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A class-based analysis of sustainable development: developing a radical perspective on environmental justice

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Abstract

Recent resurgence of interest in social aspects of sustainability has enjoined with on-going debates on environmental justice and equity. However, discussions on the socio-geographic distribution of environmental (dis-) benefits have substantially overlooked the issue of class (as defined by Marx). This paper begins to address that deficit by presenting a new conceptualisation of sustainable development explicitly drawing on Marxist theorisations of class. Capital and labour have a fundamental conflict of interest; governments have limited potential, or interest, in intervening on labour's behalf. Environmental policies have been portrayed as offering economic and social benefits including so-called green jobs. This paper argues that such policies generate competition for investment rather than promoting equity. Green jobs may offer distributional benefits to individual workers, in certain locations, but cannot benefit labour as a class.

Keywords:

Capital, labour, green jobs, environmental justice, sustainable development, class

Introduction

Approaching the twentieth anniversary of the 1992 Earth Summit, sustainable development has become a dominant feature of international political discourse. Yet progress remains problematic (Dempsey *et al.*, 2011). Recent work has shown an engagement with the social aspects of sustainable development (Quental *et al.*, 2011), which have often been outweighed by concern for issues relating to what are commonly known as the environmental and economic pillars of sustainability (*e.g.*, Cuthill, 2010; Dempsey *et al.*, 2011). Research into the social aspects of sustainability draws on ideas explored in the environmental justice literature (Agyeman and Evans, 2004; Cuthill, 2010; Dempsey *et al.*, 2011).

Redclift (2005) suggested that the sustainable development triptych implies a commonality of interest that belies the diversity of the interest groups comprising both the “social” and “economic” pillars. The environmental justice literature explores the diverse experiences of those interest groups. It is the contention of this paper, however, that the two fundamental interest groups within capitalism are the classes of labour and capital¹. Difficulties in accomplishing a fair or equitable form of sustainability arise from the conflict of class interests inherent in capitalism. This paper examines the potential for environmental policy to generate distributional² benefits to labour, drawing explicitly on Marxist-inspired theoretical perspectives. To illustrate the argument, the paper draws on recent policies claiming an overt distributional benefit to workers in the form of green jobs.

The following sections first outline the Marxist definition of class; second, briefly review recent work on environmental justice and the social limitations of sustainable development; third, present a class based model of sustainable development; fourth analyse the relations between labour, capital and the environment; fifth examine the potential distributional benefits to labour of environmental policies, using current UK offshore wind energy policy as an example. Conclusions are then drawn with respect to environmental justice and suggestions offered for further work.

Defining class

Labour as a class is a collective term for the segment of population dependent on paid work to earn their living (whether that payment comes as wage, salary, pension or benefit and whether or not it is shared with dependents). That is, in Marx’ terms (1887), those without ownership of the means of production (land, factories, resources, infrastructure, *i.e.*, the factors of production other than labour). They are therefore are obliged to sell their labour power (ability to do work that contributes to the production of a good or service for sale) to the capitalist class. Labour as a class can only be understood in relation to the capitalist class, *i.e.*, those who do collectively own the means of production. Class is not used herein in the sense of a social classification, whether based on occupation/skill (*e.g.*, UK National

¹ Labour as a class is defined in the Marxist sense as those required to sell their ability to work to earn a living. This is an important point that will be analysed further below.

² A distributional effect refers to how the costs and benefits of a given policy impact on different sections of society (*e.g.*, in the case of an income tax) or the economy (*e.g.*, a tax on carbon emissions) (Fullerton, 2011).

Statistics Socio-economic Classification), or more directly on income. Thus labour as a class includes assembly line workers, managing directors, long term unemployed, and academics. This group comprises a substantial proportion of the population. They are consumers of products, generators of waste (though possibly avid recyclers), and beneficiaries of clean air and water. Some are environmental activists; others may be frequent flyers and so on. Conversely, the capitalist class is a smaller group, but likely equally as varied in personal interests and behaviour. What is of interest here is not the distinctions within the classes, but their relationship to each other.

Social aspects of sustainability: environmental justice or class?

