

Green crime and victimisation: Tensions between social and environmental justice

Abstract

In 2011 Rio-Tinto Alcan, one of the world's largest producers of aluminium announced the closure of the smelter at Lynemouth, Northumberland, North East England. The plant, a major local employer, finally closed in March, 2013. This article examines global concerns about environmental emission standards and the costs of compliance. This plants closure is a success in green terms. However, where closure is officially considered a compliance option, costs to deprived communities are high. From a (green) victimological perspective, the article contemplates the hidden costs of closure on already deprived local and regional communities. The discussion focuses on how green crime and green compliance creates victimisation and reflects on the moral and ethical challenges this presents for a green criminology.

Keywords

ecological, environmental, green crime, social harm, victimisation

Introduction

In 1998 this journal published its first special issue: 'For a Green Criminology'. South's contribution in particular illustrated directions for theoretical development offered by a green perspective. Since then the original contributors and others stimulated by the new green field of study (South, 1998: 147) have published widely on green perspectives on the environment (see for example Beirne and South, 2007; Benton, 2007; Lynch and Stretsky, 2003; Sollund, 2008; White, 2003, 2008, 2009, 2010a, 2010b) lending sensitivity to the green and environmentally conscious perspective in criminology. My own criminological interests are connected to non-criminal forms of victimisation and invisible harms (see for example Davies, 2007, 2010, 2011; Davies et al 1999) and there are clear synergies between a green perspective and my own feminist inspired harms-based approach to crime and victimisation. Recently, through working with colleagues on innovative ways of teaching criminological theory and in particular with Tanya Wyatt, whose interests are keenly green (Wyatt, 2012a, 2012b, 2013) I refreshed my reading of the green perspective in criminology in order to better understand the closure of an aluminium plant in the North East of England due to environmental concerns about CO2 emissions which are of course, concerns of a green/brown criminology.

The closure of the Rio-Tinto Alcan (RTA) aluminium plant in Lynemouth, Northumberland in the North East of England is the starting point for a case study of tensions around social and ecological justices and victimisations. Social justice concerns are about the physical, economic and social impact of industrial contraction upon employees and other workers whose livelihoods and disposable income depends upon the existence of the plant. These extend to concerns about the local and regional economy and relationships and experiences in the aftermath of the closure including the impact on work, gender relations, social networks, younger generations, family and social life. Thus broader social concerns exist about the future of communities where closure happens. These can be represented as additional costs. Such costs have been obscured or rendered invisible on the global stage.

This paper contextualises the significance of this plant to the local and regional rural communities and provides an outline of the plants closure as linked to energy costs and emerging legislation. It foregrounds the green and environmental perspective in criminology and global concerns about environmental emission standards and compliance. Part of the justification for RTAs closure of this plant was the financial cost to the business of achieving compliance with a European directive. This plant was an industrial giant sitting at the very heart of the local and regional community and this case study illustrates how the impact of pressures to be compliant with regulatory standards effectively prevented the survival of the plant. This dilemma is facing communities all over the world, including those with low regulatory standards. The closure of this plant is a success in green terms. However, where closure is officially considered a compliance option, costs to local and regional communities are high. In the move from the global to the local this article illustrates how social costs are hidden as compared with the more visible global environmental or 'green' concerns about environmental emissions standards and compliance strategies. It illustrates how social and ecological justices appear to collide and be jointly and equally unsustainable. When green/brown (environmental) concerns appear to be prioritised, they incur as a result, further social harms and impact negatively on local and regional communities.

Though sympathetic to a harms-based approach, the ensuing discussion reflects on the lasting potential of a green perspective within criminology. It considers these tensions as conflicts of interests and argues for the imperative to weigh and balance these tensions and costs. The discussion takes account of the key concerns of a green criminology alongside concerns for, and of, communities affected by the implementation of environmental policies. In exploring the nuances of what constitutes harm and victimisation in such scenarios the paper also considers the relative worth and seriousness of different types of harms and exemplifies some of the tensions and dilemmas when these are juxtaposed. The paper suggests a green dialogue on these issues and proposes a green victimological research agenda to draw attention to such trading of costs.

