

TECHNOLOGY AND THE LABOUR PROCESS: A POST- BRAVERMAN PERSPECTIVE ON CONTROL AND WORKER RESISTANCE IN THE WORKPLACE

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Abstract

This thesis presents a post-Braverman perspective of managerial control and worker resistance in the contemporary workplace, by identifying and addressing key gaps and weaknesses identified in his work. Its focus on the adoption and implementation of technology and how this ties with reorganised labour processes enables a reworking of Braverman (1974) looking specifically at three specific contemporary contexts. Much attention has been paid to platform workers and how so called 'algorithmic management' has increased management control over a casualised workforce. This can also be seen in Amazon, where intense management and technologically monitored processes drive the supply-line to customer process with employees subjected to significant work-intensification. The third context is manufacturing, where workers have retained higher status and less intense management and working conditions, despite the introduction of advanced technology.

In this work and in an environment of pandemic restrictions, a variety of participants from the trade union and wider labour movement were interviewed, who were able to offer expert perspectives on these issues. Through a process of retrodution, and to arrive at a 'critical grounded theory' on the effect of technology and labour process reorganisation, contemporary processes of control, resistance and organisation were identified. The research shows that as managerial control was extended through the implementation of technology and labour process reorganisation, new possibilities for worker organisation emerged. This thesis seeks to contribute to the field by showing this, particularly through theorising the potential for a synthesis between what is termed as Social Democratic Trade Unionism and 21st Century New Unionism. The analysis offers a post-Braverman perspective on the effect of technology and labour process reorganisation on control within the workplace, as well as a theorisation of more effective strategy for increasing worker organisation and resistance within the context of the 21st century workplace.

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Chapter 1 - Introduction

1.1 - Introduction

The title of the research is '*The effect of technology and labour process reorganisation on control, worker resistance and organisation within the 21st century workplace*'. The research analyses the application of technology within three areas of contemporary work – platforms, Amazon and manufacturing. It assesses the way in which the labour process is subsequently structured and what this means for the nature of control within the workplace and its effects on workers in terms of factors such as work intensification and exploitation. The research moves beyond analysing these effects, by considering ways in which workers can be enabled to resist the managerial imperative to control and to organise effectively in order to assert their own interests in the struggle for control within the workplace. The research takes influence from the theories of both Marx and Braverman. A key part of the early stages of the research (in Chapter 2), is to engage with the critique of Braverman's theories that followed the publication of his work, identifying key gaps and weaknesses that are addressed and developed in order to guide the research and draw out the contributions.

The research is undertaken from a Marxist perspective. Although it is the case that management must necessarily rely on a mixture of force and consent, the relationship between management and workers is viewed as being one primarily defined by conflict, with the two standing in opposition to each other. Marx's theories, particularly relating to the application of technology and the structuring of the labour process, provide the theoretical foundations for the research, particularly given the way in which Braverman's research (and much of the critique of his work) is also built upon the theoretical foundations of Marx. In addition to this, as is outlined in Chapter 2, Marx's work helps to provide important historical context on how labour process reorganisation and the introduction of technology within the early stages of capitalist development, affected the nature of control within the workplace. This provides a useful starting point in which to ground the analysis of how the relationship between the two has impacted on control and worker resistance and organisation throughout the different stages of capitalist development.

Another important point to note, that further justifies the Marxist approach to this research, is that fact that the nature of the class for Marx, is “less about cultural and social attributes and more about the way the economy is structured, particularly in the workplace” (Umney, 2018: 22). This rejects a notion of class that has often pervaded political debates from the right, particularly in Britain, in recent years, focused upon nationalism, immigration and the effects of globalisation (ibid: 2). It instead focuses on a ‘depersonalised’ (ibid: 25) notion of class, which focuses on the structural economic and social relations within the workplace, and capitalist society more generally. As a result of this, a consideration of the class struggle within the workplace, how this is affected by contemporary technological change and ultimately the labour perspective, is not focused upon values or ideology, but on the material effects that technology and the resulting reorganisation of the labour process has.

Concepts such as alienation, which are associated with the work of Marx, also offer a justification for a Marxist analysis. Marx demonstrated how the introduction of machinery at earlier periods of capitalism had led to increasing alienation, as workers become increasingly detached from their work, as machinery became more central to the production process (Marx, 1973: 705). In the contemporary wave of technological change, many workers are experiencing the effects of technological implementation in the same way, and Marxist concepts such as alienation offer an important way to conceptualise and understand these effects. Grounding these experiences and viewpoints within Marxist theory can help to develop a more rounded understanding of the effect of technology on work and how this affects the concrete experiences of workers and the ‘collective worker’ in a more abstract sense. One of Marx’s key objectives was to make a contribution to the self-emancipation of the working class, and this has been a key driving factor for subsequent Marxist analysis. This research follows in this tradition – the purpose of understanding the effect of contemporary technological change and labour process reorganisation is to provide a more effective conception of it, that can lead to workers being able to organise more effectively against the use of machinery to decrease their autonomy and control over their own labour, and ultimately to emancipate themselves from such methods of control.

The research will take a critical realist approach. It will be argued that this is consistent with a Marxist analysis, particularly with the parallels between the critical realist notion

of different 'strata' (Collier, 1998) and Marx's concept of 'base and superstructure' (ibid: 264-265), which explain the underlying mechanisms of capitalist society and the relationship between economic, technological and social factors. Building upon this, a critical grounded theory (CGT) research approach, will be used to plan and conduct the research and analysis. In much the same way as critical realism, CGT offers a middle ground between positivism and "radical constructivism" (Belfrage and Hauf, 2015), in order to allow the researcher to develop theory from the data whilst adopting a critical realist methodology. The importance of 'retroduction' in the CGT research process (ibid), represents a constant movement between the abstract and concrete, that is consistent with a Marxist analysis and with the philosophical position of critical realism. A full explanation and justification of this will be provided in Chapter 4.

1.2 - Technology, the labour process and control

The core framing of the research is an analysis of the interplay of these three factors, within the context of the workplaces researched. As is evidenced in Chapters 2 and 3, technology and labour process reorganisation have continually played a significant role in reshaping the nature of managerial control within the workplace throughout the different stages of the capitalist cycle. Chapter 3 also outlines the extent to which these two factors have a dependent relationship, with changes in one driving changes in the other, as the productive forces are continually revolutionised in order to drive capitalism forward. One of the objectives of the research is to situate the current application of technology and labour process reorganisation within this proper historical context, in order to better understand the underlying dynamics and similarities and differences between the different periods. Of particular importance, are the periods of 'the early development of manufacture in the workshop' and the introduction of the moving assembly line at Ford, which are both presented as having the same underlying dynamics to platforms and Amazon, with changes being based primarily around the restructuring of the labour process, making use of existing technology rather than being technologically innovative.

The restructuring of the labour process in this manner, is intended to significantly increase managerial control. The structuring of the labour process is not a neutral

activity and is decided by management in order to serve the interests of themselves, shareholders and ultimately the capitalist class. The extent to which management are able to extend their level of control, depends in large part upon the balance of power within the workplace and the organisational capacity and leverage of workers. For example, as outlined in Chapter 6, automotive and aerospace manufacturing companies are not able to use technology and labour process reorganisation as such a blunt tool as platforms or Amazon. A key reason for this, is that the organisation of workers and the leverage and structural power that their skill level provides them with, means the companies are much less able to act in this manner. By contrast, the low levels of organisation and low levels of leverage and structural power that platform and Amazon workers have, means that the companies are able to extend their control to a much higher degree and with a much more blunt and aggressive strategy.

This highlights an important factor where it is clear that there is a gap in knowledge relating to the interplay of these issues, in relation to worker resistance and organisation. This is identified in Chapter 2 as a key gap in Braverman's theories, but as noted by Joyce et al. (2022), it is also a gap in much of the contemporary literature. Whilst accounts of worker resistance and organisation within the platform economy (Cant, 2019; Woodcock, 2021) provide an important insight into the reality of the situation on the ground and the strategies being developed, the value added of this research, is to tie these (concrete) forms of resistance and organisation into the theoretical (abstract) framework of technological implementation and labour process reorganisation. This addresses the gaps identified in both Braverman's and contemporary theories, whilst also tying the concrete experiences of workers into a theoretical framework that can guide the future development of effective forms of resistance and organisation. Additionally, the identification of 3 distinct strategies within the labour movement can help to provide the case for these new forms of resistance and organisational strategies to be adopted more broadly within the trade union movement.

Although Braverman provides a key influence for the perspective of the research, the post-Braverman critique of his work (as discussed in Chapter 2) highlights other flaws with his theories, that require addressing in order to provide for the strongest possible research to emerge. One key factor in this regard, is his failure to adequately account

for worker subjectivity and agency. The research makes use of the ontological perspective of critical realism in order to account for this, without abandoning the materialism of either Marx or Braverman, describing the views of individuals as subjective perceptions of an objective reality. This allows the research to investigate and account for different views within the labour movement, whilst still ultimately holding that the effects of technology and labour process reorganisation and the struggle for control within the workplace, have an objective existence, independent of these perceptions. This will be explained and justified in greater detail in Chapter 4.