Interest in social aspects of sustainability is often driven by the observation that some sections of society are presently served better than others by development, whether ostensibly sustainable or not (e.g., Haughton, 1999; Agyeman and Evans, 2004; Hopwood *et al.*, 2005). Notions of inter- and intra-generational equity dating from the World Commission on Environment and Development (WCED) report (1987) have proved difficult to implement. A considerable body of literature on social and/or environmental justice explores the variations in experiences of development, which has converged with recent sustainable development literature through the latter's interest in equity (e.g., Cuthill, 2010; Dempsey *et al.*, 2011).

The meaning of equity is often assumed rather than defined, but appears to relate more closely to "fairness" than the potentially more radical concept of "equality". Cuthill (2010, 368) for example refers to an "equitable access to appropriate and affordable housing" as an aim of social sustainability. But whilst a worthy objective, it would appear to be satisfied by increasing the geographic spread of affordable housing, rather than addressing the disparities in wealth that create a need for it. There may be an assumption that equity is the same as equality (Denier, 2007), but this still leaves open the question of what is being equalised. There are many possible qualifications to the scope of equality that limit its meaning to something rather less radical than absolute equality (Dworkin, 2000), e.g., equalising opportunity, or access, rather than income. An *equal* distribution of resources implies a far greater degree of change to the political economic structure of the world than an *equitable* distribution. In WCED (1987) terms an equitable distribution implies that

everyone's "needs" are met. However, needs can vary, certainly over time (Redclift, 2005); there is no assumption that everyone's needs are, or will be, the same.

Environmental justice concerns the equitable (*i.e.*, perceived as socially and/or spatially fair) distribution of environmental dis-benefits (*e.g.*, air pollution) and benefits (*e.g.*, urban green spaces) as well as participation, democracy and empowerment (Vifell and Soneryd, 2010; Matthews, 2011; Wright Wendel *et al.*, 2011; D'Alisa *et al.*, 2010). The literature has been accused of being more concerned with distributing pollution than promoting cleaner production (Heiman, 1996; Agyeman and Evans, 2004). There is a need for scholarly attention to both cleaner production and the social impact of production. What is missing, though, is a more radical approach which would question, for example, the existence of economically disadvantaged social groups.

A variety of social classifications are used to judge the equity of the socio-spatial distribution of environmental dis-/benefits, including race/ethnicity (*e.g.*, Kurtz, 2009; Teelucksingh and Poland, 2011); income (Matthews, 2011); gender (Elmhirst, 2011) and level of development (Grineski and Collins, 2010). Relatively few of these papers explicitly mention class, and they use the term in the sense of income/occupation rather than relationship to the means of production. For example, Grineski and Collins (2010) refer to "social class" in their study comparing the distribution of exposure to industrial hazards across the US-Mexican border. Their social classification used education level as a proxy for income, in order to facilitate international comparison. Conversely, their work on distributional equity within Mexico used income levels (Collins and Grindeski, 2010). Recent papers, such as Matthews (2011) and Wright Wendel *et al.* (2011), refer explicitly to income in their examination of exposure to pollution and access to open space respectively. Heiman (1996) and Goldman (1996), seemingly coming from a radical perspective, both refer to class in their analysis of environmental justice. Again, however, they are using the term in the sense of income level as they attempt to unravel the relative significance of race and income on the distribution of environmental dis-benefits in the US.

Situated as it is within the bounds of conventional concepts of sustainable development, the environmental justice literature offers recommendations that comply with those

conventions. These include community engagement and co-operation across gender/racial/ethnic lines (Goldman, 1996); the embedding of social aims into sustainability projects (Vigeld and Soneryd, 2010; Wright Wendel *et al.*, 2011); and the development of cleaner production (Heiman, 1996; Agyeman and Evans, 2004). However, the limitations of these approaches are apparent. Voluntary groups, for example, can struggle to have their voice heard in policy debates, even where their presence is official sanctioned (Kythreotis, 2010). Low income groups can be disproportionately impacted by variations in air pollution even in a highly regulated country such as the US (Matthews, 2011).

