

Global value chains, organisations and industrial work

Paul Stewart and Brian Garvey

Abstract

Rather than focussing exclusively on a list of key figures in the sociology of industrial, organisational and work sociology, the chapter considers organisation and industrial work in the context of thematic periods in the development of capitalism since 1945. The argument is made that the kind of studies of organisation and work undertaken throughout the history of our discipline, together with the scope of our understanding of organisation, work and employment have always been constrained by the geographies, spaces, sociologies, and temporality of determinate forms taken by the level of development of the capitalist firm. Our radical global value chain analysis of the ethanol sector in Brazil is used to exemplify this thesis.

Keywords: Organisations and industrial work, old and new ways of understanding patterns of capital accumulation, Global value chains, Brazil.

Introduction

“Scientific enterprises do not subsist in a separate self-contained world. Neither are they related only to very broad and general values. They occur in specific societies at particular points in time, and are, therefore, part of particular historical economic, political and ideological conjunctures. These social contexts are, naturally, especially important to the emergence and formation of enterprises whose specific objective is a scientific grasp of the contexts themselves.” (Therborn, 1976: 415)

This chapter is concerned with understanding organisation and industrial work on several dimensions. Rather than focussing exclusively on a list of key figures in the sociology of industrial, organisational and work sociology since the Second World War, we locate approaches to organisation and industrial work in the context of commonly understood thematic periods in the development of capitalism since 1945. The argument is that the kind of studies of organisation and work undertaken throughout the history of our discipline, together with the scope of our understanding of organisation, work (and employment) have always been

constrained by the geographies, spaces (not the same thing), sociologies, and temporality of determinate forms taken by the level of development of the capitalist firm. While precarity today may seem like precarity everywhere before the golden years (*Les Trente Glorieuse*, and mainly, as the perception implies, in Western Europe), this would be to misunderstand, as we shall indicate, the contemporary configurations of late twentieth and early twenty first century global capitalism. Thus the narrative considers:

1 - The changing character of key narratives in the sociology of organisation and industrial work including a brief assessment of their overlapping and occasionally competing narrative strands (*viz; conventional approaches deriving from pre-contemporary globalisation; globalisation narratives in the form of Development agendas* (as opposed to theories per se); *global value chain analysis* (including, radical global value chain analysis); *critical sociology of work and employment* extending radical global value chain analysis and radical political economy (see our exemplar, Brazil).

2 – As Therborn insists, the context of discussion of organisation and work is framed by historically defined socio-economic context. Thus, while current forms of, inter alia, precarious work and febrile labour relations may be reminiscent of the condition of labour in the so-called Fordist era, because contemporary internationalisation of capital has transformed the landscape of the employment relationship, any study of industrial work and organisations today cannot begin from the hermetic world of the factory, let alone the firm. Or, to the extent that it can, cognisance of the relationship between the factory, office, and firm will of necessity make more sense when it is situated within the context of global relations of the reproduction of labour and capital: the global value chain.

3 – There is a critique running through the chapter of the ethnocentric nature of dominant accounts of contemporary changes in the global trajectory of organisation and industrial work. Often, it is assumed that this trajectory should typically follow the historically determined path of Western, and more specifically, European capitalism with its assemblage of internal class based work place relationships and their various antagonisms.

Framing the arguments

“Seen from the perspective of women, and, indeed, from the perspective of the majority of the workforce in many developing countries, precariousness is the normal condition of labour under capitalism. Given the enormous asymmetries between capital and labour, what needs to be explained is not so much how this precariousness has come about but how it is that in certain times and places certain groups of workers have managed to organise themselves effectively enough to achieve some degree of income security and occupational stability.” (Huws, 2011: 4)

This chapter addresses two aspects of the sociological understanding of global changes in forms and patterns of organisation and industrial work: first; understanding how change occurs entails some exploration of the assumptions on which various perspectives are derived; second; relatedly, given arguments about how organisation and industrial work is changing, the chapter will explore a number of ways in which labour has responded to new configurations and activities of global capital. We will take as our key exemplar of the second aspect of our exploration of understanding contemporary change the case of the ethanol sector in Brazil. The key themes of the chapter are thus:

- 1 - understanding the contemporary reformation of global capital and its implications for organisation and the fate of industrial work in the global north and global south; and,
- 2 - interpreting new features and characteristics of labour and other social movements in response to structural change in the global south and global north.

Behind these considerations of contemporary globalization of industrial work account must be taken of the way in which arguments are framed. First, the extent to which the process of change is considered to be socially positive or not is dependent upon political but also sociological points of departure. Though the fact is sometimes ignored it should not be assumed that sociological narratives are without normative inspiration and political implications. For example, in a seminal paper published over two decades ago, Smith (1997) pointed out that the idea of flexibility cannot be seen as a taken for granted good, as it is by management, but must, on the contrary be judged in relation to its impact upon, significantly, worker experience. Bearing that in mind, in considering both the evolution of the debate on global organisation and

industrial work this chapter is concerned more with the fate of labour than with technocratic-managerial and teleological views based on an assumption of a zero-sum, still less, win-win, unidirectional path-way of global change.

Unusually, rather than examining work organisation and labour responses as separate phenomena, it is argued here is that determinate forms of work organisation, where-ever in the globe we examine them, are as much the result of labour's response as capital's determination. Certainly they are more than the outcome of supposedly neutral, technocratic, design. This argument brings to the fore the notion that workplace and organisational design, and thus the very condition of labour, are derived as much from social conflict within and beyond the workplace in a way that cannot be explained by conventional, bifurcated approaches to either *workplace* or *workspace*. Furthermore, in contrast to more conventional approaches, here labour is understood along two intersecting dimensions. First, labour is conceived as a social category defining how and under what historical conditions people expend effort in determinate ways for remuneration, so that here is excluded domestic work though not all unpaid activity. Second, labour is also understood as a political-cultural form that defines, in various ways, how people collectively respond to the conditions under which they expend effort. Typically, the former is decided for them and more usually under variant conditions of restraint and subordination. The character of the myriad forms of subordination in turn is historically defined by the degree to which people collectively respond to forms of their domination in and by their work. This is also therefore a story about the forms, character and extent of their insubordination.