1.3 - Platforms

In much research on the effect of technology within the contemporary workplace, platforms constitute a significant part of the analysis. In the industries in which they proliferate, the way in which technology has been used, and the way that the labour process has subsequently been reorganised, has fundamentally altered the nature of work. It has had a particularly strong effect on the extent to which management is able to extend and exert its control over the workplace. One aspect of this, is the way the 'black box' of technology serves to obscure the nature of decision making processes and the distribution of work, creating what Cant (2019: 40) terms as the creation of "an information hierarchy". The company is able to deliver information piecemeal, stage by stage to workers, yet is able to access "a constant stream of incredibly precise location and speed data, which could be processed alongside order data and all sorts of other metrics to measure [their] work" (ibid). As mentioned in the previous section, there is nothing inherent in the technology that means it has to be used in this manner. This is down to the specific way the company has chosen to use technology to structure the labour process, increase the intensity of work and increase its control over workers to such a significant extent.

Platforms appear – at first glance – to offer a fundamentally different way of managing and distributing work. In many ways, however, the organisation of platforms work has echoes of earlier forms of exploitative employment practices. The extent to which platforms are fundamentally different from earlier forms of work organisation are in many ways overstated. Yet, the way in which platform work is managed and distributed through technological means, does offer something qualitatively different to what came

before. In particular, the ability to provide information piecemeal to large numbers of workers is viable in terms of both cost and time by using technology in a way that it wouldn't be with human dispatchers. It also provides companies with the ability to be able to monitor their workforce both intensively and extensively at the same time, allowing the company to micromanage the labour process, increasing its control over both each stage of the process and the process as a whole.

Yet, it remains the case that any narrative aiming to present platforms as technological innovators is seriously misguided. Platforms have not developed new technology through which to increase productivity but have made use of existing technology developed elsewhere, such as smartphones and Google Maps. They have squeezed costs not by technologically driven increases in productivity, but rather by using technology to structure the labour process in a way that significantly increases the intensity of work and is built upon the exploitation of workers. The system of exploitation is also reliant upon an employment system that subjects workers to insecurity, through the use of 'independent contractor' status, the refusal to grant worker rights and the ability of companies to terminate workers' accounts on spurious grounds (Cant, 2019).

Platforms represent an important point in which issues around technology, the labour process and control intersect. Technology is applied in a particular way, alongside a precise structure of the labour process, that allows platforms companies to significantly increase the level of control they hold over workers. This is compounded by the insecure employment conditions that workers are subjected to, a factor that has been upheld by the UK Supreme Court (Criddle, 2023). It is compounded yet further by the fragmented nature of the workforce and the low levels of organisation. These factors all demonstrate why platforms are such a critical area that must be one of the areas of study within this research. In addition, as demonstrated by the examples of the 'early development of manufacture in the workshop' and the introduction of the moving assembly line at Ford in Chapter 2, such labour process organisation spreads out from its initial application into other areas of the economy. This means that it is critical to gain an effective understanding of platformisation, and the ways in which workers can be effectively organised in order to resist, not just in and of itself, but to prevent the

spread of such practices from leading to work intensification and increased exploitation across the workforce more generally.

1.4 - Amazon

Amazon provides a representation of many of the issues surrounding technology and labour process reorganisation within the confines of one organisation. The scale of the company means that it has a significant effect in terms of its business and employment practices and the way in which it uses technology and structures the labour process. As is outlined in Chapter 6, some of the research participants describe the power and influence that this affords the company and the likelihood that other companies will look to adopt their methods. The truly global nature of Amazon and the sheer size of its operation gives it an imposing presence in the face of its workforce and those trying to organise against the company. This is exacerbated by its extreme hostility to any form of worker organisation, its aggressive anti-union tactics and refusal to engage in any sort of collective bargaining or representation agreements with trade unions (Bloodworth, 2019; Asher-Schapiro, 2021; Lynn, 2022).

Amazon's fulfilment centres offer an example that sits at an interesting intersection of the old and new. At its core, it is essentially warehouse work, with many similarities and overlap with other workplaces within the logistics sector. Yet, the way in which the company utilises technology to manage and control its workforce and monitor and distribute work, does offer a fundamental difference between Amazon and other companies within the sector. Like platforms, Amazon utilises technology in a way that allows them to simultaneously monitor workers both intensively and extensively. This allows them to micromanage both each individual task within the labour process, as well as the process as a whole, at both the individual and collective level. This leads to a situation in which workers complain that they are being treated like robots (Middleton, 2023) and feel unable to take toilet breaks, as the use of technological surveillance picks up that workers have taken 'time off task' and could lead to them facing disciplinary action (Kantor et al., 2021). This demonstrates an example of the extent to which Amazon is employing technology, alongside a particular structure of

the labour process, to significantly increase the level of control it is able to exert over its workforce.

Although attempts have been made to organise workers within Amazon, this has been extremely limited. This is due to a variety of factors, most notably the extreme hostility of the company to worker organisation and trade unions, with the high turnover of staff being another issue. Unlike the platform economy, such attempts have not been made by grassroots trade unions such as the IWGB, but through major TUC-affiliated unions - mainly GMB, but also Unite. As outlined in the 'Postscript on Amazon' in Chapter 8, there have been recent breakthroughs in recruiting workers and in workers taking industrial action within Amazon facilities, that took place after the research had concluded. This offers hope for the effective organisation of Amazon workers, but there is still a long way to go, particularly with the refusal of the company to recognise or engage with trade unions. It is also the case that the action emerged over a pay offer rather than because of the nature of the work or employment relationship. This poses important questions about why this is the case, which may offer an avenue for future research.

It is also important to note the crossover between Amazon and platforms in the form of Amazon's couriers, particularly those working off the Amazon Flex app. Such workers are subjected to many of the same practices as workers working on other platforms, in relation to monitoring and surveillance, the distribution of tasks through technology, the intensification of work and being subjected to poor and exploitative employment relationships (Asher-Schapiro, 2021). In terms of the organisation of the workforce, this is even more limited than on platforms such as Uber and Deliveroo. This is exacerbated by the much more powerful nature of Amazon in comparison to platform firms, which further increases the power imbalance and the control that they are able to exert over couriers. This demonstrates a further example of where Amazon is using technology and labour process restructuring to significantly increase its level of control over workers, leading to increased alienation, work intensification and exploitation.

1.5 - Aerospace and Automotive Manufacturing

These industries, provide an important counterweight to platforms and Amazon. In contrast to the workers in the other two areas, workers within aerospace and automotive manufacturing enjoy a high degree of structural power, a designation as skilled workers and much better employment conditions and job security. These workplaces have already been through earlier waves of technological implementation and automation, in contrast to areas of work such as taxi driving, food delivery and warehouse work which have previously been much more manual in relative terms. Crucially, they also have much higher levels of trade union density and recognition and collective bargaining agreements with companies. As will be outlined in Chapter 6, the factors listed above, played a significant role in protecting the position of workers through the waves of automation that have taken place. Although knowledge of the labour process has - at least to some extent - been transferred from workers and embedded within technology, through sufficient organisation, workers have been able to protect their position and retain a high degree of structural power.

In examining aerospace and automotive manufacturing, it demonstrates how the way that technology is applied and the way the labour process is restructured, is not an inevitability or inherent within the nature of the technology but is rather dependent on the particular context in which they are applied. The status of manufacturing workers offers protection against the kind of blunt, aggressive strategies applied within platforms and Amazon, to intensify work and significantly extend managerial control. A further crucial factor is the strength of organisation of such workers, with high levels of unionisation and established recognition agreements with the companies. This demonstrates that if workers in platforms and Amazon were able to become more effectively organised and be able to exercise their power within the workplace, that the potential exists for them to be able to fight back against the managerial imperative to control and improve their working conditions and terms of employment.

Having said this, there remains no room for complacency with regard to manufacturing workers. As outlined in Chapter 6, although it is more subtle, management are still using technological implementation and labour process reorganisation to deskill workers, transfer knowledge of the production process into the hands of management,

increase their control over the labour process and ultimately weaken the structural power of workers. Manufacturing workers and their representatives need to remain alert to this, and to not only maintain but strengthen the organisation of workers, in order to prevent the companies from being able to utilise technological implementation and labour process restructuring in this way to increase their control and reduce the power and strength of workers.