Many of the inequitable socio-geographical distributions identified in the environmental justice literature are occurring between different components of labour as a class. Labour in this sense encompasses a wide range of income levels, skills, education, as well as members of groups whether defined by race or gender, and other geographical definitions, *e.g.*, urban, rural, developed, developing economy. How does it help to group these apparently disparate sections of society together? Far from removing nuance from the debate, *e.g.*, relating to degrees of inequity, basing the analysis on labour as a class opens up a new appreciation of the fundamental limitations of sustainable development.

Revisiting sustainable development from a class perspective

This paper presents a conceptual framework for sustainable development that explicitly addresses the relationship between labour and capital. The three pillars of sustainability are replaced by four categories comprising the environment, state, capital and labour (Figure 1). According to this scheme, the environment includes natural resources, renewable and otherwise, including raw materials, energy, water, air and land. The state represents political authority, operating at a range of spatial scales, and setting the regulatory and institutional context within which the relationships between capital, labour and the environment exist. The state has an important role in the promotion and administration of sustainability (and other) policy initiatives, but may, however, struggle to establish programmes that endure (the “administrative sustainability” of Smits *et al.* 2008, p. 629). The involvement of the state in the processes of capitalism is highly complex (*e.g.*, Jessop, 2002). Whilst the protection of the environment and labour has become a major task of

governance at all scales, the interest and ability of the state to intervene in capital are limited (Dryzek, 1994). Institutions are important in mediating the relationship between different organisations, and can be influential in policy outcomes (*e.g.*, Spangenberg, 2004). They are part of the operational framework of capitalism, and as such both impact on and are impacted by, but do not fundamentally alter, the class relationships within capitalism.

The economic and social spheres of sustainable development are herein re-divided into capital and labour, using these terms as defined by Marx (1887) and above. Recent work has delved within the social pillar to examine the influences and impacts within it (Cuthill, 2010; Vifell and Soneryd, 2010; Dempsey et al., 2011). However, this work sits firmly within the standard model of sustainable development. Social relationships are important to the experience of sustainability, but the class relationship is important to understanding the underlying causes of variable experiences and difficulties of policy intervention.

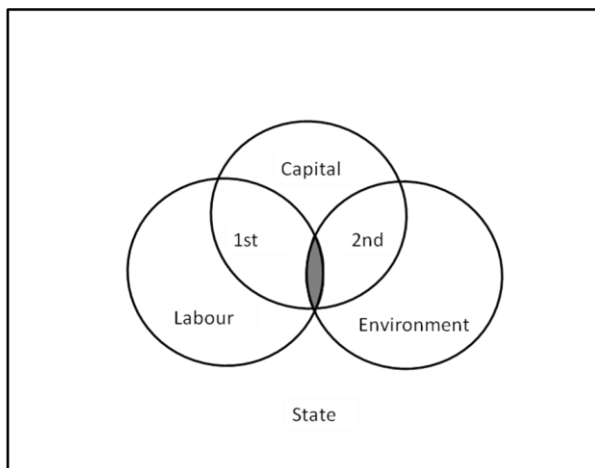


Figure 1: Diagrammatic representation of the relationship between capital, labour, the environment and the state. The area labelled '1st' indicates processes of exploitation and regulation associated with the first contradiction of capitalism (capitalists' need for a market whilst keeping wages low); the area labelled '2nd' relates to processes of exploitation and regulation associated with the second contradiction of capitalism (tendency, without regulatory restraint, of capital to exploit resources to exhaustion in disregard of potential future needs). The shaded area, therefore, represents the co-incidence of environmental and economic affairs identified by Porter and others. It is deliberately shown here entirely within the realm of capital. The state comprises the political context within which the other elements operate, defining what is acceptable practice (or an environmental feature worth conserving) in a given time and place.

Whilst other questions are raised by the conceptualisation of sustainable development presented herein (*e.g.*, relating to the role of the state), this paper focuses on the key relationship between capital and labour. This analysis refers directly to Marx' work, whilst

acknowledging later key contributions. It pulls together some key principles, arguably little changed since Marx' time (Burnham, 2010), in order to show the limited potential for achieving outcomes beneficial to labour as a class within capitalism.