Case Study: Rio-Tinto Alcan and the aluminium smelter at Lynemouth

In November 2011 Rio Tinto Alcan (RTA) announced it would close the Lynemouth aluminium smelter near Ashington in Northumberland. Directly employing 515 people with an additional 111 employed at the local coal fired power station, in March 2012 RTA confirmed that the plant would shut on 29 March, 2013. The plant is now being de-commissioned. The power station has been bought.

Rio-Tinto is a leading industrial mining group and a global leader in the aluminium industry. It is one of the world's largest producers of bauxite, alumina and aluminium. Aluminium is a lightweight yet strong product which is used to manufacture other recyclable and 'green' products with low carbon footprints. Smelting technology together with hydropower (in some plants) combines to allow the company to boast a principled approach to sustainable development. The Lynemouth smelter in Northumberland, England opened in 1972. Until late in 2012 it employed 515 people, with a further 111 employed at the power station. Adding to this were 200 directly contracted workers and hundreds more indirectly in work connected to the plant at Lynemouth. In the early 1990s the numbers employed at the plant reached a peak, employees in the casting plant alone were just under 1000 and in that decade these numbers were halved.

When Lynemouth became the home to the Alcan (since 2007 RTA) aluminium smelter and the power station in the early 1970s, there was a ready-made workforce which was part of the pull factor for the company being attracted to the area. Lynemouth and Ellington are villages close to the town of Ashington in Northumberland, a sizeable geographical area encompassing remote rural areas bordering with Scotland in the North, Cumbria in the West and the more urban area of North Tyneside to the South with the coast to the East. Ellington was a village serving a coal pit which closed in 2005. Transport links via the port of Blyth allowed for the importation of bauxite, alumina and, after the closure of the pit at Ellington, coal and coke to Lynemouth. Good road and rail links was also a key feature in the industry being attracted to the area and for the success of the smelting operation. The pit at Ellington was for a long time the only remaining pit open in the region. Coal mine closures in the early 1980s had left thousands of men in the region unemployed. The local closures were of course part of the general contraction throughout the European Community of coal mining. In England and Wales this ultimately resulted in the Miner's Strike 1985-85 (Stead, 1987). Following de-industrialisation in geographically isolated areas and single occupational communities colleagues have explored the human consequences of immiseration (Stephenson and Wray; Waddington et al., 1993, 2003; Stead, 1987). According to these analyses Marx's concept of immiseration is useful to any understanding of the consequences of post industrialism. Such was the rate of social and economic degeneration following the pit closures in this particular region in the North East that the British government granted £28 million to the Canadian owned company Alcan to help reduce unemployment in the local authority area of Wansbeck. Since the decline of the shipbuilding, closure of the docks and dwindling of the fishing industry in the North East the villages surrounding Ashington have long been isolated. The Wansbeck area generally has experienced de-industrialisation and few alternative opportunities for employment of any description exist in the region.

Lynemouth and the towns in the south east part of the county of Northumberland scores poorly across a range of indicators of deprivation. Out of 32,482 local super output areas across the countryⁱ, almost 50% of the areas in Northumberland are in the top 400 most deprived. Northumberland falls into the 50 most deprived local authorities for employment scale (number of people employment deprived) and is ranked 29th most deprived.

Northumberland is ranked 53rd most deprived for the number of people income deprived. In the income deprivation domain, 13 Northumberland LSOAs fall into the most deprived 10% and 20,221 people live in the most deprived areas. Wages in the county are lower than the country figure with the weekly average (median) pay being £474 compared to £508 in England (2011). In terms of benefits claimants as percentage of working age population, the neighbourhood had more than double the number of those in England on benefit, job seekers allowance and incapacity benefits in 2010. South East Northumberland contains the majority of the LSOAs that fall into the most deprived 30%. Blyth is ranked the 400th most deprived area in England falling into the most deprived 2% of LSOAs. All LSOAs in the worst 10% of the IMD 2010 fall into the South East area of Northumberland, all contained within the former Blyth Valley and Wansbeck Districts. This area also contains several LSOAs that fall into the 11% to 20% and 21% to 30% most deprived.