1.6 - Structure of thesis

Following on from this introductory chapter, the structure of the thesis is as follows. Chapter 2 provides an overview of Braverman's (1974) theories as outlined in his most significant work – Labour and Monopoly Capital. The research then assesses the critique of this work that followed, before outlining how the research positions itself in relation to both Braverman's work and the subsequent critique, outlining a theory of contemporary worker organisation and resistance. Subsequently, guided by the development of two proto-theories (in line with the CGT method, outlined in further detail in Chapter 4), two research questions emerge at the end of the chapter. Chapter 3 starts by outlining the historical context of the relationship between technology and labour process reorganisation. It then provides a review of the literature in each of the three areas of work studied within the research – platforms, Amazon and manufacturing.

Following on from this, three soft-hypotheses are presented – SH1 and SH2 relate to RQ1, whilst SH3 relates to RQ2. They are constructed from a critical review of the literature, from theorising Braverman's ideas on worker control and resistance and helping to guide the research into the contemporary setting of technology, control and worker organisation. To explain further, the analysis of Braverman in chapter 2 is codified in the development of what is termed in CGT as proto-theory (Belfrage and Hauf, 2015). The proto-theories outlined here are an important bridge towards the construction of the research questions. At this stage we have the abstraction derived from the literature as the foundation of the research questions along with a requirement to operationalise the research in some rigorous way. This is why the soft-hypotheses are important. We use the three soft-hypotheses to shift from the abstract,

the research questions, to the concrete (Sayer, 1992) and into a research design that is qualitative in character, but critical in seeking a grounded approach to what at this point we might call 'truth'. The move from proto-theory to research question to soft hypothesis is how, in CGT, we move from the abstract to the concrete and do so iteratively. The epistemological basis to this is explained further in Chapter 4.

Chapter 4 outlines the methodology of the research, outlining and justifying the use of critical realism as the research perspective. The chapter then outlines and justifies the use of CGT as the research approach, demonstrating how this is suitable for the ontological and epistemological positioning of the research. The chapter then outlines the research design, outlining and justifying the decision to use qualitative methods, explaining the number of interviews, as well as the coding structure and analysis developed using the Atlas.ti program. Following on from this, the research then moved into the primary research stage. Chapter 5 outlines the findings and analysis from the interviews for the research into platform capitalism. The structure of the chapter is designed around the analysis, with key codes that emerged from the data used to structure the subsections of the chapter. Chapter 6 follows this same framework, but for what is termed as 'industrial capitalism', covering both Amazon and manufacturing. Chapter 7 provides the synthesis chapter, in which the findings and analysis are brought together in order to re-assess the soft-hypotheses that were outlined at the end of Chapter 3. These are then used to provide answers to the two research questions outlined at the end of Chapter 2. Chapter 8 provides the conclusion to the research, in which the two main contributions of the research are outlined. The chapter also assesses the limitations of the research and outlines possibilities for future research.

1.7 - Research Questions

There are two research questions, which emerge at the end of Chapter 2. These are outlined below:

- RQ1 – How is new technology and labour process reorganisation affecting the nature of control in contemporary workplaces?

- RQ2 - How can workers be empowered to effectively organise and resist the managerial imperative to control?

These research questions emerge from the analysis of Braverman's work and also of the subsequent critique that took place in Chapter 2. The two research questions outline the main strands of the research as outlined in the research title – the effect of technology and labour process reorganisation on control and worker resistance and organisation in response to this. RQ1 aims to build upon Braverman's theorisation of technology and labour process reorganisation on control within the workplace, albeit with an adjusted perspective in order to account for some of the weaknesses identified through an engagement with the post-Braverman critique of his work, as outlined in Chapters 2 and 4 in greater detail. RQ2 aims to address the key fundamental gap in Braverman's theory, namely accounting for working class resistance and organisation against the managerial imperative to control and its application through technological implementation and labour process reorganisation. This aims to provide agency for workers – at the collective rather than individual level - and explore ways to effectively organise and win back control within the workplace.

Figure 1.1 below, outlines the strategy around the development of the research questions, as consistent with the Critical Grounded Theory method. The table outlines the full development and relationship between each different aspect, from proto-theories → research questions → soft-hypotheses → answers to the research questions → contributions.

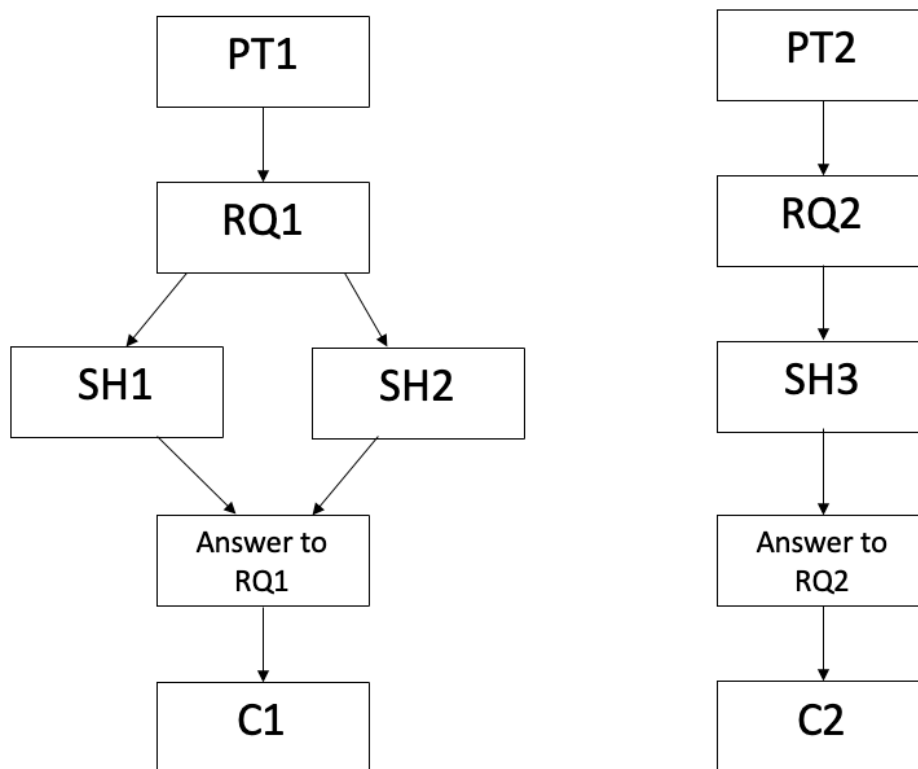


Figure 1.1 – RQ formulation & relationship chart

1.8 - Contribution

The contribution of the research is outlined by the two main contributions that are outlined at the end of Chapter 7 and outlined in greater detail in Chapter 8. These are outlined below:

- *Contribution 1 (C1) – The research contributes a post-Braverman perspective on how technology and labour process reorganisation are affecting the nature of control within contemporary workplaces, particularly in emerging areas of work such as platforms and Amazon.*
- *Contribution 2 (C2) – The research provides a theorisation of the organisation and resistance of workers within the context of contemporary forms of work and the way in which technology and labour process restructuring are applied. It has addressed the gap in Braverman’s work, and much subsequent research on the labour process and the workplace by centring the working class and their*

effective organisation into the collective worker. The identification of, and development of, strategies and tactics to achieve this, can be used in a concrete sense, by trade unions and groups of workers, in order to help guide and develop the effective organisation and resistance of workers.

These contributions emerge following the research and analysis that is outlined in Chapters 5, 6 and 7. These two contributions are reflective of the two main aspects to the research – the first of which is researching the effect of technology and labour process reorganisation on the nature of control and the second of which is assessing ways of effectively organising workers in response to this, in order for them to be able to effectively resist and win back control and improved working conditions and terms of employment. In this way, a clear pathway can be drawn between the research questions, the soft-hypotheses, the answers to the research questions and the contributions.

1.9 - Conclusion

This chapter has provided an introduction to the research, outlining the research title and providing an overview of the topic that the research investigates. It outlines the theoretical basis of the research, outlining that the perspective of the research will take a Marxist approach and justifying the reasoning for this. It also explains the use of critical realism as the research approach and the use of critical grounded theory in the research design, which are explained in depth in Chapter 4. It also introduces the work of Braverman (1974) and explains how the research topic is grounded within his work and the subsequent critique of it, with the central factors to the research of technology, the labour process, control and worker resistance and organisation all emerging from this analysis. It outlines how Chapter 2 begins with an analysis of Braverman's work and subsequent critique and is used to provide the theoretical base upon which the rest of the research is built upon and from which the research questions emerge.

The chapter also introduces the three main areas of contemporary work to be researched – platforms, Amazon and manufacturing. It outlines the importance of each of these areas and outlines the way in which labour process reorganisation and technological implementation are affecting the nature of managerial control within

each of them. It also introduces the context of how each is affected by the level of worker organisation and the attitude of the companies towards worker organisation. In both of these issues, manufacturing provides an interesting contrast to platforms and Amazon, and helps to underline one of the key initial findings from the literature review (which informs upon SH2). Namely, that the way in which technology and labour process control are used to increase managerial control, is not because of factors inherent within the technology, but because of active choices by management and the context in which they are applied. Finally, the chapter concludes by providing an overview of the structure of the thesis, outlining the details of each chapter and the flow of the thesis. The next chapter introduces the work of Braverman and assesses the subsequent critique of his work, in order to identify gaps and weaknesses in his theories. This is then used to provide a theorisation of contemporary worker organisation and resistance, from which the two research questions emerge.