Industrial work and labour

There are a range of cogent, empirically grounded, and theoretically driven approaches to industrial work and organisation in Western Europe (notably the UK), the USA and Canada that are distinguished from a focus on specific aspects of labour and the organisation of work in late capitalism. These address, following engagement with wider changes in labour markets and/or work place organisation, changes to patterns of industrial organisation or the convergence of work forms. Work methods matter but are rooted in an analysis of capitalist political economies. Exemplary accounts of the former can be found in the long term research begun in the 1990s in the 'Manchester School' by Marchington et al (2005) and Rubery, et al (2003) and Rubery and

Grimshaw, (2003). Another key figure, now moved on, is Huw Beynon and it is being taken to another dimension by Martinez Lucio as a founding contributor to the Critical Labour Studies network. Developing a political economy perspective, they have chartered the rise and decline of determinate labour markets, work organisations and state engagement in the late twentieth and early twenty first century. Critical comparative work extending beyond Britain can be found in Hardy's (2012) work on the reconfiguration of capitalism in Eastern Europe. Researchers of workplace specific changes involving the study of the evolution in forms of work comprise a number of prominent US researchers including, amongst others, Smith (1997), Milkman (1991) Graham (1995) and Gottfried (2012). The latter is concerned more broadly with contemporary transformations of the global political economy in the context of gender and labour markets and is closer to the developing work of the Critical Labour Studies network. These exemplars are drawn from an impressive number of critical sociologists of work and employment in the US. For the latter and others working from within a critical sociology of work tradition in the US, the issue is not so much a concern with this or that variant of labour market trajectory within late capitalism, though this is not unimportant, so much as a focus upon identifying the variants to work organisation and labour processes that to varying degrees deepen labour subordination.

In France, a critical agenda to work is found at the Centre Pierre Naville, notably the work of Jean Pierre Durand and colleagues (see, Durand, 2006; Durand and Hatzfeld, 2003). Thus, one key example of this trend can be seen in the attention given to the evolution of forms of, inter alia, lean production. Regarding lean production, and to an exceptional degree, the work of a group of Canadian researcher-scholar activists working with the Canadian Auto Workers' union in the late 1990s produced an astonishing research paradigm exploring the trajectory of lean production (Rinehart et al. 1997).

That said, though noting that work qua work-place is by no means the ubiquitous focus of research, it is nevertheless the prevalent domain concerning sociologists of work and organisation in their various critiques of capitalist social relations. (See especially the critical work by Peck, 1996; Gough, 2005 on the sociology and political economy of work in determinate social spaces) At the same time, complementing and often utilising the research of the latter are those within the developing tradition of Critical Labour Studies attending to the

wider political economy. The developing oeuvre of the Critical Labour Studies conference exemplifies this emerging strand that seeks to bring together labour process research, sociology of labour market analysis, critical spatial studies and radical political economy in an analytical chain.

This is important since it can ensure that the focus of radical analytical intervention no longer has to remain at the level of one or other of the specialist research areas. Thus, while more conventional accounts of firm supply chains (Hamilton and Gereffi, 2009; Bonacich and Wilson, 2008) habitually give limited attention to wider political economies (still less labour and value creation) researchers within the emerging Critical Labour Studies school have begun to highlight the importance of explaining global value chains in the context of international capitalist restructuring. Accordingly, locale is salient and significantly is understood as rooted in the reproduction of capital-labour relations within the new international global economy.

Ways of understanding contemporary change

Following on from this discussion, the agenda proposed here includes the conception of political economy as pivotal to understanding global shifts in organisation and work. Setting aside some popular media and policy excitement about a global win-win outcome to contemporary change we identify two other ways of addressing the evolution in organisation and industrial work from a global perspective. Both derive from assumptions about the development of industrial capitalism since the end of the Second World War. One sees historical change as unidirectional in which power especially that of labour in the global north is depleted through myriad processes of deindustrialisation consequent upon the mobility of capital to the global south. As industrialisation, the well spring of workplace and other forms of social and political power, shifts to the global south, one assumption that could be drawn from this prognosis is that both labour and capital will develop enhanced capacities (whether realised or not, especially for labour) to extend forms of social solidarity similar to those established in the global north in the period after 1945. Examples of this approach, which sees capital and development as historically and teleologically bound together, can be found in a range of registers and while more limited in Sociology, can be witnessed in the work of popular economists, for example Stiglitz (2002) and Augar (2006). Some see labour in the global north as getting its comeuppance due to being

perceived to have been one of the historical beneficiaries of colonial and later imperialist largesse, and the emphasis upon the extent of loss of economic and political power by labour in the global north varies according to perspective (and agenda). Stiglitz and Augar, while famously critical of the workings of international capitalist organisations and notably the IMF and the World Bank, at the same time retain a great sense of optimism about the development of the global economy since for them it offers positive long term benefits: enlightened capitalism based upon a presumed European and best-of-the-US paradigm can eventually save the world and ensure progress for all.

Sociology has been far from free of the joys of one-world development. However, unlike post-war development theory it is more usually ambivalent about the long term consequences of the inevitability of modernity (see, for example, Giddens, 1990 and Beck, 2000). More serious commentators on global synchrony (not the same as convergence) include contemporary French Regulationists who, whilst eschewing teleology are ambivalent about change. Various, they recognise that obstacles to transformation may also provide the foundation for structural opportunities that do not take everyone along some easily recognisable route to the 'global north' (Boyer, 2002; Amable 2003). Giddens now defunct Third Way optimism aside, pessimistic accounts of the coming cataclysm for workers and employment everywhere is central in much of Bauman's later writing (2004; 2005) where globalisation is effectively a one-way street of labour, social and cultural degradation. There is for sure much of this to be witnessed everywhere across the planet, but if we begin from a non-European perspective then the street is less one-way, less unremittingly pessimistic. The starting point for the regulationists is not explicitly that of macro socio-economic convergence.

While not a straightforward rerun of the convergence debate of the 1960s (Kerr et al, 1960) nevertheless, as with Kerr and colleagues, there is a more or less implicit assumption in the work of Giddens, Beck and others taking up their agenda that with industrialism comes a range of modernist, or proto modernist, progressive cultural and political formations. Paramount among the latter is the notion that democratic participation in social and (sometimes) economic life is inevitable. Neither could it be maintained that this is a conscious reworking of post war development theories whereby capitalism eventually drives out tradition. (For a classical

assessment of the development-underdevelopment -modernisation debates see, inter alia, Harrison, 1988). Yet, in one respect Giddens and Kerr and others share the assumption that there could be (and should be?) a relative *evenness* to global change: there can be both local and global cultural and political gain for all. This is problematical for at least two reasons since, as the quotation from Huws above makes clear, the idea of a planned security to workers' lives must be seen as being limited both by particular socio-economic forces and political circumstances together with various cultural and sociological traditions within countries. Additionally, this is a story of the capacity of workers and their institutions to establish forms of (temporally) embedded social, political and economic securities, even if these were always and everywhere, in their own terms, limited by gender, class and ethnicity within the defined nation state in the global north. For Huws, while workers and other social groups in the global north may retain their various forms of progressive cultural and social capital, including variant forms of representative democracy, these will be much diminished due to the inability, or unwillingness, of the state to continue (and western capital especially) to pay for the reconstitution of the post war social settlement.