Furthermore, In terms of education and health deprivation the neighbourhood has one of the highest levels on both of these scores and people were 10% less likely to rate

themselves as in very good health as compared with in England. The most extreme levels of deprivation in the Health Deprivation and Disability domain are concentrated in the South East of the County. Levels of children in need are often linked to levels of deprivation and one recent reports suggests that children are suffering as the pressure builds on families in the North East which has the highest rate of children in need in England. Out of 12 local authority areas in the North East, Northumberland has the fourth highest rate of children in need in 2011-12 (Warburton, 2013: 5).

Background and outline of the closure

The power station at Lynemouth uses coal to produce electricity for the energy source to supply the smelter. The plant at Lynemouth has high energy needs and therefore costs. Coal is less efficient than other energy sources and as a fossil fuel the energy source produces carbon emissions and air pollution. In some other parts of the world including Lochaber, Scotland, power is hydroelectric (HEP) - water driven making these aluminium plants less costly, more efficient and 'greener'. In simple terms coal could be seen as the source of the problem leading to the plants closure. It is a pollutant and unecological.

When, in November 2011, it was announced that RTA would close the Lynemouth aluminium smelter, subject to the completion of a 90-day consultation process with employee and union representatives, the press release also announced that the company was in exclusive discussions regarding the potential sale of the power station at the site. It stated that all affected employees would receive support, including re-training and job-search assistance, in order to mitigate the impact of any closure. In 2011, Jacynthe Côté, chief executive of Rio Tinto Alcan, reported:

This decision follows a thorough strategic review which explored every possible option for continuing to operate the smelter and power station. However, it is clear the smelter is no longer a sustainable business because its energy costs are increasing significantly, due largely to emerging legislation. We are hopeful that the power station can remain in operation under new ownership.

On 6th March 2012 it was confirmed that RTA would close the Lynemouth aluminium smelter. Production at the smelter ended at 14:00 on 29 March 2012. The carbon plant and pot rooms closed. Production in the casting plant ceased on 2nd November 2012 having fulfilled orders until March 2013, with aluminium being shipped in from Russia while the rail operations and equipment lay idle, alumina no longer being needed.

Prior to the closure, in 2009, the managing director was upbeat. The Lynemouth power station had served the Smelter and the communities which depend on it well for over 30 years. There had been heavy investment in a programme of continuous improvement to the plant's environmental performance and to its world-class levels of energy efficiency. The Environmental Report for 2009 (RTA, 2009) summarises the CO₂ emissions from the power station and in 2009 it claimed to be one of the best in its class for CO₂ emissions per unit of generation due to high plant efficiency. 2009 saw continued improvements due to reduced coal burn following a record biomass burn. The power station however, emits 2.5million tonnes of CO₂ emissions, thus, looking to the future, the proposal was to secure funding to convert one of the three 140 megawatt generating units in the power station to carbon

capture storage (CCS) technology and, as a result, increase energy generation from that unit by more than 150%. Carbon emissions from the unit would be removed, transported via under-sea pipeline and stored safely in an off-shore aquifer. In the meantime the power station would continue to set targets for the use of biomass to displace coal combustion and decrease CO₂ emissions. During 2009, 40,419 tonnes of biomass was used, the highest since biomass co-firing began during 2004.

In the same year - 2009 - the Prime Minister Gordon Brown visited Lynemouth power station to discuss proposals to demonstrate carbon capture and storage at the site. He acknowledged that the development of CCS technologies would be an important part of energy generation in the future and gave assurances that the UK government was looking at Lynemouth Power Station as a possible investment opportunity to develop a visionary retrofit project to convert one of the three 140MW units to integrated gasification combined cycle (IGCC) configuration with carbon capture to give an output of 375MW. The Prime Minister said:

‘.....I’ve been hugely impressed by the scale of the operation and by the technology you use. The North East of England has a long history of being at the forefront of energy innovation and with what you are proposing on carbon capture and storage, Rio Tinto Alcan and this region can lead the world in this important technology. (G Brown, 2009 in RTA 2009).