Chapter 2 - Theorising worker organisation and resistance to the managerial imperative for control

2.1 - Introduction

In the field of Labour Process Theory and studies around the effect of technology and labour process reorganisation of work, Harry Braverman's (1974) 'Labour and Monopoly Capital' (henceforth referred to as LMC) is a key and influential text that has provided the basis for much of the analysis and discussion in the decades that have followed. Braverman came from a working class background in New York City, and spent his formative adult years as a manual worker, working in a shipyard and later a steelworks (Bellamy Foster, 1998: x). His experience of the workshop laid the foundations of his conception of the capitalist workplace, and this was built upon by his active engagement with socialist political organisations in the USA during the 1940s and 1950s (ibid: xi). Braverman's work has, in many ways proved divisive, with both supporters and critics of Braverman's theoretical and analytical contributions. These mostly lay around his arguments that technology had been implemented in a way that extended managerial control over the labour process and reduced the autonomy of workers. Additionally, he also made the case that technology led to a general deskilling of workers, as management was increasingly able to appropriate workers knowledge and embed it into technology and management processes.

This chapter will outline some of Braverman's key contributions, before analysing the post-Braverman literature that critiques Braverman's core concepts. It will then seek to further develop this critique, through bringing it more up to date and applying it to developments within contemporary workplaces. In addition to this, key gaps and weaknesses in Braverman's theories are identified, which are used to develop a further strengthened critique of Braverman's theories. This leads into the development of the two research questions that emerge from this critique, which are used in turn, in order to design and guide the later stages of the research.

2.2 - Braverman on control and technology

In LMC, Braverman made a number of key arguments that have strongly influenced the 'labour process debate' in the subsequent decades. The first of these, of particular relevance to the current research, is in relation to control. In his analysis of Taylorism, control played a key part in what it was that he believed that Taylor had set out to achieve. This is outlined in the extract below:

“The conclusions which Taylor drew from the baptism of fire he received in the Midvale struggle may be summarised as follows: workers who are controlled only by general orders and discipline are not adequately controlled, because they retain their grip on the actual processes of labour. So long as they control the labour process itself, they will thwart efforts to realise to the full potential inherent in their labour power. To change this situation, control over the labour process must pass into the hands of management, not only in a formal sense, but by the control and dictation of each step in the process, including its mode of performance.” (Braverman, 1998: 69)

What this outlines is that, for Braverman, the managerial imperative for control was rooted in the need for the management to control each individual step of the labour process in order to control the process as a whole, and thus be able to maximise the intensity of work and of both absolute and relative surplus value extraction. This leads to a situation in which workers not only “lose control over their instruments of production, but they must now lose control over their own labour and the manner of its performance” (ibid: 80). This means that workers are gradually deprived of autonomy over their own labour process, as management control extends over “the actual mode of labour activity, from the simplest to the most complicated” (ibid: 62).

Braverman also makes a strong contribution, in his analysis of the way in which machinery affects the development of labour process reorganisation and control within the workplace. He argues that although the study of machinery in and of itself is of little value for a “comprehension of its social role”, that, “the moment we begin to assess its evolution from the point of view of the labour process, however, its technical characteristics group themselves around this axis and lines of development begin to

emerge” (ibid: 128 – 129). The specific role that machinery plays in furthering the goal of the managerial imperative to control, is outlined in the extract below:

“The mass of humanity is subjected to the labour process for the purposes of those who control it rather than for any general purposes of ‘humanity’, as such. In thus acquiring concrete form, the control of humans over the labour process turns into its opposite and becomes the control of the labour process over the mass of humans. Machinery comes into the world, not as the servant of humanity, but as the instrument of those to whom the accumulation of capital gives the ownership of the machines. The capacity of humans to control the labour process through machinery is seized upon by capital as *the prime means by whereby production may be controlled not by the direct producer, but by the owners and representatives of capital*. Thus, in addition to its technical function of increasing the productivity of labour – which would be a mark of machinery under any social system, machinery also has in the capitalist system, the function of divesting the mass of workers of their control over their own labour.”
(ibid: 133)

This is a key passage, that outlines the importance of machinery (or technology), in depriving workers of control over their own labour process. There is also a further key point made by Braverman, that this effect of technology is not because of anything inherent within the technology itself, but rather because of the way in which it is implemented by the owners of capital and their management functionaries, in order to suit their needs – i.e. extend their control over the labour process in order to maximise capital accumulation. This is of crucial importance of developing an understanding of why contemporary firms, such as platforms and Amazon, employ technology in such a way. However, before considering Braverman’s theories within the context of contemporary developments, an assessment must be made of the ‘post-Braverman’ literature between the publication of LMC and the present day. Through an analysis of this critique of Braverman’s work, key gaps and weaknesses within his theories are addressed, in order to provide a stronger and more balanced account of the effect of technology and labour process reorganisation in contemporary workplaces and, crucially, the possibilities for effective working-class organisation and resistance.

2.3 - The critique of Labour and Monopoly Capital (LMC)

The critique of Braverman and LMC has been fairly extensive in the years that have followed its publication, with varied and fairly extensive claims made against its core claims. One of the primary allegations levelled against LMC, is that Braverman has provided an overly objectivist account of workplace relations, that does not allow sufficiently for the subjectivity of workers (O'Doherty and Willmott, 2001; Burawoy, 1996; Adler, 2007). For many researchers, especially those with a 'Foucauldian' position, there is a rejection of "materialist and otherwise objectivist conceptions of conflict and power" (Spencer, 2018: 239). Focusing more specifically on a criticism of LMC, Knights (1990: 299), states that Braverman's omission of subjectivity, is down to what Braverman sees as the effects of subjectivism within industrial sociology, helping to sustain and support managerial control and the systems underlying it. Knights, however, believes Braverman is mistaken in this, arguing that the solution is to further develop a concept of subjectivity that 'supersedes' managerial theories of subjectivity.

In further outlining the conception of subjectivity within the workplace, Knights and Willmott (1989: 553) argue that power is not exercised directly from class relations, ideologies or the material forces of production, but rather through individuals being subjected to their own subjective identity. They argue that Braverman and other post-Braverman theorists lack a sufficient appreciation of the link between subjects and the way in which they reproduce the forms of domination and social relations which determine their experience (ibid: 546). There is a clear difference here from what is put forward by Braverman in LMC – power and control, in the subjectivist account, are exercised in a way that workers experience in an individual, rather than collective sense. In contrast to the way in which, in LMC, workers are portrayed as having methods of control imposed upon them, in this account, workers play an active (if unconscious) role in shaping the power relations that condition their experience.

In aiming to reintroduce the notion of subjectivity within the workplace, O'Doherty and Willmott (2001) do not go as far as what they term as "the anti-realist tendency" of which Knights is the most prominent figure (ibid: 463), arguing instead for something of a middle position, which "is informed by poststructuralist insights, but does not neglect or reject established traditions of modern sociology and labour process

research” (ibid: 457). In their critique of what they term as ‘orthodox’ tendencies (including Braverman and many later scholars), they argue that:

“Subjects are understood to be constituted and formed by social relations that cannot be reduced or equated with the singular abstract logic of economic categories. Multiple forces clash and interact to generate inconsistency and paradox in the practice and the theory of labour processes – both for those employed in the labour process and those engaged in its research.” (ibid: 466)

Where O’Doherty and Willmott differ from the ‘anti-realist’ tendency however, is that they do not reject *wholesale* the dualistic categories associated with the orthodox tradition, such as ‘capital and labour’ and ‘organisation and individual’, but instead argue that these can be “critically refashioned from within” (ibid). Their analysis is that in rejecting the dualistic categories in and of themselves, the anti-realists go too far and end up with a situation in which “one falls into the quicksands where nothing appears to govern, structure or provide meaning in the social world” (ibid: 464). A further result of this, is that “terms such as ‘capitalism’ or ‘labour’ rapidly lose any correspondence with the material practices in the so called real-world-out-there” (ibid). This leads to a situation in which any notion of an objective reality fragments into a seemingly endless expanse of subjective worlds. Although it is not a point they make explicitly, there are certain parallels that O’Doherty and Willmott’s argument has with that of critical realism – i.e. accounting for the subjectivity of individuals and different perceptions of reality, without abandoning the concept of an external, objective reality and the structures that govern it.