This is not a straightforward left-right political argument as Streeck has emphasised (2014) and the salient point is that from this perspective, to understand what is happening we need to follow the money, or, in this case, capital investment within and beyond company networks and more widely, across national frontiers. Furthermore, since from this vantage point large scale industrial workplaces are a diminishing feature of capitalism in the global north and industrialisation, being a zero sum process in which wealth and power increasingly flows to the global south, there is a sting in the tail for capital. Moving to the global south allows the advantages of accumulation witnessed in post war Europe and the US but without the downside – a well organised labour movement. “Accumulation by dispossession”, to use Harvey's fine summation. Democracy ‘yes’ and a labour movement of sorts perhaps, but it certainly will not be one delivering social democratic welfare and worker rights in anything like the manner of western European liberal democracies after 1945. Whatever the superficial appearances of global convergence, and these are not to be in themselves underplayed, nevertheless, economic, social and political power will eventually shift to the global south. This usually is taken to refer to the so-called BRIC countries. In other words, whereas in a previous era when labour, due to

its ability to mobilise widely in society was able to benefit from industrialisation in the form of social-democratic welfare state compromises, new patterns of capital accumulation are different. The argument is that the contemporary situation will see capital as less constrained by the limits imposed by space, geography and time, and consequently and most significantly, organised labour. Accordingly, this first perspective, whatever the respective differences in terms of political view point, perceives change from the vantage point of the global north.

By contrast, a second perspective sees organisational and industrial work as undergoing transformations in ways that are to be distinguished from the post Second World War European and North American experience of industrial change though not necessarily at the expense of labour. The process(es) of contemporary global change are to be seen in terms of international capitalist restructuring that are not best understood either in win-win, and still less, zero-sum terms. Thus, while for example, steel plants, the petro chemical sector, white goods manufacturing and the apparel industry may be shifting to the global south it is important to note that the generation of trade still occurs within a relatively narrow arc of countries and regions. It is important in other words to distinguish between the geographies of production, accumulation and profit repatriation. The money still to a significant degree continues to flow unevenly to particular countries in specific regions of the (richest) global north.

From the latter perspective, change, which sees increasing industrialisation in the global south, is thus not a zero sum game in which labour is automatically compromised across the globe as a result of increasing industrialisation in the global south and its relative diminution in the global north. From this viewpoint, the assumption of a relative evenness of cultural and political gain is replaced by an assumption of *unevenness*. In the north labour is not weaker per se due to changes in work place size and the shifting nature of sectoral activity as the mass industries with large workplaces remerge in the global south. Of course size and massification matter but they are not straightforward determinants of the power of labour. Neither is labour straightforwardly politically or organisationally 'weak' in the global south because it has been developed in the context of post-colonial, politically repressive, state and employment regimes sustained by external influence as can be witnessed for example through the aegis of structural adjustment programmes. While social and political repression are not unimportant it is the nature of

historical and contemporary production with variant forms of coordination of global value chains that helps to explain the relative development and underdevelopment of labour unions and other social movements from a global perspective. Moreover, the argument made from this perspective is that it is the relative strength of labour and other social movements, socially and historically determined by locale (in national and regional terms, yet always linked to external processes) that matters more than the seemingly straightforward view that with the erosion of industrial space and spatial scope organised labour is inevitably and irredeemably weakened.

This is understood to be a condition of socio-spatial and political-regional – plus workplace - power. In this case, the assumption is that it is not so much the nature of work (inter alia, work organisation and the labour process, though these matter of course), together with its degree of physical concentration, that determines work place and organisational capacities of any social group. Rather, of crucial importance are the relationships between the various actors both within the work place and its determinate social spaces, however these may be defined spatially and organisationally, and as importantly, globally.

The latter perspective comprises researchers such as Antunes (2011) and Clarke and Godrey (2011). For these critics, it would be possible to contrast the rise of mass industries in the global north since 1945, where production was highly concentrated by region, with contemporary forms of capitalist production. These have witnessed the new patterns of value chain development, often centrally controlled from the global north, or even without geopolitical centres at all, as is the case with MNCs, spreading across not just countries and regions but continents. This has had a dramatic impact upon the social and political capacities for labour and other social actors to control their fate in an immediate way. Power is often defined by the fact that capital is located quite literally a continent away and capital can often be shifted relatively quickly to off-shore zones of indulgence. Hence, similarities in appearance are not a best guide to the complexity of cross class social alliances that might follow: the struggles by auto and other workers in post 1945 Europe and, for example, post dictatorship Brazil, as we shall see, are not commensurate.

Specifically, industrial concentration, for example of automotive production in Brazil with its attendant large workplaces does not necessarily allow the space for powerful labour movement

activity that it once would have done when those industries operated in the global north. This is because the concatenation of broader class and other social alliances takes different forms according to history, space, locale and the culture of socio-industrial conflict. This is important to emphasise despite appearances to the contrary. For example, the understandable excitement attending unionisation of the mass industries in Argentina, Brazil and India is derived from the ways in which unionisation was discussed in Western Europe after 1945. Yet the reality is that while of course sociology matters (i.e. the collective worker in situ together with high wages especially with regards to the social wage) politics and state matter as much in the setting of context and discourses around how workers struggle and in accounting for what is achievable within capitalist societies. This is another way of saying that where the latter are born of social democratic settlements, struggles for improvements typically remain economic whereas where the social wage is weak, macro-supporting context febrile, if even existent, even basic struggles for pecuniary improvements may often rapidly become political. This is the quite typical of circumstances in the global south. One way in which we can link a critical understanding of workplace change within and across national boundaries in an uneven world is by integrating the radical global value chain analysis of a range of researchers such as Raworth and Kidder (2009), Taylor et al. (2013), Mulholland and Stewart (2014) with a *critical sociology of work and employment* perspective. This will allow us to integrate a radical global value chain analysis and radical political economy providing a more realistic understanding of the *unevenness* of capital's social, economic and political power within contested global value chains. This provides the basis to begin to explain the differences between the worlds of work today and in the past.