Capital, labour and the contradictions of capitalism

Capitalism is an economic system of production and exchange based on the production of goods and services (*i.e.*, commodities) for sale. This is effectively a global system, notwithstanding variations in political organisation, *e.g.*, style and extent of democracy, a rather few remaining pre-capitalist economies, a burgeoning, but still small, number of post capitalist or alternative economies. To the capitalist class, the owners of the means of production, workers are one of the factors of production – the cost of which needs to be reduced, alongside that of the others (*e.g.*, raw materials, energy, land, financial services). Labour and capital are on opposing sides in a financial transaction. This is no more or less true for labour in what might be termed a green industry than any other. Thus there is a fundamental conflict of interest between labour and capital as the former seeks to maximise the value of its labour power and the latter to diminish it. The area of overlap between capital and labour on Figure One is not a space of mutual accommodation, but a space of exploitation.

Marx's most essential insight to the processes of capitalism was that labour power has the unique ability to generate what he termed surplus value, *i.e.*, make product worth more than sum of its constituent inputs (including the cost of the labour power employed in its production)³. The difference in value between total costs of production and sale price of a commodity (*i.e.*, the profit) is the surplus value from the application of labour power (Marx, 1887, Chapter 7). Marx thereby pinpointed the source of wealth as the time and effort of workers, not the investment of capitalists. However, whilst this point emphasises the dichotomy of interests between labour and capital, it is not necessary to agree with it to see that there is clearly an incentive for capital to cheapen the cost of labour, and for workers to attempt to increase it.

³ The reader is referred to volume one of Capital for Marx's lengthy derivation of this proposition; Harvey (1982) provides a cogent summary.

There is likely to be little dispute with the comment that firms operating under capitalism are driven by the profit motive. Importantly, even fabled environmental goods and services, including renewable energy, and in common with food and other necessities of life, are not made to satisfy a human need, but are commodities to be sold for a profit. However, by the nature of capitalist production, the potential value in commodities is only realised by their exchange for money (or a recognised substitute, *e.g.*, credit) (Marx 1887, Chapter 1). Thus, rather critically, there needs to be a market for goods produced for economic advantage to be secured. Whilst investment is made in the production of goods for sale to other companies (either as part of a supply chain or equipment for use in the production of other goods), ultimately there is an end market comprising consumers (Cox, 2002). This gives rise to what O'Connor (1994) termed the first contradiction of capitalism, *i.e.*, the overlap between workforce and market, manifested by the need to keep wages low whilst having a populace with sufficient spending power to provide a market for the goods they have helped to produce.

Capital attempts to overcome the first contradiction by reducing costs (*e.g.*, exploring more efficient technologies, cheaper manufacturing/maintenance procedures, and seeking a more cost effective labour force) whilst expanding markets (both geographically and by increasing market share) (Harvey, 1982; O'Connor 1994; Pianta, 2005; Dicken, 2011). This drive for growth and cost effectiveness poses a threat to the environment that O'Connor (1994) summed up neatly as the second contradiction of capitalism. Driven by their individual short term interests, firms will jeopardise their own longer term individual and class interests by exploiting resources to exhaustion and generating pollution that impacts on their labour force's ability to work (O'Connor, 1994). Thus the area of overlap between capital and environment in Figure one is an area of conflict rather than accommodation, just as is the overlap between labour and capital.

Regulations to constrain the environmental issues that could arise from the second contradiction have become commonplace around the world, albeit variably enforced (*e.g.*, Smith *et al.*, 2010). The following section examines the likely distributional benefits of environmental policy, as governments seek to draw economic advantage from environmental regulation.