Although they believe that there is a need to move beyond the ‘mechanistic’ and ‘dualistic’ nature of the orthodox literature (such as LMC) in order to account for the subjectivity of workers, they also state that the categories associated with the orthodox literature are still necessary in preventing this tipping the balance too far in the other direction. In the latter case, the focus is shifted away from the workplace to a focus on language, discourse and “the texts and existential inadequacies of those writing about the labour process” (ibid). They outline their position further, by arguing that the linguistic turn of Knights, “circumvents what could be termed the ‘practical’ and ‘material’ instantiations of power and knowledge” (ibid: 464). For O’Doherty and

Willmott, it is still necessary to recognise that capitalism is something that exists outside of language and text, and that terms associated with this, such as 'labour' or 'capital' act as important signifiers of this material reality, even if it is through text and language that this is communicated. They argue that through the use of these categories, "we obtain some analytical purchase – however precarious and problematical - on how social relations become ossified, regimented, and divided in the practical work of producing and reproducing capitalism." (ibid: 465) The analysis provided by O'Doherty and Willmott does provide some useful advice on how some of the potential weaknesses and gaps within LMC and the orthodox tradition, can be addressed, without abandoning the core concepts and categories that they are built around.

A further critique is offered by Adler (2007), which is based around an alternative reading of Marx to that of Braverman – what Adler terms as the 'paleo-Marxist' reading. A key difference in this reading of Marx, is that it presents a view of "both increasing complexity and declining autonomy as progressive tendencies driven by the 'laws of development' of capitalism" (ibid: 1314). Whereas Braverman views decreasing autonomy as representative of an extension of managerial control, and the mechanisation of human labour, Adler views this as "merely the converse of interdependence" (ibid: 1319) that comes with advanced technological development and associated forms of work organisation. He expands this criticism on the focus of autonomy below:

"However, viewed theoretically (and indeed politically), autonomy is, I submit, the wrong yardstick. It is backward-looking, reflecting nostalgic regret for the passing of the autonomous craftsman (or alternatively, reflecting the ideal of alienated, self-sufficient individualism that is the spontaneous ideology of market society). This yardstick may allow us to measure what often has been lost in the development of capitalism; but to formulate an assessment, we surely also need a way to understand what has replaced that lost autonomy." (ibid)

Much of Adler's critique, rests on the notion that decreasing autonomy leads, not to the alienated worker portrayed by Braverman, but something more akin to the 'social individual' outlined by Marx in the Grundrisse (ibid: 1322-1323). The socialisation of

the labour process, according to Adler, means that skills are also socialised, and that this leads to “the internalization of a much larger universe of accumulated knowledge” (ibid: 1323). The evidence suggests that this is something of a two-sided coin – within many industries, the loss of autonomy in the sense described by Adler can be a positive step, leading to greater co-operation and the further development of the collective worker. However, it can also lead to the degradation of work in the way Braverman suggested – in the contemporary economy, this can be evidenced by the way in which many platform workers are subjected to the ‘alienated, self-sufficient individualism’ that Adler suggested was reflective of the nostalgic view of autonomy. In this sense, the reduction in autonomy can be either progressive or degrading, depending on the wider context on which it occurs. Taking this into account, it becomes clear that Adler’s suggestion that autonomy is the wrong yardstick is essentially correct. It is not autonomy in and of itself that is the crucial factor, but the factors underlying this wider context. This underlying context is something that will be explored further in the remainder of this section and the next section.

In contrast to the oft cited ‘deskilling thesis’ of Braverman, Adler outlines a thesis of general ‘upskilling’, in which automation “in the longer term, allows machinery to take over the simpler, less-skilled tasks more easily and more profitably than the more-complex, more-skilled tasks” (ibid: 1325). Although Adler points out that there is also a fair degree of deskilling that sits alongside this and should not be ignored, this nonetheless represents a “secondary tendency of capitalism” (ibid). Proponents of both these tendencies accept that there is an existence of both deskilling and upskilling that occurs simultaneously; the difference occurs in which direction the *general* tendency operates. For Braverman, although some upskilling does occur, this is within the context of polarisation within the labour market, that sees such upskilling outweighed by the extent of deskilling and domination of less-skilled jobs (Carter and Choonara, 2022: 183). As a result, his ‘deskilling thesis’ must be viewed as a tendency operating within capitalism, as opposed to something representing an iron clad law (Carter and Choonara, 2022: 186; Spencer, 2000: 227). However, for supporters of the upskilling thesis, the tendency for technology to replace less skilled work and the socialisation of knowledge, leads to a general upskilling, as workers are directed towards more collaborative and cognitive forms of work (Adler, 2007). It is clear that there are contradictory examples of deskilling and upskilling evident within the

capitalist economy – the question is whether there is a *general* tendency towards either upskilling or deskilling in the workplaces considered as part of the research.

It is important to note that although Adler's critique came several decades after LMC, it nevertheless arrived shortly before many of the technologies reshaping contemporary work, and the associated labour process reorganisation they enable, had been developed or brought to market. At this point, it was not clear to envisage the way that smartphones (at that point an emerging technology) could be used to distribute work to workers using automated management systems through platforms, as one example. The fragmentation and individualisation of work associated with platformisation, in addition to the way in which tasks are distributed and micromanaged, does offer something of a contrast to Adler's conception of workers being directed towards more collaborative and cognitive forms of work. Whilst it is important to note that platforms have led to the creation of skilled tech jobs to design and manage the technology underpinning them, this is far outweighed by the insecure, low-paid and unpredictable jobs created for workers working on the platforms themselves. Despite this, it is also true that platforms are an emerging form of work organisation (albeit with many parallels with earlier forms of insecure work), that still cover an incredibly small percentage of the total economy. Whether platformisation spreads out into the economy to undermine Adler's thesis on a more general level is something that will only become clear in time.

This is perhaps less the case in areas of manufacturing, such as the two examples assessed in this research, automotive and aerospace manufacturing. Nevertheless, there have been developments in technology that may still have materially affected the outlook within these industries from the time that Adler was writing in 2007. Within the context of manufacturing, Braverman wrote of the deskilling that had occurred through the introduction of Taylorist principles and the introduction of the moving assembly line at Ford, with the breaking down of work into tasks fragmenting the workforce and reducing the general knowledge of workers, with this passing into the hands of management. Subsequent to LMC, despite reductions in the workforce, the increasing importance of technology led to the upskilling of the workers who remained. This leads to further questions about general upskilling and deskilling – e.g. although retained workers were likely to have been upskilled, what happened to those who lose

their jobs? What was the average or overall effect? Additionally, even if it is accepted that the introduction of previous technology did lead to the upskilling of the workforce, this may not necessarily be the case for further waves, which may act in a similar way to the introduction of the moving assembly line for example.

A further important point is made by Littler and Salaman (1982: 266), when they note that “Capitalists are not, after all, despite the insistence of some recent authors, interested in control per se. The first priority of capitalism is accumulation, not control. Control only becomes a concern when profitability is threatened.” This is something that must be borne in mind when analysing control within the workplace. Even if Braverman’s key theories about the managerial imperative for control within the workplace are accepted, it remains the case that capitalists are not interested in increasing control as an end in itself (Wood, 2019: 112). Control over the labour process is a means to an end, as a way of ensuring continued accumulation and profitability – this is a point that can easily be looked over and needs to be explicitly addressed. Nevertheless, for some management functionaries, the maximisation of control within the workplace and their role in the class struggle against workers (despite being workers themselves according to some interpretations) may be integrated as a key factor underpinning their managerial identity, and this does add a (secondary) subjective layer to the main overriding objective aim of capital accumulation.

A further criticism, levelled by Littler and Salaman (1982: 256), claims that Braverman displays a “strong strain of Marxist functionalism”, in which “reorganisations of the labour process are presented as the outcome of a conscious design, rather than as the product of the struggle of contending groups” (ibid). The result of this, according to the authors, is that Braverman “tends to ignore or minimise the role of class struggle in the shaping of the labour process, such that the employer is portrayed as having uncontested control over the labour process” (ibid). The authors present an alternative conception of control within the workplace, that the capital / labour relationship is contradictory. They argue that if this is accepted, that: “... this changes the character of the control relation. Control must be seen in relation to conflict and sources of conflict, and in relation to the potential terrain of compromise and consensus” (ibid: 253). This reading of LMC, views it as somewhat ‘conspiratorial’ (ibid: 256) in its

analysis of control and change within the workplace, giving too much credence to the role of management in consciously shaping the labour process to suit its needs, instead arguing that this is shaped by the struggle between groups with different interests within the workplace. It also presents LMC as portraying the extension of managerial control within the workplace as a function of management, in which workers are passive recipients who are unable to influence the course of events, as opposed to “an active agency in the capital relation” (Elger, 1979: 60)

This also has consequences for the relationship between employers and workers within the workplace. It rejects Braverman’s conception of ever-increasing managerial control being imposed upon workers, by providing workers with greater agency, not only within the class struggle against their employers, but also within “the potential terrain of compromise and consensus” (ibid: 253). This could provide workers with a potential path to resistance of managerial imperatives, as through developing organisation and class power within the workplace, this can necessitate management to require a greater focus on co-operation and reaching compromise with workers, rather than imposing change upon them. Although the current research disagrees with much of this analysis, particularly in relation to the claims of ‘Marxist functionalism’ and the importance of compromise and consensus (which is not evident within platform firms in particular), there is an acceptance that the lack of theorisation around class conflict and the ability of workers to organise to resist the imperative for control is a key weakness in Braverman’s analysis. The research therefore attempts to account for this, in order to produce a more rounded understanding of how the managerial imperative towards control affects the workplace and how organised workforces are able to fight back. This will be outlined in greater detail in later sections.