We can gain further insight into this by reference to the case of Brazil in the 1970s. During these years, while under military rule, the large auto strikes led to the formation of PT (Workers' Party). In 2010, 40,000 metal workers at Ford, VW, and Mercedes struck and won a 10% pay increase, disrupting German automotive production. While it is unnecessary to point out the extraordinary importance of workers to be able to strike without the fear of being shot down, what the dispute also speaks to is the increasingly important phenomenon of the *nature* of the interconnectedness of labour and capital not just globally but especially structurally. The nature of capital formation, including its greater capacity to relocate associated with, inter alia, the geographical spread of global value chains, defines the key difference between contemporary

forms of industrialisation in the global south and post war experiences of fordist industrialisation in the global north. The salient point here however is the paradox central to all new forms of global value chains exemplified by the Brazilian metal workers above. New patterns of value accumulation and production chains are providing new opportunities to disrupt production; a strike in one place has a major downstream and upstream effect. The effects are also lateral where capital in material production is increasingly adumbrated by fictitious capital (financialisation). These two broad approaches (power and influence moving *evenly* from 'north' to 'south', or, greater complexity of power relationships due to the *unevenness* of the power of capital and labour) to understanding industrial change thus lead to quite distinct ways of interpreting developing forms of industrial and work organisation, class formation and class action both within the work place and beyond. We return in more detail to the case of Brazil below.

Context shaping forces: of deindustrialisation and neo-industrialisation and other arguments

Contemporary forms of the internationalisation of capital are shaping the nature of worker experience of work (places) both in respect of how (the condition of labour, broadly understood) and where people work. While place matters, social relationships defined in and by space matter more. Whereas the story of mass industrialisation in post war capitalism in Europe and the USA was of an industrial society and culture increasingly transformed after the oil crisis in the 1970s, the centre of industrial production, this could only be a part of story. More automobiles are produced in Europe as we write than at any time since the 1960s; what is of particular significance is that considerably fewer workers are required to produce them and this can be said of any industrial sector. It is of course the case that to all intents and purposes whole sectors have indeed shifted to the global south, including the most commonly referred to, apparel and white goods manufacturing and steel.

Yet, the key factor in this shift has not been deindustrialisation per se so much as an integrally related process of the industrialisation of the global south under conditions very different from those experienced by societies in the global north in the 18th and 19th centuries. This shift in de and neo industrialisation processes is occurring in tandem with the reconfiguration of industrial processes in the global north, again, under very different conditions to those experienced in

Europe during the early period of industrialisation. That is to say that the debate is also about social and political power. It is not so much that labour in the global north obtained power simply due to industrial massification and the concentration of social forces. If massification and social organisational concentration were sufficient in delivering powerful social movements including labour unions, industrialisation alone would tell the whole story. The whole story however, as we know, would be more than incomplete were it to ignore the peculiarity of the post war settlement in Europe. This story includes the US willingness, or necessity, to fund European rebuilding and re-establishment of markets via the Marshall Plan and more recently, from the late 1970s, the role of northern imposed trade agreements. Specifically, we are referring to structural adjustment programmes that made the post war European experience of social development impossible in the global south. Thus, it is necessary to be able to argue that massification alone cannot explain what is happening in the global south where we are witnessing a rising concentration of labour as great, and at least in China and regions of India, greater than was experienced in Europe in the 19th Century yet without strong internal, let alone external labour (movement) organisation. While it is beyond the remit of this chapter to explore the trajectory of post Second World War Keynesian welfare states, suffice to say that strong labour unions with various attendant social and welfare rights were axiomatic to their formation (Streeck, 2014; Huws, 2011).

Remaking labour subordination – from north to south-and-south and back again.

While analysts and policy makers identify increased unemployment in the global north as industrial work is exported to nation states in the global south, where wages are lower and trade unions are weaker or non-existent, this is but one contestable feature in the current debate about the changing nature of organisations and industrial work. Thus, while this contestable reality holds sway in a number of instances, nevertheless, despite the apparent commonsense of popular critiques implying a weakening of labour generally by capital flight to the south, what is ignored is the recent role of labour unions in restoring democracy (Chile, Argentina, Brazil) bringing constitutional change, seeking collective rights as opposed to liberal rights, and recent reforms that run counter to homogenising discourses of work degradation. (Arrighi et al, 2003).

One of the critical aspects to the processes of change in global employment patterns that must be considered is the degree to which forms of labour subordination, including weakened or non-existent labour organisation, more usual in the global south are becoming familiar in the global north. Of course, this is not to suggest that weakened labour in France, or the UK, for example, in any way resembles weak labour organisation in the global south, in Brazil, India or China. We know that the numbers of workers in labour unions *beyond* the global north is growing and in absolute terms may be greater than at any time in history when China is factored in. Moreover, notwithstanding the straightened circumstances in which unions in Europe now find themselves, their previous social and political strength gave rise to social formations and socio-cultural relationships that underpinned strongly regulated employment and welfare institutions which often continue to prevail, albeit under much reduced circumstances. But one historical trajectory does not mean that, in this instance, the patterns and processes of industrialisation will be the same, or even similar, so that despite the historically unprecedented numbers of industrial workers in the global south, the earlier experience of strong labour unions will be repeated.

Then again, while history is not repeatable, contemporary forms of relatively weak labour unions in the global south do not in and of themselves suggest this will always be so and especially it does not mean that they will, in different ways and circumstances, be unable to establish other progressive forms of social-welfare states. However, the south had a role as a supplier of raw materials for the north's industrialisation. This is relational; the south's trajectory of industrialisation and its labour and union power continues to be impacted by these historical and contemporary north-south relations.

An uneven story indeed. While IG-Metal in Germany, in contrast to previous periods, may not be able to greatly impact on policy formation in GM Europe, despite its sectoral strength, this will be the height of its ambitions, while sections of the trade unions confederation, CUT, in Brazil joined protests of 2014 world cup, a direct challenge to the state. Again, as mentioned previously, this perhaps tells us something about the need to situate labour struggles and our interpretation of them firmly within the context of the relationship between economic and political actions: whether labour and labour actions push up against an accommodating political context (as highlighted earlier) or whether struggles by workers are inherently antithetical to this

context. Accordingly, the argument being made is that global value chain analysis within a political economy framework best explains the fate of global organisation, industrial work and hence the actions of labour today. To illustrate our argument about the emergence of new patterns of labour actions in the context of the shifts in global capital formation over time, we focus on the exemplar of Brazil from the 1970s.