Distributional benefits of environmental policy

Traditionally seen as a cost to business to be borne for collective environmental benefit, environmental policies have come to be seen as having a mutually beneficial relationship with economic growth (Jaffe *et al.*, 1995; Porter and van der Linde, 1995). The Porter Hypothesis, along with its European cousin of Ecological Modernisation, assert that the drive for innovation and growth in capitalism offers a means to ameliorate environmental problems and that such innovation can be brought about by policy initiatives (Hajer, 1995; Porter and van der Linde, 1995). These ideas have gained widespread policy acceptance, although analysis of the relationship has been substantially limited to the distributional effects on industry (*e.g.*, Fullerton, 2011). Arguably European Union environmental policy is an exercise in Ecological Modernisation, assuming synergies between economic growth and environmental protection (Baker, 2007). Whilst the potentially deleterious implications of environmental policy on EU economic competitiveness have been considered (*e.g.*, GHK, 2009), the Renewable Energy Directive, for example, notes a link between “sustainable competitive energy policy” and economic growth (Pre-amble, Paragraph 3). The UK Renewable Energy policy provides an example of that Government’s adherence to idea of a mutually supportive relationship between economic growth and environmental policy. A seven fold increase in the share of energy from renewable sources is required to meet the EU target of 15% of final energy consumption from renewable sources by 2020 (DECC, 2011). Meeting this target implies a hefty investment, estimated at £100 billion (DECC, 2009b); it is further estimated that the number of jobs in renewables in the UK could double to 0.5 million over the same period (DECC, 2011 p. 4).

However, theoretical considerations for distributional benefits to industry are complex because environmental policies can have wide ranging indirect impacts (*e.g.*, creating demand for clean up technology) in addition to direct ones (*e.g.*, tax on carbon emissions) (Fullerton, 2011). Empirical evidence for distributional effects of policy is hard to disentangle from other potential causal factors (Jaffe *et al.*, 1995; Chapple *et al.*, 2011). For example, there are uncertainties over the extent to which regulations produced any innovation that may have occurred, and, likewise over the degree to which innovation influenced competitiveness. Additionally, one industrial sector’s benefit can be a cost to

another (Fullerton, 2011), *e.g.*, the increased energy prices required to fund renewable development in the UK, to be met by both consumers and industry (DECC 2011).

The focus of the economy-environment literature on distributional benefits to business from environmental policies allows a tacit assumption that any such benefits may be shared by actual and potential employees of business. However, the material impact of environmental policy on jobs is difficult to assess. Innovation may not result in economic growth supportive of additional employment (Chapple *et al.*, 2011). However, perhaps incentivised by the widespread economic crisis, recent policy initiatives, such as the UK Renewable Energy policy, have explicitly referred to a distributional benefit to workers from environmental policy, *i.e.*, green jobs (Stilwell and Primrose, 2010; DECC, 2011). Matthews (2011) argues that state led economic growth in the environmental sector may provide an environmentally favourable and socially just form of economic development. A policy succeeding in this respect would indeed fulfil the three standard pillars of sustainable development. The distributional benefits to labour as a class, however, are very uncertain.

Green jobs and labour as a class

The definition of the green economy, and by extension what might be defined as a green job, is a matter for debate (*e.g.*, Chapple *et al.*, 2011). The United Nations Environment Programme (UNEP, 2008) usefully defines green jobs as contributing to environmental protection and/or restoration. Thus green jobs would include those relating to the design, organisation, development, utilisation, maintenance and decommissioning of impact prevention/reduction technologies. This includes renewable energy generation technologies, which are promoted on the assumption of having lower life cycle carbon emissions than fossil based energy generation alternatives.

Significantly for social aspects of sustainable development, the UNEP (2008) definition further states that green jobs should “meet longstanding demands and goals of the labour movement, *i.e.*, adequate wages, safe working conditions, and worker rights, including the right to organize labour unions” (p. 53). However, the social considerations are not ambitious. Attention to basic health and safety and employment rights is not exceptional in developed countries. Moreover, at what level should wages be deemed “adequate”? The

expression suggests something closer to subsistence than luxury. Furthermore, equating labour with organised labour (*i.e.*, trade unions) overlooks the class relationship of labour to capital (Burnham, 1999). Trade unions are organisations designed to represent the collective interests of their members in negotiations with employers. There is a resonance between the objectives of trade unions and the social aims of sustainability (Springett and Foster, 2005). Nonetheless, they represent a fairly small proportion of the working class in total (*e.g.*, 15 % of private sector workers in the UK in 2011⁴) and, just as companies respond to their shareholders, individual unions have to protect the interests of their own members rather than those of their class. A brief analysis of the response to the UK offshore wind policy will illustrate both the difference between benefits to workers as individuals and labour as a class and the conflict of interest between labour and capital.