Although much of the post-Braverman literature does highlight issues with his theories, there is nevertheless, a lot of work that is more supportive of the core concepts of LMC and the contributions of orthodox theory. There is much criticism in particular, of arguments influenced by Foucault, which it is argued, “succumb to the very fetishism of identity that they allege hinders radical change within contemporary society” (Spencer, 2000: 238). One further argument that has been put forward as a criticism of the ‘subjectivist’ turn in labour process research is that it leads to a depoliticisation of the study of work (Martinez Lucio and Stewart, 1997: 56):

“Our argument is that an inability to articulate the theme of the fate of ‘labour’ within contemporary labour process debate is symptomatic of a more general abandonment by disciplines concerned with work and employment and specifically by those researchers of industrial relations and human resource management who have located themselves in the much narrower institutional relationships of work at the expense of the social and political context and its complexities.”

The focus on the subjectivism of the worker, leads to an increasingly micro-level focus on the workplace, that neglects the larger political and structural factors at play. Additionally, this is also representative of a “retreat away from class” (Carter and Choonara, 2022: 205), in which the objective class relations in society are largely ignored in favour of a more subjective conception of workplace relations. A further argument put forward by Martinez Lucio and Stewart (1997), is that “the problem of the disappearing worker in labour process debate is to be located in the problem of absent labour in the guise of the collective worker” (ibid: 53). They note that within capitalism, despite the appearance of work as individual process, this is never the case. They put forward the argument that the mistaken perception of work as an individual process and the fact that this often supersedes the co-operation and collective participation necessary for the capitalist labour process to function, is at the heart of the excessive focus on subjectivity to the neglect of collectivism. Furthermore, they point out that the fact that, because value is determined collectively, this leads to work being defined collectively, even if this may be at odds with the subjective perception of individuals.

The importance of this point is that although for workers themselves, the effects of work may often feel individualised, the fact that work is defined collectively means that too great a focus on subjectivity can lead to a misunderstanding of the collective worker and the nature of work. This misunderstanding is particularly problematic in areas of work where workers are not gathered together on the same site and are dispersed geographically, with platform work being a particular example of this. The fact that the work designated to individual workers is in effect, the whole process (i.e. of delivery) rather than smaller tasks that combine to make a whole process, can often

aid this perception of individualisation. Individual workers are not reliant on co-operation with other workers in order to complete their work as they would be in a factory or even an Amazon fulfilment centre for example. Yet, despite this appearance, the worker is still part of a collective workforce employed through the company, upon which it is reliant to deliver its services. Though the individual worker lacks the power or ability to significantly impact management, the collective worker does have the ability to harness this latent power. Joyce et al. (2022) outline the difference between 'structural' and 'associational' power, with dispersed platform workplaces lacking the structural power of more coherent and co-operative groups of workers. Through harnessing their 'associational' power however, they can be effectively organised and empowered to develop ways of asserting this power to resist the managerial imperative towards control and fight against the levels of exploitation that they are subjected to. This will be examined in greater detail in the following section.

The earlier point made by Martinez Lucio and Stewart (1997), links in to another factor, the extent to which management (or 'business') is ascribed a collective identity, but workers are presented as individuals; what Martinez Lucio and Stewart (1997: 62) describe as "collective identities for some but not others". This falls into one of the same dangers that has been identified as a key omission in LMC, namely accounting for the ability of workers as a collective, to organise effectively in order to resist control. The individualisation associated with subjectivist, and particularly Foucauldian influenced research, and its conception of "self-organised and self-disciplined labour on the shopfloor" (Knights and Willmott, 1989: 552) that forces "individuals back in on themselves" (ibid: 550), does not sufficiently allow for collective responses by workers to organise effectively against the managerial imperative to control and the reorganisation of the labour process. It jettisons the potential of collective working class self-emancipation, in favour of philosophical pondering.

One further contribution of LMC, was to address the ahistoricism of the dominant theories in the field, signifying "a break with both industrial sociology and organisation theory, and a shift to structure and history" (Burawoy, 1996: 297). Although criticism of LMC that criticises its lack of subjectivity does have to be taken seriously and addressed, it is also important not to lose sight of the contribution that Braverman made to reinforcing the need for the study of work to be located within its historical

context and associated structures. This is a particularly important point to consider when assessing the impact of technology in contemporary workplaces, as the tendency to study this in ahistorical terms, divorced from the wider historical context, can lead to the omission of important factors that can lead to a greater understanding of how technology and labour process reorganisation affects workers. This a key factor underpinning not only Braverman's work, but also Marx's (1973; 1976).

There is a double importance to incorporating historicism into the study of work and situating contemporary forms of work within this historical context. The first of these, is that it is important to understand how the introduction of new technologies and labour process reorganisation has affected workplaces in the past, to better anticipate and understand how they are likely to affect workplaces now. This is not to say that previous examples can simply be mapped out in order to provide a guide on the effect in contemporary workplaces, but it can help provide a more rounded and grounded understanding of the underlying dynamics of how this affects change within the workplace, and the effects it has on control within the workplace and the organisation of work. This also leads into the second point on its importance, which is that an incorporation of historicism can also offer up an improved understanding of how workers reacted and how they were able to resist and organise effectively (and just as crucially, where and why they weren't able to). This is crucially important in enabling a more developed understanding of worker organisation, and ways in which this can be best achieved within the current context in order to maximise its effectiveness.

The claim made by Littler and Salaman (1982), that Braverman represents "a strain of Marxist functionalism" that presents re-organisations of the labour process as conscious design rather than the struggle of contending groups (*ibid*), is also challenged. Although it is the case that labour process reorganisation can be a response to the struggle of contending groups within the workplace, it is also valid to say that there is a strong element of conscious design in the way in which the labour process has been reorganised at various stages of capitalist development. The organisation of the labour process is not an organic process that emerges autonomously from the struggle between contending classes – it is the response of one of those classes to the consequences of class struggle within the workplace, in relation to the existing organisation of the labour process. As a result, although it is

indeed the case that there is class struggle within the workplace over the management imperative to control (thus affording agency to workers), the reorganisation of the labour process is an attempt by capital to assert (or reassert) its authority. This is not however, to say that this attempt is determinate, as each reorganisation of the labour process throws up new opportunities for resistance and working class organisation – this is an example of where Braverman’s theories can be expanded in order to account for this.

2.4 - Theorising contemporary worker organisation and resistance

Although the critique of Braverman’s theory demonstrates serious limitations and flaws within LMC, nevertheless it can still be used as a valuable starting point for considering the impact of technology and labour process reorganisation in contemporary workplaces. The value added of this research, is to further develop Braverman’s ideas within the context of 21st century capitalism and to sufficiently address the gaps and limitations that have been identified within the critique of Braverman, to reach a more developed and refined theory. This section outlines some of these gaps in Braverman’s theories and theorises about how these can be addressed, to provide a more rounded and contemporary account on the effect of technology and the organisation of the labour process within the workplace, and how workers can be effectively organised in order to counter this. In particular, the section aims to theorise upon how Braverman’s lack of account for class conflict and worker resistance and organisation can be addressed.

One element that has become a much more significant factor since Braverman wrote LMC, is the high prevalence of self-employment in many economies (Blanchflower, 2000: 480). However, self-employment does not necessarily mean an escape from exploitative work relations. The rise of self-employment following the onset of the neoliberal revolution may be a “symptom of labour market deficiencies” (Bögenhold and Staber, 1991: 224) as opposed to a result of changes that have made self-employment more attractive or desirable in itself. For many people, it may be their only choice due to “economic necessity, unemployment or redundancy” and “their only means to participate in the economy” (ibid: 226). There is also the phenomenon of

'bogus self-employment', such as in the UK construction industry, where workers are often required to declare themselves as self-employed in order to reduce the tax liabilities and costs of contractors (Behling and Harvey, 2015: 970). These workers are also subjected to "high wage volatility, loss of many employment rights (e.g. sickness pay, holidays, unemployment), and lack of retirement and pension entitlement" (ibid: 970-971). Such workers are, far from being removed from exploitation, actually subjected to worse exploitation than directly employed workers.