Energy costs and emerging legislation

The energy costs and emerging legislation referred to by the CEO in the November 2011 press release concerns emissions from large combustion plants and concerns for the environment. In April 2010, the European Court of Justice ruled that the power plant was subject to the emission limit values laid down in an environmental treaty in 2001 to fight global warming. This took the form of a directive - directive 2001/80/EC of the European Parliament on the limitation of emissions of certain pollutants into the air from large combustion plants - the Kyoto Protocol. The UK government had been unable to succeed in court in challenging the categorising of the smelter at Lynemouth as a large combustion plant and the fate of the plant looked gloomy henceforth. Following the court case the plant was given just a matter of weeks to comply with the legislation, otherwise the government itself would be liable to pay fines to the European Commission for failing to implement the directive properly. RTAs criterion of 40% rate of return from its businesses would be impossible to achieve if the plant were required to become compliant by 2014. The British Government decided it would not just meet emissions targets but would set much higher standards effectively sealing the fate and eventual closure of the plant at Lynemouth leaving business to go to countries such as China and Russia and elsewhere across the globe, where there are less or no such emission standards to comply with.

As noted above, the managing director had, in 2009, been boasting that the power station had world-class levels of energy efficiency and was the best in its class for CO₂ emissions per unit of generation due to high plant efficiency. Nevertheless, RTA Lynemouth CO₂ emissions are around 350,000 tonnes, this site total CO₂ figure being dwarfed by the contribution from the power station emitting 2.5 million tonnes. The CO₂ emissions from the smelter (Pot rooms and Casting Emissions) are more complex because low level PFCs (polyfluorocarbons) emissions from ‘anode effects’ during the smelting operations need to be

considered. The aim is to have as few anode effects as possible. Gas used in the furnaces is the main source of CO₂ production in the Carbon Plant (Carbon Anode Plant Emissions).

Table 1 shows the calculated costs to the business from compliance with the various strands of new or impending legislation. Clearly all of the costs are increasing. The projected cost from the Large Combustion Plants Directive (LCPD) increasing almost fivefold from 2011 - 2015 to a total of £31m alongside further projected costs from 2013 -2015 arising from European Union Emissions Trading Scheme (EU ETS) and Carbon Price Support (CPS) adding a further £74m costs onto the £31m – totalling £105m projected costs from compliance with the various strands of new or impending legislation.

Table 1: Emissions Data and Projected Costs

	2011	2012	2013	2014	2015
LCPD	£7m	£11m	£17m	£28m	£31m
EU ETS	NA	NA	£46m	£46m	£46m
CPS	NA	NA	£10	£21m	£28m
Total	£7m	£11m	£73m	£95m	£105m

LCPD = Large Combustion Plants Directive

EU ETS - European Union Emissions Trading Scheme

CPS = Carbon Price Support

Discussion: Tensions, costs and losses

What happened following the optimism noted above from the Managing Director and the (ex) Prime Minister in 2009, concerning the power plant and sustainable energy? Part of the explanation for the closure, as proffered by the Chief Executive, was emerging environmental regulations and legislation. This begs the question - should the British government have worked harder to find a solution to the environmental challenges? Compliance could be achieved in one of three ways: one, achieve the emissions standards (known as Emission Limit Values). This was impossible via the existing technology at the plant and would therefore require a hugely expensive retrofit (c £250-£300m); two, purchase sulphur credits from plants that were emitting less than their permitted levels; three, close. Under the scope of the directive, closure was not a consequence of the legislation; it was officially considered a compliance option.

Reducing the probability of dangerous climate change is of course a significant challenge and doing so in a socially just way creates additional challenges for governments (Friends of

the Earth, 2011). Whilst the challenges for governments are significant and include debating the principles that policy makers adhere to, the discussion here, examines the challenges these scenarios pose for a green criminology/victimology. The closure of this plant is a success in green terms. Yet the brunt of the costs to achieving this are felt by those living in an isolated and already impoverished rural community. This green achievement is now considered and juxtaposed against the notion of a victimised community. The discussion is framed loosely around the seriousness of different types of harms and injustices. First, green issues are foregrounded. Second, victimised communities are explored. Third, a sociological analysis is introduced.