Brazil

The Brazilian ‘economic miracle’ of 1964-1973, during which GDP grew annually by 11%, relied heavily on imported oil, foreign credit and involved the vicious suppression of the wages and activity of labour under military rule. Slashing of the minimum wage was counterproductive as the population simply did not have the capacity to support import substitution strategies.

This paradox was thrown into stark relief after the 1973 oil crisis when the price of Brazil’s petroleum based imports escalated and international banks overflowing with petrodollars sought investment opportunities in the global south. Bankers from US, Europe and Japan invested keenly with the generals and new highways, railroads, steel works, power plants, oil and gas terminals appeared. In 1974, Brazil borrowed more money than it had in the previous 150 years. Interest rates shot up after the second oil crisis of 1979, however, and in 1982 Brazil underwent the largest (at that time) debt default in modern history and the government was forced to the table by the International Monetary Fund (IMF). Debt servicing replaced social priorities and the poorest 20% of the population saw their share of income drop from 3.9% in 1960 to 2.8% in the early 1980s and social protests gained momentum in a decade of immense pressure for labour, land and social reform in Brazil. The new syndicalist movement (CUT; and PT) that emerged from the autoworkers strikes of 1979, and social movements such as the Movimento dos Trabalhadores Sem Terra (MST – Landless Peoples’ Movement) found, however, that the restoration of democracy and constitutional reform in 1988 did not translate into economic rights.

The imposed structural adjustment programmes of the IMF and World Bank, along with membership of the WTO in 1995 demanded the deregulation of state owned enterprises, an end to import tariffs and to credit support for the rural poor as foreign debt servicing replaced

national welfare spending. Rural to urban migration intensified, swelling the favelas that hosted 15 million unemployed people by 2001 while work informality peaked. It was a stark indication of Brazil's reversion to primary production for export under IMF-inspired neoliberalism as agricultural exports increased to 41 per cent of total exports, car manufacturing fell by one third between 1980 and 1990, while unemployment continued to climb, more than doubling between 1994 and 2000 (from 6.1 per cent to 15 per cent).

Although the volume of foreign direct investments rose 14-fold between 1994 and 1998 this materialised in neither growth nor jobs. 83% of investment went to the privatised service industry of non-traded goods (the financial sector, telecommunications, and electric power) while automotive parts workers who had confronted the military state of the 1970s were wrong-footed by the sectoralisation, outsourcing, automation and fragmentation of the autoparts manufacturing process under foreign owners who increased their control of the sector from 12% to 70% in just 3 years (1994-1997). This reduced both the number of workers (by 22% between 1995 and 1999) and their militancy. Hence, the elimination of jobs, the ideological and organisational undermining of trade union strength under neoliberal restructuring could be detected in a drastic reduction in the total number of workers on strike between 1990 and 1999 (Alves, 2006:466-7). In contrast to the 'north' with its long period of post-war welfarism, in Brazil the century closed on a period of autocratic military, and then IMF rule. To illuminate several extraordinary outcomes: more than half of the working population was employed informally while only one-third of Brazilians had a registered job by 2002 and 25% were living below the poverty line.

Brazil: neo-developmentalism or neo corporatism?

The electoral victory of the Workers Party in 2003 symbolised, arguably, a rejection of the neoliberal formula that had been administered since the late 1980s. In taking a more central role in industrial organisation, however, the government combined modest social reforms that reduced social inequality with a distinct economic shift back to primary commodity production and export with an increasing reliance on the demand for ores, foodstuffs and grains by China (Goncalves, 2013; Wilkinson and Wesz Junior, 2013). Foreign direct investment in minerals, agriculture and cattle leapt from US\$ 2.4 billion in 2000 to US\$ 13.1 billion in 2007, the latter

increasing its share of GDP to 24% (from 21%) between 1993 and 2009, while transformative industries fell from 75% to 66% of total GDP during the same period.

The epoch defining patterns of economic growth in populous countries such as Brazil, India and China have added considerably to the global working class and have been accompanied by paradoxical developments in industrial and employment relations. Industrial clustering has led to many examples of labour strengthening in the global south (Silver 2003), yet state promotion of ‘pro-labour legal reforms’, however, often sit alongside often severe limits to worker self-organisation. Furthermore, the persistent unevenness of development between the northern and southern economies continues to militate against international organisation of workers differentially impacted by globalised industrial processes across space (Arrighi, et al., 2003).

These distinct features emerge from the following study of Brazil’s revival of the centuries old sugar and sugar-derived ethanol sector. This was of the indigenous primary industries championed by the governing Workers Party for the strong command over the supply chain enjoyed by Brazilian firms, its potential to reach new markets for ‘renewable’ energy and subsequent potential to generate revenue for selective state projects of social reform. In the 2007-2008 sugarcane harvest, only 7% of the mills had the participation of external capital. Following the 2007-8 financial crisis, however, Brazil’s comparative advantage in sunlight, land, water availability and generous credit incentives attracted leading MNCs in energy, food and biotechnology and investors fleeing unstable US and European banks. Forbes list favourites such as James Wolfenshen (former World Bank president), George Soros and Vinod Kholsa (Sun Microsystems) were among foreign investors whose share in the sector tripled in the following three years to 22% (Olivon, 2012).

Although aggressively marketed as environmentally and socially responsible, the territorial expansion and political influence of leading MNCs is in stark contrast to the spatially fixed and fragmented character of the trade unions, with very evident implications for labour. Under Brazilian labour law dating to the military rule of the 1940s limitations to the geographical area and specific occupation that a trade union may represent means that unions are spatially confined and that sugar cane cutters, drivers, and machine operators in fields cultivating sugar cane and in

factories refining sugar primarily for food, and those refining it for ethanol distilleries, may all belong to different unions. With several significant exceptions (see below), the result has been that workers collective organisations have been unable to ameliorate a marked, and sometimes fatal, intensification of work rate, persistent seasonal hiring and firing, or prevent mass layoffs from both mechanisation and the closure of smaller plants. Yet, despite this, worker led pressure for progressive political and economic reforms (see also Ecuador, Bolivia and Venezuela) include a continued real increase in minimum wages, a greater formalisation of work, a modest reduction in social inequality and a determination to end child and ‘slave like’ labour. These changes guard against overly prescriptive narratives of endless, downward spiralling of global labour conditions (Silver, 2003); yet, in a period of strong economic growth they have co-existed with, rather than overtly challenged, structured inequality and increasing power asymmetries characterised by the fixed geographical and sectoral nature of fragmented unions.