Capitalising on the wind energy potential bequeathed by its location on the Atlantic periphery of Europe, a major emphasis of UK renewables development is on offshore wind energy (DECC, 2009a; 2011). The government aspires to generate 30 GW of electricity (representing 1/4 of total UK electricity consumption) from this source by 2020⁵ and nine zones of the North Sea have been leased to consortiums for development. This policy has clear attractions for both policy makers (*e.g.*, enhancement of energy security, contributions to climate change as well as renewable energy targets) and the offshore energy industry (a market for deep water wind energy technology, for which there could be international demand). Jobs associated with the development would meet the definition of green discussed above. Standard employment practice in the UK, which includes a minimum wage, should assure that any jobs arising from offshore wind development would meet the social aspects of the UNEP definition of green jobs.

The UK Government has estimated that 70,000 new jobs could come from investment in offshore wind (DECC, 2009a). The incentive to invest comes in part from a requirement for electricity generation companies to obtain a proportion of their energy from renewable resources (DECC, 2011). This creates a market for renewable energy, which would otherwise struggle to compete financially with fossil fuel sources. An important aspect of

⁴ *The Economist*, 8/1/2011 p. 9.

⁵ <http://www.thecrownestate.co.uk/newscontent/92-r3-developers.htm> Accessed 11/07/2011.

the policy, however, is to reduce the cost of offshore wind (and other) renewable technologies (DECC, 2009a, 2011). The benefits from this could potentially be shared equitably in the form of lower energy costs. This would not advance equality, however, as some could still afford more energy than others. Moreover, the mobility of capital is such that savings in one location can be re-invested elsewhere. The renewable industry is constrained by the same drives to reduce costs that have contributed to the patterns of globalisation associated with many other industries. There is already a major drive for renewable energy development in China, for example (Peidong *et al.*, 2009).

Furthermore, whilst there is a clear potential for a substantial number of jobs in manufacturing (directly and via and supply chain firms) in the UK, the extent of investment is highly uncertain; production could occur beyond the UK. The prospect of jobs has already resulted in a strenuous competition for that investment between geographically suitable locations. In 2010 Siemens (lead partner in the Hornsea offshore wind development zone⁶) announced that £80 million was to be invested in the construction of the turbines with in the UK⁷. This provoked considerable place competition both between and within east coast regions of the UK, vying for investment assumed likely to generate up to some 800 jobs directly, and potentially thousands indirectly⁸. An announcement in January 2011 that Hull was the “preferred bidder” to host the construction plant⁹ was greeted by enthusiasm in this socially-deprived northern city (*e.g.*, Kythreotis, 2010). Rival locations just a few 10s of km away bemoaned had lost the opportunity to become a centre for renewable investment¹⁰. However, preferred bidder status has since lapsed amid news reports that international competition for the investment continues¹¹. Thus competition for investment assumed to provide jobs is intense across a range of spatial scales.

⁶ *Ibid.*

⁷ http://www.edie.net/news/news_story.asp?src=nl&id=17876 30 March 2010; Accessed 13/05/2010

⁸ ‘The Politics Show’, BBC, broadcast Sunday 23 January, 2011; see also Hull Daily Mail, 21/01/2011 and 18/03/2011; Yorkshire Forward, 2010.

⁹ Siemens PLC, 2011 http://www.siemens.co.uk/en/news_press/index/news_archive/siemens-selects-abp-as-preferred-bidder-for-uk-wind-turbine-factory.htm 9/9/2011

¹⁰ North East Vision, 21.3.11 (<http://www.nebusiness.co.uk/supplements/north-east-vision/spring-2011/2011/03/21/>) 14/4/11

¹¹ <http://www.bbc.co.uk/news/uk-england-humber-14837992> 9/9/2011

It is evident that costs and benefits of offshore wind development are unlikely to be shared evenly. There is a zero sum place competition for green jobs. In other respects, too, the outcome of green jobs policies appears ambivalent for workers. Even within locations gaining green jobs, there are issues of equity relating to access. Teelucksingh and Poland (2011), studying jobs arising from energy policy in Toronto, expressed concern that some sectors of society, such as immigrant populations, would be unlikely to benefit.