Foregrounding the Green

The foundations of green criminology are to be found in ecofeminism, environmental racism and ecological socialism whereby environmental degradation sees the rich minority exploiting the poor majority on a global scale (Lynch, 1990). A green criminology or perspective seeks a green, environmental and ecological justice. Environmental crimes, noncompliance and risks create harms to the health of humans and the natural world (Gibbs et al., 2010). Environmental harm is itself deemed to be a (social and ecological) crime, regardless of legal status – if harm is done to humans or environments or animals, then it is argued that this ought to be considered a ‘crime’ (White, 2013). A green perspective therefore raises some controversial issues about what constitutes crime. The ‘politics of definition’ (White, 2008: 88) come into play here and collisions between what constitute crime, harm, injury, injustice. A harms based discourse ‘zemiology’ is relevant to such understandings (Hillyard et al., 2004) where the study of harms includes crimes as well as non-criminal victimisations and experiences of injustice, unfairness, prejudice. Often, though not always, a green perspective signals a harms based discourse as opposed to a crime based discourse where proponents argue that crime has no ontological reality and serves to maintain power relations, that criminalisation is ineffective and counter-productive and that addressing social injustice is a priority (Hillyard, 2005; Hillyard and Tombs, 2007; Hillyard et al., 2005). A harm based approach takes on an expansive definition of harm (or victimisation) where justice is achieved according to Hudson (2001: 278) by adhering to the following principles:

The fair distribution of opportunities, rewards and responsibilities in society.
Principles and institutions for the distribution of meaningful social goods – income, shelter, food, health, education, freedom to pursue individual goals.

A green society would be one in which, amongst other aspirations, humans would live in ways which minimally disrupt the rest of nature. Present generations ought to act in ways that do not jeopardise the existence and quality of life of future generations. In green terms coal, as a fossil fuel, produces greenhouse gas emissions and it is a pollutant contributing to global warming by increasing the levels of carbon dioxide in the air and in turn contributing to the depletion of the ozone layer. Hundreds of the dirtiest coal fired power stations across Europe are currently under threat of closure by 2015 (Gosden, 2013:7). Protagonists make a strong and convincing case for such issues to be a criminological concern:

‘Simply put the world is warming’ and evidence is provided from a range of sources attesting to this.....’Atmospheric concentrations of carbon dioxide, in particular, have risen quite sharply over the last two centuries’ and more

evidence is offered in support of this together with predictions about greenhouse gases in the atmosphere quadrupling by 2100 producing climate related disasters including heat waves, hurricanes, drought, and varieties of flooding. (Wachholz, 2007: 163).

Some have acknowledged that a foregrounding of the green in criminology must be premised on the principles of environmentalism and broader issues of environmental justice (Walters, 2007:199). Benton (2007) also recognises that green issues pose deep and serious questions for established views on justice and vice-versa that considerations of justice pose a challenge to some versions of green social and political thought and, Skinnider, (2011) points out that:

“[M]any environmental disruptions are actually legal and take place with the consent of society. Classifying what is an environmental crime involves a complex balancing of communities’ interest in jobs and income with ecosystem maintenance, biodiversity and sustainability” (Skinnider, 2011: 2)

Gibbs (2010) focusses on the criminalization debate:

A grey area emerges for environmental risks that are not currently subject to regulation or criminal enforcement but where further understanding of the risk may lead stakeholders to argue for regulation and/or criminalization” (Gibbs et al., 2010: 133)

Thus for some this invites debate about which harms constitute serious harms and which ought to be considered a crime. From Whyte’s perspective, environmental degradation is a crime regardless of legal status. There are different views about how to achieve an ecological justice though essentially the debate is similar to that rehearsed by those concerned about white collar and corporate crimes and which have manifested themselves in the regulation or compliance versus criminalisation debate (see the exchange between Hawkins and Pearce and Tombs in the 1990 and 1991 editions of *The British Journal of Criminology*. However, it is clear what the ambitions of a green perspective are and in the context of the closure of the plant at Lynemouth there are at least three green connections. First, green criminology demands that air pollution be seen as a serious crime, offence and injurious type of behaviour. Second, that effective compliance strategy should be in place to enforce regulations and to reduce air quality problems. Third, green issues open up a range of possibilities for interdisciplinary work. A green criminology directs attention to causes of harms, crimes and conflicts as well as the related connections and consequences. In this example we see how a green perspective on crime has successfully achieved effective compliance strategies through the closure of the plant. We now explore the closure due to green concerns with a view from sociology and with insights from victimology. From this interdisciplinary and harms-based perspective we now examine some of the related connections and consequences through the concept of victimised communities.

A victimised community?

