfan, *Journal of Psychosomatic research*, 257-260.

Mac an Ghail, M. and Haywood, C. 2011. Schooling, masculinity and class analysis: towards an aesthetics of subjectivity. *British Journal of Sociology of Education*: 32 No.5: 729-744.

Marx, K.. 1992. *Capital: A Critique of Political Economy, Volume 1*. London: Penguin.

McLean, Iain. and Johnes, Martin. 2000. *Aberfan: Government and Disasters*. Swansea: Welsh Academic Press.

Michael, M. (2014) Afterward: on the topologies and temporalities of disaster, *The Sociological Review*, 62, S1, 236-245.

Morgan, Louise; Williams, David; Jasper, Anne and Lewis, Glynn. 2003. The Aberfan Disaster: 33 year follow up with survivors, *The British Journal of Psychiatry*, 82: 532-536.

Preston, John. 2003. White trash vocationalism? Formations of class and race in an Essex Further Education College. *Journal of Widening Participation and Lifelong Learning*. 5: 6-17.

Preston, John 2008. (Mis)recognizing lifelong learning in non-formal settings. In Sutherland, P. and Crowther, J. (eds.) *Lifelong Learning: Concepts and Contexts*. London: Routledge.

Preston, John. 2012. *Disaster Education: Race, equity and pedagogy*, Rotterdam: Sense Publishers.

Rikowski, Glenn. 2002. Education, capital and the transhuman. In Hill, Dave et al (eds.) *Marxism against postmodernism in educational theory*. Lanham: Lexington Books.

Skeggs, B. 2004 *Class, self, culture*, London: Routledge.

Skeggs, B. Imagining personhood differently: person value and autonomist working-class value practices, *The Sociological Review*, 59, 3, 496-513.

Solorzano, Daneil and Yosso, Tara. 2002. Critical Race Methodology: Counter-Story Telling as an Analytical Framework for Education. *Qualitative Inquiry*. 8, No.1: 23-44.

The National Archives (TNA): EF/12/16: Report into the causes of the Flixborough disaster on behalf of Nypro (UK) Ltd by LH Manderstam and Partners (UK) Ltd

The National Archives (TNA): HLG118/2039: Flixborough Disaster: Private Secretaries' Office correspondence, discussion papers, notes and correspondence

The National Archives (TNA): LAB104/411: Official report of the Inquiry into the Flixborough disaster: correspondence with members of the public regarding the report

The National Archives (TNA): TS84/31: Humberside Police: list of witnesses on and off site; statements collected from employees and members of the public

The National Archives of Wales: H.M.S.O. (1967) *Report of the Tribunal appointed to inquire into the Disaster at Aberfan on October 21st, 1966*, Chairman Lord Justice Edmund Davies, HL 316 & HC 553, p.27

The National Archives of Wales: D/DZ 748 / 1: Newspaper cuttings relating to the Aberfan disaster 1966, comprising:-
Sunday Express, London, October, 1966, 7
Daily Mail, Saturday October 26th 1966
Western Mail, Wednesday, October 26th, 1966

The National Archives of Wales: SWMM 5/4/34 Booklet of newspaper cuttings of 'The Aberfan Disaster'. 1966 comprising:-
Cutting from unidentified local newspaper in child's scrapbook
Herald of Wales, Sunday 29th October, 1966

The National Archives of Wales: Western Mail, Wednesday, October 26th, 1966

The National Archives of Wales: Herald of Wales, Sunday 29th October, 1966

Venart, James. 2007. Flixborough: a final footnote. *Journal of Loss Prevention in the Process Industries*, 621-643.

Weiss, Lois. 2004. *Class Reunion: The Remaking of the American White Working Class*. London: Routledge.

Willis, Paul. 1977. *Learning to Labour: How Working Class Kids Get Working Class Jobs*. London: Saxon House.

Wray, Matt and Newitz, Analee. 1997. *White Trash: Race and Class in America*. London: Routledge.