This exemplar of current tensions in these specific sites of production, however, would be incomplete, as are global value chain studies more generally, if only work relations, tensions and conflicts at the point of production are considered. For sure, the extent to which workers choose to exercise their potential power within global value chains will depend largely on the degree to which they and their unions respond to these new corporate spatialized challenges (Antunes, 2003), forging relations internationally. Beyond the factory floor, and networked nodes of production, the globalised demands for new mines, dams and sources of monocultivated grains and energy are bringing capitalist pioneers once again into conflict with indigenous and rural populations, producing new enclosures in regions of production. In Latin America, Asia and Africa in particular, the willingness of these latter groups to take greater risks appear to be in direct relation to the extent of their dispossession and marginalisation. Those challenging the latter have often very imaginatively opened up new forms and spaces of contestation in the political sphere across the global south (see Antunes, 2003; Porto-Gonçalves, 2006).

Restrictions then, but also the inter-linkages between firms within GVC, present enormous opportunities for labour paradoxically not present in previous periods when the internationalisation of capital was more limited by form (before financialisation) geography and sector.

Discussion and reflections

In previous eras and notably in the period commonly known as Fordism, researchers were more comfortable with focussed accounts on particular phenomena, separated from wider historical cultural experiences (see the CLS critique above). Nevertheless, while it remains possible to explicate phenomena separately, as often can be seen with focused research into particular firms, this is becoming a less promising avenue in explaining contemporary forms and processes of work and organisation. Since the nature of the interrelationships attending contemporary work are different with the advent of newly empowered and globally enhanced GVCs, firm-limited, not to mention factory limited, research, is less likely to adequately account for what is actually going on inside ‘the firm’. In contemporary political economies, the more or less immediate practical impact of GVCs means that researchers of organisations and work today are no longer able to limit their explanation of what goes on inside the firm (qua the office, factory, warehouse – or the worker’s own home) to what appears to be immediately defined by the managers inside a particular *workspace*.

The fact that outcomes of internal conflicts at work are determined (sometimes more immediately than in the past) by what goes on outside the workplace means that where production occurs, and under what conditions of subordination, tells us much about the ways in which labour can respond. This too is a factor of the condition of labour within the broader political economy in which work is experienced: while the actual *work processes* in the auto industry, for example, will be almost the same whether we are researching Brazil or Germany, what determines worker experience is itself a condition of temporal social and economic relationships between factory, labour-union practices, home, community (locale) and the state. The state, notwithstanding the role of MNCs, should not be underestimated in respect of both its institutional (labour market regulation), constitutional (critical to the reproduction of capital locally, if not locally owned), and finally, ideological role in terms of the designation of the ‘citizen’. Of course, while the meeting places between what John Berger describes as local and abroad (1967) have always been transcendent, the difference today is that the determination of social action with the *workplace* is no longer restricted to the conditions of that workplace in its immediate locale, let alone state, since the *workspace* may extend beyond the boundaries – and in the context of MNCs will do so as a matter of course – of the nation state. Which brings us

back to our starting point: internationalisation of capital today ('globalisation') ensures that no-one is safe in employment terms from the shift in investment to other parts of a company's value chain. Work is not only outsourced beyond the firm to precarious workers but also to other countries and continents. What is more, workers in the firm, however secure they may be today can have their conditions transformed to parallel those in other parts of the MNC's GVC while they remain in situ. Finally, allied to the pressure of employment precarity is the fact that management-labour and work processes such as lean production are now mobilised by capital in ways that transcend sector, occupation and geography. No one anywhere or on at any level in a job hierarchy is safe.

In that case, how can we study resistance? More than a backdrop to what is going on in terms of worker experiences the circumstances just described necessitates a different route to account for what workers do when they resist. We need to be able to argue that since resistance is conditioned by history and local circumstance, our research narrative will also evolve to account for what is happening in other places, other nodes, in the *workspaces* which, where we are discussing the fate of labour in MNCs, will have to take account of the rest of the firm in other places. The 'rest' – workers in other areas of the firm's global nexus - may in fact be pivotal to what those at the 'end of the line' can do. Yet again, on one dimension some of this is commonly known to those familiar with the older world we have researched, for example, the world of the automotive industry until the late twentieth century. Worker activists and critical researchers have been working within this register for decades. We know about this in other and positive ways since workers across the various automotive assembly plants are internationally well organised.

However, the employment circumstances researchers are often faced with today are those in which workers who may indeed be linked to the same firm are in geographical, social and economic terms quite removed from one another. Inter-sector linkages resulting from global changes in the firm, organisation, work and employment relations have transformed the myriad relations between groups of workers who hitherto may have had only the most tenuous relationships. Accordingly, it is not so much a case of first ('developed') world versus third ('developing') world whereby the conditions of the former are being undermined by the (worse)

conditions of the latter. Of course, while this may be so it can no longer be accounted for by the nature of local employment regimes alone. The European and US automotive industries' requirements for new forms of fuel allied to notions of a green economy are indelibly inscribed in what MNCs do in Brazil (and the rest of the global south). Indeed, MNCs are not only outposted in the global south. The fact is that the interlinkages between firms whether in the realm of the real (production) or the immaterial (finance/financialisation) define, in complex ways that demand new ways of explaining, the international, local and spatial production of value. This shift in research narrative will be complex and is being addressed by researchers in areas of commodity production unknown barely two decades ago, as can be witnessed in the compelling research into Foxconn (Chan, 2013).

This is a developing perspective in which research on organisations and industrial work will include cognisance of the fact that we have to shift our agenda from a view of de-industrializing West versus an industrializing 'East' (global South). Furthermore, there is another reason why the latter may be the wrong starting point in explaining an extraordinary shift in global wealth. Whatever the degree of industrialisation and proletarianisation within the so-called BRIC countries, allied to the rise of the new middle classes in the global south, together with the attendant power of local (and sometimes, as in the case of Russia and China, new) capitalists, this should not be confused with the persistence of another process. This is that the concentration of power, capital and resources in the global north has increased as a result of the current trends in internationalisation we have been describing. This is important for our argument here because one of the consequences of the latter is that it is now necessary to tie the evolution of GVC to new patterns of subordination and insubordination. While it is beyond our remit to explore the latter beyond our exemplar Brazil, it is nevertheless permissible to at least sketch some of the discernible contours of labour *co-option* and *insubordination* alluded to.