As Evans and Fraser (2004) have argued there are several links between communities and victimization. In the context of this paper, an appreciation of potentially negative impacts such as job and disposable income losses as a consequence of closure are considered as

victimological harms. The related economic and social connections and affective consequences of closure in an isolated and already impoverished community as described above are explored below. In order to appreciate the relevance of a victimised community, first, victimological concepts are explored.

From a critical social science perspective colleagues (Davies et al., 1999, 2003, 2007) suggest that 'invisible' social harms and injustices take place within the global world that are worthy of examination. Such harms incur suffering akin to victimisation yet are rendered invisible for a number of reasons, in part due to their non-crime status. Such harms impact substantially on the lives of their victims and communities in which they occur and in turn these injustices impact heavily on the work of social, health, welfare and criminal justice agencies, the state and other regulatory bodies. It is not a crime to close an industrial plant yet doing so in an area whose economic wealth is generated almost exclusively from a single industry causes significant further harms and losses that impact substantially in terms of costs to individuals, families and communities.

The concepts of indirect, tertiary and secondary victimisation in part explain suffering that does not meet the criteria of criminal victimisation (Davies, 2011). The concept of secondary victimisation refers to those who are indirectly harmed following criminal victimisation for example, the significant others of murder or rape victims. This is also sometimes known as indirect or tertiary victimisation. Essentially it draws attention to the impact that crime has on those not directly involved in the particular event concerned but to a wider circle of 'victims' who may have been affected by a particularly shocking event or life changing experience. Another meaning of secondary victimisation is similar to being re-victimised and here victimisation occurs at the hands of criminal justice system staff or anyone else responding to an offence. It results from the insensitive treatment of significant others, bystanders, witnesses, victims of crime – often inadvertently – by the criminal justice system (or by friends and acquaintances). Barristers, jurors, police officers may be a cause of secondary victimisation and through their insensitivity they may exacerbate feelings of victimisation (Davies, 2011). In the context of this paper's case study, those vicariously victimised are those individuals and families in the local and regional community who bear the brunt of the closure. They have been disempowered and a major plank of their social capital has been removed. They have experienced the equivalent of having been robbed of their jobs and financial resources and their chances of replacing these losses in the aftermath of the closure, by legitimate means, are, as the deprivation data suggests, severely restricted. The question of whether higher environmental standards threaten employment levels is vexing. Though there is little published on this, there is some recent research, in the very different context of the Northeast States of America that supports the argument that there is no detrimental effect. A report on an 11 State regional clean fuels program suggests that Green House Gas (GHG) emissions can be reduced by introducing low carbon fuels at the same time as effecting a small but positive impact on jobs, gross regional product and disposable income (NESCAUM 2011). Whilst this does not support the arguments being developed in this paper, it does suggest that empirical work within such communities to explore what social harms have/have not befallen them as a consequence of closure is worthwhile.

Alongside the relevance of victimological concepts for understanding residents' in the south east Northumberland predicament, equally important are their affective experiences.

Within the social sciences, sociological perspectives are increasingly suggesting that human emotion is important generally in understanding social relations and, increasingly, emotions are seen as a crucial link between micro and macro levels of social reality. Subjective, embodied and experiential aspects of social change are important (see Davies 2011a, 2011b) and virtually all theories of emotions in society visualise emotions as mobilising and guiding behaviour (Turner and Stets, 2005). If policies at very local levels are to be seen and experienced as fair and just, grass roots understanding (Davies, 2008) of where the impacts of change would have a greatest emphasis on families and sets of personal relationships, on local social dynamics, formal and informal networks in communities is essential. Closures due to policy change emanating from Europe can be viewed and experienced as far removed, abstracted and damaging if broader and potentially damaging unintended consequences are not adequately considered. Whilst an ethics of sympathy and affective civilities more generally is difficult to achieve in the new 'civilized' barbarism inspired by neoliberalism which makes empathy and compassionate sentiments difficult to expand past domestic sentimentalism and micro-communal, this does not justify a paucity of theoretical discussion and debate that brings emotion back in. In drawing together these arguments around the concept of victimisation together with an ethic of affective civility, to understand the predicament of those experiencing the aftermath of the closure, Lynemouth and surrounding area emerges as a victimised community. Whilst continuing to draw on the affective dimensions to the closure, these additional costs of closure to the community are now extended with reference to previous sociological analysis of similarly devastated communities.