In this sense, the notion of control becomes a lot opaquer and more difficult to pin down than that studied and put forward by Braverman. The use of bogus self-employment can act as a disciplinary tool, nominally allowing workers more 'freedom', but operating several forms of implicit control beneath the surface that can be used to achieve increased control over workers, whilst shedding employer responsibilities and job security. The use of such precarity in order to control and discipline workers is nothing new and has parallels with many earlier forms of exploitation. For Braverman, this kind of implicit control and exploitation had receded and given way to the more direct and explicit forms of control associated with the factory and large industrial workplaces, at a higher stage of technological development. What the example of bogus self-employment, particularly in 'modern' forms within workplaces such as platforms show, is that the development of such forms of control is not as linear as Braverman thought. Taking this into account, the role of class struggle and worker organisation becomes even more pertinent – effective working class organisation is essential in preventing a backslide into increased exploitation and implicit forms of control that are more difficult to pin down and resist.

This is an important factor in the debate about whether platform workers are legitimately self-employed or whether they should be classed as workers and their designation as 'self-employed partners' is a form of forced 'bogus self-employment'. This is a further example of where the notion of managerial control becomes a lot more complex than the forms of control considered by Braverman – i.e. within large, industrial, factory settings, with workers gathered together in one place and clear structures of authority. By contrast, the nature of control on platforms is much more opaque, with less clear structures of authority, which are often obscured by the way in which technology is used – for example, Deliveroo's use of 'black box' technology

rendering decision making processes inaccessible to workers (Cant, 2019). This can also be a factor in making organisation and collective resistance more difficult, as there are less obvious points of conflict at which to direct action (e.g. in comparison to a human supervisor or foreman), as well as the geographical dispersal of workers.

There is also a crucially important requirement to study the effects of industries that are associated with more 'typical' forms of capitalist organisation, in order to understand how methods of control and worker resistance are being shaped by new technologies and contemporary attempts at labour process reorganisation. One example of this is in manufacturing, including both of the manufacturing processes considered for this research, automotive and aerospace manufacturing. These areas differ from platforms and Amazon in three fundamental ways – the required skill level and consequently the pool of reserve labour, the extent to which automation has already taken place and the level of union density and organisation. These factors mean that the managerial imperative to control is much less blunt than in the other two areas, and that workers are subjected to less exploitation, work intensification and alienation. Nevertheless, it remains the case that the current wave of technological implementation and labour process reorganisation is having a demonstrable impact within these workplaces, that is worthy of consideration. Additionally, the context for worker organisation is different within these organisations, that are much less hostile to trade unions and where recognition and relatively collegiate relationships between firms and unions exist. However, this potentially raises further questions about the nature of worker organisation and the consciousness and self-organisation of workers in the face of management action.

Amazon's fulfilment centres are also examples of a more traditional workplace setting, in which workers are situated within a single, defined workspace, with clear hierarchies of authority – yet the way in which they make use of technology to structure the labour process and manage workers, does also offer a novel difference from the workplaces studied by Braverman, as well as many post-Fordist workplaces. For example, although Amazon make use of human supervisors, the technology they use enables them to monitor a large number of workers in real-time, in a way that simply would not have been possible before (Bloodworth, 2018; Asher-Schapiro, 2021). This permits the simultaneous intensive and extensive surveillance of workers and data relating to

their work, in real-time, in a way that would simply not have been possible in previous periods of lower technological sophistication. This clearly elevates the potential for the expansion of managerial control over the labour process to a whole new level.

Although control is clearly a crucial part of the way that technology is introduced, and the labour process is structured within Amazon's fulfilment centres, it is not the only reason that workers are managed in such a way. The business model of Amazon, built around quick turnarounds and fast shipping to customers, including same day delivery (Stone, 2014: 360), necessitates a maximisation of work intensification and worker exploitation in order to achieve this. The way in which workers are managed has led to accusations of the company treating its workers like robots (Middleton, 2023), however this robotisation of human labour is in many ways the logical outcome of technological implementation and labour process reorganisation. Yet, although companies such as Amazon have introduced management regimes that have led to such robotisation of human labour, they have not yet managed to replace workers in any meaningful sense. Despite appearances to the contrary, this means that workers still have a high degree of latent power within the workplace. If the 'collective worker' can be effectively organised and mobilised, this gives them a high degree of leverage in terms of disrupting the company's control mechanism, business model and ultimately, continued capital accumulation.

One of the key gaps in LMC that has been highlighted, is the insufficient consideration of working class resistance and organisation. This is also something that can be highlighted for much of the contemporary academic literature, with Joyce and Stuart (2021: 158) noting that "to date, there has been a significant – indeed, problematic – overemphasis of control, while platform worker resistance has been correspondingly downplayed". It is also relevant to the literature relating to Amazon, in which an analysis of the possibilities of worker organisation have been lacking, even in comparison to platform workers. The fact that the spontaneous worker action that initially emerged at Amazon was due to a significantly below inflation pay offer (Middleton and Butler, 2022) rather than anything relating to the company's use of technology, poor managerial practices or exploitative behaviour, does throw up questions around why this is the case and what this means for organising attempts

both within Amazon, and more widely across the economy, particularly in workplaces with insecure work and poor employment practices.

The company's extreme hostility to trade unions has led to a defeatism in certain quarters with regard to the possibilities for organisation within Amazon, yet the emergence of spontaneous acts of worker resistance, increasing density of union membership and the first strikes that have emerged within Amazon's UK fulfilment centres (ibid), demonstrate the potential that exists. This provides an example of workers spontaneously harnessing their associational power in order to become more organised and develop resistance to management. The extreme hostility of management at Amazon to worker organisation, as well as other factors such as the high turnover of staff, low skilled classification and large reserve pool of labour, deny workers the structural power that was associated with such mass workplaces in previous periods. However, this provides an example of where workers in such a seemingly difficult position, can organise and coalesce into the collective worker, through harnessing their associational rather than structural power (the distinction between the two is outlined later in this section).

A key contribution of this research therefore, will be to build upon the gaps in knowledge and theory, both within Braverman's work, and also the literature relating to contemporary forms of work. Although the managerial imperative to control, and the way in which technology and labour process reorganisation is used to increase this remains an important part of this research, it will nevertheless aim to move beyond this to examine how worker organisation can be developed in order to effectively resist and fight back against it. This moves beyond a somewhat deterministic understanding of the nature of control within the workplace, to one that adequately accounts for the fact that it is bound up within the class struggle. Nevertheless, this is not in a way that aims to jettison the objectivity of class struggle for the full subjectivity of the individual. Whilst accounting for worker agency is an important part of addressing the deficiencies in LMC, the focus in this regard must be on the 'collective worker' rather than the individual, as history demonstrates that it is only through collective action that workers can sufficiently challenge the power of management and capital.

As noted in the previous sections of this chapter, one of the key contributions of Braverman's work, was the reinforcement of and – to some extent – reintroduction of this historicism into the study of work. Building upon this contribution, a key contribution of this research is theorising contemporary forms of worker organisation and resistance in relation to those that have happened in the past, particularly groups of workers that have been described as 'unorganisable', yet through effective organisation went on to become amongst the most powerful, for example dockworkers (Marren, 2016). This demonstrates the importance of researching ways in which workers can be empowered to organise, and assessing the different forms that this organisation could take. Although the technological base and forms of organisation differ from those in the past, there are nevertheless important lessons that can be learned from previous organising attempts. In addition, the underlying dynamics of capitalism and class struggle remain the same.

In foregrounding the 'collective worker' (Martinez Lucio and Stewart, 1997), and theorising the organisation of workers in collective terms, the research addresses the deficiency of worker agency within Braverman's account, without succumbing to the individualisation and subjectivity of post-modernist research in particular. The need to do this is demonstrated by the evidence of both historical and contemporary examples, that demonstrate that it is when workers are able to organise and resist *collectively* that they are able to achieve their greatest measures of success. Beynon (1975) provides a historical example of where the effective organisation of the critical mass of workers within a workplace can blunt the managerial imperative for control and empower workers to win back control over the working day. Cant (2019) offers a contemporary example of the forms of organisation that are taking place, albeit in an embryonic form, which is yet to achieve the organisation of a critical mass of workers within a workforce. Nevertheless, the achievement of organising groups of workers subjected to a high degree of individualisation and geographical dispersal, and the pioneering tactics used, demonstrates the possibilities opened up by new technology (i.e. for organising purposes – for example WhatsApp groups) and forms of work organisation.

The distinction made by Joyce et al. (2022), between the structural and associational power of workers, is another factor that can build upon the gaps in theorising worker

resistance. It can help to provide an understanding of the contemporary organisation of workers, both in contrast to forms of organisation in earlier periods, as well as the differences in the organisation of workers in different workplaces and sectors of the economy in the present. Structural power is most commonly associated with large, 'traditional' unions operating in industries where workers are more likely to be classed as skilled and hold greater leverage within the workplace – this includes many workers in the automotive and aerospace manufacturing sectors. Such workers and their representatives are able to use this leverage, and the structural embeddedness of the unions within the companies, in order to enact collective bargaining practices to represent their members interests.