Furthermore, in the case of UK offshore wind policy, it remains to be seen how many jobs materialise, where, and to what extent they match the skills available locally, for how long they last and what the effect may be beyond the immediate area. In addition, to what extent any jobs created will be genuinely new, rather than displaced from other sectors and/or locations? The workers currently employed by Siemens elsewhere to construct wind turbines likely to take a different view of proceedings to UK based observers.

Therefore while some individual workers with the right skills in the right place (or the ability to move) are likely to benefit from green jobs, other workers in different, and even the same, places must necessarily miss out. Distributional benefits may be geographically and/or socially redistributed but it is difficult to argue that there has been a fundamental change in equity and certainly not equality. Rather the policy has engendered a standard competition between places and people for to secure economic development under capitalism.

Conclusions: the prospects for sustainable development

This paper has presented and analysed a new conceptual framework for sustainable development that makes the class relationship between capital and labour explicit. Importantly, processes pertaining to the development of green industries, whether innovation, or environmental protection, are inseparable from fundamental drivers of capitalism. The conflict of interest between labour and capital is disguised by the fact that labour is reliant on capital to provide employment. However, the competition for jobs relating to the offshore wind development illustrates the fragility of employment for labour under capitalism. Capital has a great mobility than both labour and the nation state. The ability of the state to intervene in the relationship between capital and environment to the benefit of labour is very limited. The manufacturing of the wind turbines which may aid the

UK in meeting its renewable energy targets need not take place within the UK at all. Furthermore, capital, and individual firms, outpace changes and crises of capital accumulation in part by shedding workers (Freeman, 2009). For the individual worker, the firm's survival and even improving prospects for the nation's economy may be scant consolation for the loss of their job. Technological and operational innovations do not resolve the conflict of interest between capital and labour (summed up as the first contradiction), but rather are the process by which it capital seeks to further its advantages over labour.

Thus even a policy that appears to score highly when judged against the three pillars of sustainable development is of little benefit to labour as a class. The apparent value of the policy in terms of environmental justice depends on both the location and scale selected for analysis. Even if the UK as a whole gains in jobs in response to the Government's incentives to invest in renewables, only a limited number of cities can benefit directly. Others, perhaps equally in need of investment, inevitably miss out. Even within cities selected for investment, the benefits cannot be evenly spread. Sustainable development policies can achieve a redistribution of environmental goods and ills, or a reduction in the severity of the dis-benefits (*e.g.*, by mandating or incentivising cleaner energy sources). But this redistribution between geographically, racially, sexually, educationally and/or financially distinguished groups of members of labour does not alter relationship of labour to capital. The state intervenes in the relationships between capital and the environment, and between capital and labour. These interventions are vital to protect the environment and labour, but also function to preserve capital's longer access to these factors of production. Labour *as a class* does not benefit from the appearance of green jobs, because its subordinate relationship to capital remains. Ultimately a green job is just a job. Sustainable development is ultimately not for the benefit of workers, even whilst they share the benefits of environmental protection.

What are the implications of this analysis? There are two alternatives:

1. Abolition of capitalism: workers should deliver themselves from the shackles of capitalism, not be content with being protected for the benefit of capital. Notwithstanding

the ratio of workers to capitalists in the world, this is likely to be the less favoured option. This perhaps is the greatest contradiction of capitalism.

2. Lessons for the promotion sustainable development within capitalism: Even if changing the proverbial system is a step too far, a better understanding of how it operates can only be beneficial both to labour and policy makers. Three academic programmes can be envisaged:

- a. Further develop the theoretical framework, e.g., drawing on analyses of class post-Marx, recent work on labour geographies and the relationship between capital and the state; assessing the ability of the state to generate green jobs;
- b. Empirically examine the distributional impact of environmental and economic transitions of recent decades on labour at a range of geographic scales;
- c. Analysis of the labour perspective on green jobs. How is organised and non-organised labour adjusting to the environmental-economic policy agendas? What are the labour implications of varying definitions of green jobs?

Such work may produce information and understanding which can be used to promote a steady diffusion of employment standards and environmental protection to follow behind the globalisation of industry. Can we achieve a global standard of wellbeing that it is socially and culturally unacceptable to transgress?

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