Sociological Analysis

Three of the eight characteristics belonging to pit communities identified by Bulmer in 1975 are physical isolation, the economic preponderance of a single industry and a working-class majority of the population. These applied to the communities around Lynemouth when the plant closed. Bulmer's remaining five characteristics (daily experience of arduous work pervading the community; endemic industrial conflict; segregated gender roles; leisure public and male dominated; and social networks close-knit, overlapping and supportive) have been slipping away from this community since the closure of the pits. These defining characteristics of the local and regional communities might now be lost forever. They are additional costs yet to be measured and quantified; the qualitative assessment of these invisible costs has yet to be exposed.

Studies in the wake of the closure of the coal mines and demise of the pit communities have explored sociological questions about the effects of closure on family and social life and the impact on family relations including money problems, stress, illness, family disputes and young people's futures (Stead, 1987; Waddington et al., 1991). Some have explored the gendered nature of the experiences and activisms following closures (refs) and the gender patterns to crime and victimisation has also been noted. Furthermore, there is a gender patterning to emotions linked to victimisation. As women, and as indirect, tertiary and secondary victims, we feel the pains, harms and victimisations of those close to us (Davies, 2008). Women's emotional labour involves responding to other's stresses and distresses in a selfless 'caring' way (Lupton, 1998). This suggests a gender bias in the nature of emotional work which impinges upon women's experiences of victimisation. Women appear to bear the brunt of harm and suffering and victimisation (Davies, 2011). Women appear to bear a

disproportionate burden of harm, suffering and victimisation by taking on the woes of others. Northumberland has an ageing male and female population, a trend which is set to continue. These trends have implications in terms of the services provided as well as the prospects for community activism, social and economic rejuvenation.

The dependence of the mining community in Lynemouth on the pits as a major employer was transferred to a dependence on Alcan in the 1970s. With this second closure of the single industry major employer in the area this reinforces an already existing pessimism about present and future employment prospects. Unlike the chronology of the miners' strike February 1984 - March 1985, the chronology of the closure of the RTA plant has not had the same 'cause celebres'. There has been no significant Trade Union or any strike activity. Unlike the miner's strike – there was no 'coming together', no international politics, and no militancy. Indeed, in Britain as membership of trade unions has declined, membership of green and animal welfare organisations has risen dramatically. With few prospects for future employment, increasingly those seeking employment, and especially young people, will have no option other than to move away or risk permanent unemployment. The local authority is keenly aware of the need to put in place policies which help retain younger people and the 50-59 age group where the largest projected falls are expected to occur (NCC, 2012).

As a rural and deprived community the negative social justice impacts are compounded and are likely to increase inequalities in the region and increase the pressures towards anti-social behaviour and crime in the decimated communities of Blyth and Ashington. Areas in the 10% most deprived, 11% to 20% most deprived and 21% to 30% most deprived deciles of the crime domain are already concentrated in these two towns in the south east area of Northumberland (ONS, 2011). Degeneration of community, as Crawford explains, 'is viewed as both the cause and effect of crime and the fear of crime', so that, 'rebuilding community, it is supposed, will lead to less crime' (Crawford, 1997: 151). A weakening of informal social control mechanisms - those ties that link people together in relations with each other and with community-based institutions (e.g., schools, family and work), is likely to have deleterious effect in terms of decreasing levels of 'social capital' - resources and skills that individuals can draw upon throughout their life course and that derive from positive and 'interdependent' relationships with local social institutions such as school, family and workplace (Sampson and Laub, 1993: 19). These relationships connect resident and local institutions to resources which in turn influence in the wider public sphere. As Hope states:

the paradox of community crime prevention ...stems from the problem of trying to build community institutions that control crime in the face of their powerlessness to withstand the pressures towards crime in the community, whose source, or the forces that sustain them, derive from the wider structure (Hope, 1995: 24).

Spence and Stephenson paint a stark picture in ex-mining villages:

Pit closures and related socio-economic decline have been accompanied by weakening and fragmentation of the masculine organisational framework in which local cultural norms, with their *gemeinschaft* characteristics (Tönnies, 1955; Bauman, 2001) were previously reproduced in the public domain.