Given the optimism for a more radical change following the election of the Workers Party, the extent to which neo-liberalism has been accommodated by the government is perhaps surprising but is also reflected in:

-*Reluctance*, or inability, of sections of the trade union movement to detach from their co-option during military rule.

-A *general trend* away from the more radical syndicalism of the 1980s towards a corporate management of discontent, consistent with the ideology of neoliberalism.

-*Contentment* to participation in tripartite state-capital-labour 'common sense' negotiation of shared material gains for workers in GVCs.

In contrast, however, the industrial and rural struggles of the 1980s have resonance in:

-*Spontaneous* and largely uncoordinated strikes by manual, rural labourers and cane cutters (e.g. in response to falling wages after the 2008 financial crisis)

-*continued occupations* of rural - and now urban land - by landless workers, and precariously employed dwellers of urban peripheries. These continue to be most evident in regions of expanding agroindustry or escalating rents (e.g. Sao Paulo city)

-*sporadic but co-ordinated*, collective actions against further outsourcing (e.g. dock workers) and worker layoff (auto workers)

-*formation of new trade union* associations across divisions of labour and sectoral categories challenging the neo-corporatist union structure (e.g. Intersindical, CONLUTAS)

-*escalating protests against land and water grabs* in which indigenous communities are increasingly represented, and victims of violent reprisal¹. In 2012 the Guarani successfully prevented Shell from using their ancestral land for sugar and ethanol production in Mato Grosso do Sul, while over 2000 Guarani and Terena blocked roads in the region to prevent further land loss.

¹ Since 1985, over 1600 rural activists have been assassinated in land conflicts. Twenty three indigenous leaders have been killed

A most intriguing contemporary development in Brazil is that of the Federation of Rural Workers in Sao Paulo, one of the organisations emerging from general social unrest and the spontaneous cane cutter strikes of the mid-1980s. They have been combining ‘traditional’ industrial action of sugar and ethanol employees while also organising land occupations that include workers made redundant through lean cost cutting measures and factory closures. Breaking away from CUT (along with many of CUT’s founding members from the metallurgy and auto sectors), a more confrontational stance against outdated labour law and the intransigence of MNCs has earned significant victories. A strike in a Sao Paulo plant in 2012, for example, was achieved by uniting workers across the divisions of labour in field and factory, whether or not they were unionised. The work stoppage, by halting raw material supply and processing, disrupted the entire supply chain costing the employer an estimated US\$6 million and replaced variable salaries, pay by production and the bonus systems, with improved wages and conditions. This victory is now being used as leverage in other plants, particularly in the new. While insisting on centralised negotiations with leading energy and food MNCs, the organisation simultaneously advocates radical agrarian reform, socially and ecologically committed food and energy production in Latin America as an alternative to the hegemonic, resource intensive model of large-scale monoculture being exported from Brazil.

Outlining this scope for action by labour allows us to link the study of action to the study of capital in terms of era. We have argued that previous studies of work and organisation were limited, by and large, to the factory gate, or the region, according the characteristic form of capital accumulation. Canonical studies of the 1960s and 70s, not only from within Anglo Saxon traditions but also more widely, (see especially Linhart, 1978) reflected this pattern of capital form and nowhere more so, arguably, than in the Beynon’s iconic *Working For Ford* (1972), Burawoy’s *Manufacturing Consent* (1979), or Pollert’s *Girls, Wives Factory Lives* (1981). The fact that in telling us about the nature of work at a specific locale this research was also telling us something of the nature of global capitalism at the time is precisely the point. Today, it would not be so straightforward (though this does not mean that it would not be of immense value in other ways) to illustrate key features of the nature of contemporary capitalism by analysing the internal working relationships of a determinate factory in one region of one country.

Contemporary globalisation reduces the analytical power of the kind work place study characteristic of the period from the late 1950s through to the late 1980s and 90s. There is a proviso of course and that is that focused studies, couched within a radical political economy and GVC analysis, are still vital since they will allow us necessarily to look outwards rather than inwards, the latter being a key feature of a period in which knowledge of one Fordist factory could elucidate the world of much contemporary work in the West, of course. The immediacy of global interrelationships involved in commodity production impacted less while it impacted more immediately on those located at the immediate site of production in the global south. To put it another way, the responses available to *local* labour today are themselves a condition of the global nature of embedded *global* capital everywhere, a far cry from previous eras of commodity production.

References

Alves, G. (2006) Trabalho E Sindicalismo No Brasil Dos Anos 2000: Dilemas Da Era Neoliberal, In R. Antunes (Editor), *Riqueza E Miséria Do Trabalho No Brasil*, São Paulo, Boitempo Editorial: 461-574

Amable, B (2003) *The Diversity of Modern Capitalism*, Oxford, OUP.

Antunes, R. (2003) The Metamorphoses And Centrality Of Labour Today *Critique: Journal of Socialist Theory*, 31 (1):117-130

Antunes, R (2011) 'Freeze-Dried Flexibility: a new morphology of labour, casualisation and value', *Work Organisation, Labour and Globalisation*, 5:1. pp148-159. Summer

Arrighi, G., Silver, B., and Brewer, B. (2003). Industrial Convergence, Globalization, and the Persistence of the North-South Divide *Studies in Comparative International Development*, 38, (1) pp. 3-31.

Augar, P (2006) *The Greed Merchants. How the Investment Banks played the Free Market Game*, London: Penguin.

Bauman, Z (2004) *Wasted Lives. Modernity and its Outcasts*. Cambridge: Polity

Bauman, Z (2005) *Liquid Life*. Cambridge: Polity.

Beck, U (2000) *The Brave New World of Work*, Cambridge: Polity.

Berger, J and Mohr, J (1967) *A Fortunate Man; The Story of a Country Doctor*, London: Penguin

Beynon, H (1972) *Working for Ford*, London: Penguin.

Bonacich, E. Wilson, J (2008) *Getting the Goods: Ports, Labour and the Logistics Revolution*, Ithaca and London Cornell University Press

Boyer, R (2002) *La Croissance, Début de Siècle*, Paris: Albin Michel.

Burawoy, M (1979) *Manufacturing Consent: Changes in the Labor Process Under Monopoly Capitalism*, University of Chicago Press

Chan, J (2013) 'A Suicide Survivor: The Life of a Chinese Worker', *New Technology, Work and Employment*, 28: 2, pp. 84-99, 2013

Clarke and Godfrey (2011) 'Skirting Regulation? Trade Liberalisation, Retailers and the Informalisation of South Africa's Clothing Industry'. *Work Organisation, Labour and Globalisation*, 5:1. pp75-93. Summer.