Inevitably, the loss of work and the destruction of associated systems of socialisation, power and cultural reproduction have been accompanied, as predicted (Samuel et al., 1986), by an increase in the range of problems associated with low income, insecurity and decreased levels of civic participation (Putnam, 2001; Waddington, 2003). In degraded environments, where the identifying adjective 'mining' no longer has a material reference point, it has been difficult to sustain 'community' derived from connections between work and place with assumptions of collective endeavour reflecting patterns of male work underground. As place of residence and rhythms of life cease to revolve around the mine, the family and neighbourhood base of women's traditional role in community is also disturbed. Meanwhile, young people have no visible reference point for inheriting a common culture located in local community life and relationships.

(Spence and Stephenson, 2007).

In bringing this discussion of tensions and costs to a close, it is appropriate to draw attention to a point made by Nigel South (2007) 6 years ago:

'One consistent theme in global political discourse about environmental rights is the need to establish a reasonable balance of interests between environmental protection and the costs of providing this. This has been seen in operation at a global level as part of the underlying opposition of the USA to the Kyoto agreement, viewed by US anti-environmental 'hawks' as a European conspiracy to damage America's competitiveness and 'reduce' its standard of living to European levels'. (South, 2007: 235).

This quote captures the delicate balancing act which involves making compromises between different interests for example economic costs and environmental considerations. The costs referred to are largely economic or fiscal costs. The above discussion of the broader social and affective civilities is not cast solely or mainly in monetary terms. It is nuanced by the inclusion of additional social costs to closure and the less visible losses to those in local communities.

Conclusion: Justice for all?

The response of the state to environmental harm is guided by a concern with environmental protection. Policies and regulations are designed to prevent or minimise destructive or injurious practices into the future, based upon analysis and responses to harms identified in the present. But the moral and ethical challenge for a green criminology is when, why and how should green justice override other risks and harm to communities. In this case, a green view of justice collides with other communitarian accounts of justice.

This paper underlines the potential diffuse and negative impact the closure of a single large employer may have on peoples lived experiences with risks of, in the aftermath of closure, a degeneration of community. The paper has explored tensions that appear to represent value conflicts between social and ecological justice. The causes of death to this plant - LCPD, the new EU Policy Industrial Emissions Directive (IED) and the Carbons Price Floor - have cost jobs with the likelihood of increasing inequalities and poverty. The social right to

livelihood is pitted against the environment and ecological imperatives to sustain environments (Benton, 2007:46). The paper concludes by suggesting there is a further sub-set of research that green criminology might focus upon. A communitarian victimisation research agenda that seeks to explore unidentified regressive impacts resulting from some environmental policies and the potentially discriminatory nature of ecological justice ought to be on the horizon. This paper suggests that the closure of production plants due to carbon emissions disproportionately affects poorer localities and lower classes. The direction for the new sub-set of research may be a more sustainable approach 'consistent with the broader sustainable development principles of meeting all people's needs within environmental limits' (Friends of the Earth, 2011: 25).

The Aluminium plant at Lynemouth has closed. The power plant on which it depended for energy is still open but, along with other 'dirty' power stations in Europe, its future remains unclear. At the time of writing Britain has just closed three giant coal power plants, Kingsnorth in Kent, Cockerhale in Scotland and Didcot A in Oxfordshire (Gosden, 2013). The closure of major industrial plants and of our 'dirty' power stations, is a success story for green environmental policies. This paper points out that this success comes at a very high price to some. In broader social policy terms, the case example ultimately questions whether or not Capitalism can go green. Insights from victimology and from sociologist's studies of previously effected communities provide gloomy prospects regarding impacts on social networks, the younger generation in particular and lessons about rebuilding communities. The regressive impact of the increased social inequalities and poverty in the north East of England is not likely to feel like sustainable development to the people and families who have lost their livelihoods in and around Lynemouth and Ashington.

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Notes

ⁱ Data from The Office for National Statistics shows the Lynemouth plant postcode area is within a neighbourhood (Lower Layer Super Output Areas' -LSOAs) which contains roughly 1500 people or 650 households. The neighbourhood is within the larger Wansbeck area (Middle Layer Super Output Areas – MSOA) which contains roughly 7500 people or 3000 households.