Durand, J-P (2007) *Invisible Chain: Constraints and Opportunities in the New World of Employment*, Basingstoke: Palgrave-Macmillan.

Durand, J-P and Hatzfeld, N (2003) *Living Labour: Life on the Line at Peugeot France*, Basingstoke: Palgrave-Macmillan.

Garvey, B. and Barreto, M.J. (2015). At the cutting edge: Precarious labour in the sugar cane fields of Sao Paulo. Chapter in forthcoming book, Lambert, R and Herod, A. (eds.) *Globalisation and Precarious Work: ethnographies of accommodation and resistance*. London: Edward Elgar.

Giddens, A (1990) *The Consequences of Modernity*, Stanford: SUP.

Goncalves, R. 2013. *Desenvolvimento às Avessas. Verdade, má-fé e ilusão no atual modelo brasileiro de desenvolvimento*, Sao Paulo, LTC.

Gottfried, H (2012) *Gender, Work, and Economy: Unpacking the Global Economy*, Cambridge: Polity.

Gough, J (2005) *Work, Locality and the Rhythms of Capital*, London: Routledge

Graham, L (1995) *On the Line at Subaru-Isuzu: The Japanese Model and the American Worker*, Ithaca: ILR-Cornell University Press.

Hamilton, G and Gereffi, G (2009) 'Global Commodity Chains, Market Makers, and the Rise of Demand Responsive Economies' in Bair, J. (ed) (2009)

Hardy, J. (2012) *Life in Post-Communist Europe After EU Membership: Happy Ever After?* Beachain, D. O., Sheridan, V. & Stan, S. (eds.) London: Routledge

Harrison, D (1988) *The Sociology of Modernization and Development*, London: Unwin Hyman.

Harvey, D (2004) 'The new Imperialism: accumulation by dispossession', *Socialist Register*, 40: 63-87.

Hopkins, T.K and Wallerstein. I (1977) 'Patterns of Development of the modern world system', *Review*, 1;2 pp 11-145

Huws, U (2011) 'Passing The Buck: Corporate Restructuring and the Casualisation of Employment', in *Work, Organisation, Labour and Globalisation*, 5:1 Summer pp1-10.

Huws, U (2010) 'Between a Rock and a Hard Place: the shape of employment in the global economy', in *Work, Organisation, Labour and Globalisation*, 4:1 Spring pp1-8.

Kerr, C, Dunlop, JT, FH, and Myers, CA (1960) *Industrialism and Industrial Man. The Problems of Labor and Management in Economic Growth*, London: Penguin.

Linhart, R (1978) *L'Établi*, Éditions de Minuit.

MacKenzie, R, Stuart, M., C, Greenwood, I and J, Gardiner (2006) ' "All that is Solid?": Class, Identity and the Maintenance of a Collective Orientation amongst Redundant Steelworkers', *Sociology*, 40:5 pp 833-852 October.

Marchington, M P., Grimshaw, D., Rubery, J., Willmott, H (2005) *Fragmenting Work: Blurring Organisational Boundaries and Disordering Hierarchies*. Oxford: Oxford University Press,.

Mulholland, K and Stewart, P (2014) 'Workers in Food Distribution: Global Commodity Chains and Lean Logistics', *New Political Economy*, 19 (4), 534-558.

Milkman (1991) *Japan's California Factories: Labor Relations and Economic Globalization*, Los Angeles: UCLA Institute of Industrial Relations, Monograph and Research Series, no. 55

Olivon, B (2011) Participação de estrangeiros em açúcar e álcool triplica em três anos <http://portalexame.abril.com.br/negocios/noticias/participacao-estrangeiros-acucar-alcool-triplica-tres-anos-561944.html> (accessed on 8/27/10).

Peck, J (1996) *Work Place. The Social Regulation of Labor Markets*. NY: The Guilford Press.

Pinto, A.G. (2006) Uma introdução à indústria automotiva no Brasil. In Antunes, R. (Ed.) *Riqueza e miséria do trabalho no Brasil*. São Paulo: Boitempo: 77-92

Pollert, A (1981) *Girls, Wives, Factory Lives*, London: Macmillan.

Porto-Goncalves, C.W. (2006) *A Globalizacao da Natureza e a Natureza de Globalizcao*. Rio de Janeiro: Civilizacao Brasileiro.

Raworth, K and Kidder, T. (2009) Mimicking ‘Lean’ Lean in Global Value Chains, It’s the Workers who get leaned on’. In Bair, J. (2009) (ed) *Frontiers of Commodity Chain Research*, Stanford: Stanford University Press, pp165-189

Rinehart, J, Huxley, C and Robertson, D (1997) *Just Another Car Factory?: Lean Production and Its Discontents*, Cornell: ILR Press.

Rubery, J., Burchell B, Deakin S, Michie, [eds.] (2003) *J. Systems of Production: Markets, Organisations and Performance*. London: Routledge

Rubery, J., Grimshaw, D. (2003) *The Organisation of Employment: an international perspective*. London: Palgrave,

Selwyn, B. (2012). Beyond Firm-centrism: Re-integrating Labour and Capitalism into Global Commodity Chain Analysis. *Journal of Economic Geography*, 12(1): 205–226.

Silver, B. (2003) *Forces of Labor: Workers’ Movements and Globalization since 1870*. New York and Cambridge: Cambridge University Press.

Smith, V (1997) ‘New Forms of Work and Organisation’, *Annual Review of Sociology*, Vol 23, pp 315-339.

Stiglitz, J (2002) *Globalization and its Discontents*, London: Penguin.

Streeck, W (2014) *Buying Time: The Delayed Crisis of Democratic Capitalism*, London: Verso.

Stewart, P Richardson, M, Danford, A. Murphy, K Richardson, T and Wass, V (2009) *We Sell Our Time No More: Workers' Struggles Against Lean Production in the British Car Industry*, London: Pluto.

Taylor, P., Newsome, K and Rannie, A. (2013) Putting Labour in its Place: global value chains and labour process analysis, *Competition and Change*, 17 (1):1–5

Therborn, G (1976) *Science Class and Society: On the Formation of Sociology and Historical Materialism*, London: New Left Books.

Wilkinson, J and Wesz Junior, V. J. 2013 Underlying issues in the emergence of China and Brazil as major global players in the new South–South trade and investment axis. *International Journal of Technology Management and Sustainable Development* 12 (3): 245-260

Womack, J, Jones, D and Roos, D (1990) *The Machine That Changed the World*. New York: Rawson Associates.