By contrast, platform workers are not able to exercise this sort of structural power and are forced to rely on their 'associational power' in order to fight back against poor employment practices. In Silver's (2003) analysis of structural and associational power, associational power is reliant on "workers efforts of collective organisation and action" (Joyce et. al, 2022: 25). In this sense, there is a much greater reliance upon self-organisation of workers, and various forms of direct action, as opposed to the use of professional organisers and established structures of dialogue within automotive and aerospace manufacturing. This conceptualisation of the differing strategies employed by different types of unions, representing different groups of workers, is useful in understanding the underlying reasons for the differing approaches representative of different unions within the different workplaces studied in this research.

Some clear distinctions can be made between different perspectives within the labour movement, not only on the effect of technology and labour process reorganisation, but also on the best strategies for the effective organisation and mobilisation of workers. A key difference that can be identified, is between organisations and individuals representative of workers with significant structural power within the workplace (e.g. automotive and aerospace manufacturing workers), and those groups of workers who lack this structural power and are reliant upon associational power (e.g. food delivery platform workers). Representatives of workers with structural power, tend to be more (small c) conservative, focusing on existing strategies such as collective bargaining agreements and established relationships with management. For representatives of

workers reliant on associational power however, these avenues are often closed off, and as a result, such organisations tend to be more radical and likely to develop new strategies and forms of organising.

Drawing on the earlier work of Silver (2003), Joyce et. al (2022: 25) use the 'leading industry framework', to identify platformisation at the forefront of new developments within the world of work, with this leading role coming in a 'dual sense'. The first of these, is that such leading industries historically, have been used to pioneer new forms of management and work organisation that have then spread and been applied in a wide range of sectors across the economy. The second sense, is that they have also historically seen the development of new forms of worker organisation. Within the context of this research, this is something that can be applied to both platformisation and Amazon fulfilment centres, which are both at the forefront of the contemporary introduction of technology and labour process reorganisation, that are spilling into other sectors of the economy. Both of these examples also demonstrate the development of new forms of worker organisation, which have manifested in different ways. The primary focus on grassroots unionism for platform workers (notwithstanding the attempts of GMB), can be contrasted with the greater involvement of major unions in the attempts to organise within Amazon. Nevertheless, the extreme hostility of the company and its refusal to engage, suggests that even established unions may need to pioneer new tactics and forms of organisation in order to break through.

The focus on workers and the wider labour movement as a collective is an important part of the Marxist viewpoint underpinning the research perspective. However, it is also important to note that there is a contradiction here – although labour is at its strongest as a collective, there are nevertheless many different strands within the labour movement that have very different strategical, tactical and ontological viewpoints. One of the key contributions of the research, is the examination of various different expert perspectives within the labour movement, in order to consider the ways in which workers may be empowered to more effectively organise, and strengthen the 'collective worker', in order to effectively resist management and win back control within the workplace. Through the use of critical realism and critical grounded theory, the research provides a bridge between the subjective perspectives of individual experts, and the objective class relations that exist within workplaces and society, in

order to assess the impact of technology and labour process reorganisation, and the possibilities for worker organisation to combat these effects. This leads to the development of a 'Post-Braverman' theory on the effect of technology and labour process reorganisation and control and worker resistance within contemporary workplaces.

2.5 - Conclusion

This chapter built upon the initial theories outlined by Braverman in LMC, engaging with the academic critique of his work, in order to develop a more refined, contemporary and rounded theory on the effect of technology and labour process reorganisation in the workplace, and crucially, accounting for worker resistance and organisation in the face of this. Many of the points raised in the academic critique of his work were accepted, particularly points around the lack of theorisation of class struggle and worker organisation and resistance, however where necessary some were also rejected. The chapter then further developed this critique within the context of contemporary technological change and labour process reorganisation. This led to the formulation of an updated theory, that whilst using LMC as a strong foundational base, nevertheless aims to use the addressing of these gaps to provide a more balanced theoretical understanding, especially in relation to the nature of class struggle within the workplace and the ability of workers to effectively organise and resist the managerial imperative towards control.

Much of the debate centres around the extent to which the study of the workplace should be focused primarily around a more objectivist conception of class relations, or a more subjectivist focus on the perceptions of individual workers. Clearly there is a balance to be struck here, with there being a need to – at least to some degree – account for both objectivity and subjectivity. The use of a critical realist research approach helps in this regard, in order to allow for a single, *objective* reality, that is experienced *subjectively* by individuals. Nevertheless, the research will lean more towards the objectivism of the orthodox literature, in foregrounding the importance of the 'collective worker' rather than individual workers. The research seeks to address the critique of Braverman and LMC, aiming to address the weaknesses and gaps that

have been identified and providing a more relevant, refined and contemporary account than that found in LMC.

The research focuses on control as a key element in understanding the effect of technology and labour process reorganisation in the contemporary workplaces under consideration. However, one of the criticisms of LMC, is that it has too much of a one-dimensional conception of the extension of control within the workplace, that does not allow sufficiently for the resistance of workers to control - Joyce and Stuart (2021: 163) refer to the “duel dynamic within the capitalist labour process, which entails both control and resistance”. They go on to argue that, “despite the centrality of resistance to the labour process framework, theoretical discussion of this key concept is undeveloped by comparison to control” (ibid). As demonstrated by Beynon (1975), a well organised workforce can effectively resist the impulses of management towards control, and push back and win a degree of control for workers on the shopfloor. There is also evidence of workers within industries at the forefront of the debate around contemporary technology and control, beginning to organise in order to fight back against the exploitation and poor employment conditions associated with this (Cant, 2019; Middleton and Butler, 2022).

Taking this into account, although the research examines the way in which management is using technology and labour process reorganisation in an attempt to extend control within contemporary workplaces, it also considers ways in which this can be effectively resisted by workers. The lack of a sufficient accounting for the class struggle within the workplace, and the ability for workers to organise and push back against the managerial imperative for control, is a flaw in Braverman’s work that has been raised by several critiques of it (Elger, 1979; Palmer, 1975: 32). Although, as Carter and Choonara (2022: 187) point out, Braverman intended LMC as “an active intervention aimed at supporting revolts against the degradation and inhumanity of contemporary work”, the failure to actively conceptualise how this could be achieved, renders the theory insufficient and in need of reworking.

It is also important to note the point made by Littler and Salaman (1982: 266) that “the first priority of capitalism is accumulation, not control” – control cannot be viewed as an end in itself, meaning that in examining the extension of managerial control, it is

necessary to consider the underlying reasons for this. One pertinent example of this, is the extreme lengths to which management in platform firms (Cant, 2019; Bloodworth, 2018), which are consistently loss making (Roofoods, 2023; Uber, 2021), go to in order to increase the control held over workers. This can be viewed as an attempt to maximise the exploitation of workers, in an attempt to squeeze costs and attempt to reach profitability (or at least be seen to). This demonstrates how the imperative for control is the result of underlying motivations, related to capital accumulation and profitability. Understanding the reasoning behind the imperative to managerial control, is a crucially important step in being able to conceptualise the reorganisation of the labour process.

The research aims to apply the reconstructed understanding of technology, control and worker resistance, to analyse the impact that technology and labour process reorganisation is having in the contemporary workplaces under consideration – with a particular focus on what this means for the nature of control. However, it also aims to address what were identified as key gaps within Braverman's theory, particularly related to adequately theorising class struggle within the workplace, and the ability of workers to organise effectively in order to resist the reorganisation of the labour process and the imperative for managerial control, in order to assert their collective strength within both the workplace and wider society. This leads to the development of a 'post-Braverman' theory on control and worker resistance in the workplace.

Taking the two main factors outlined in the previous paragraph into account, this has led to the development of two initial proto-theories that have emerged from the analysis that has taken place in this chapter:

PT1 - Technology and labour process reorganisation have a significant impact on the nature of control within the workplace.

PT2 - Understanding the potential for worker resistance and organisation is essential in empowering workers.

These two proto theories are then used to develop the two research questions that the primary research stage is designed to answer:

RQ1 – How is new technology and labour process reorganisation affecting the nature of control in contemporary workplaces?

RQ2 – How can workers be empowered to effectively organise and resist the managerial imperative to control?

These two research questions are used in order to guide the design of the research and analysis that takes place in later chapters, during the stages of the primary research and analysis. Using a critical realist research perspective, and the critical grounded theory method (as outlined within Chapter 4), the subjective understandings of the key informants interviewed, will be analysed in order to move from the transitive to the intransitive domain, using their subjective understandings of the external, objective reality, in order to improve knowledge around the effect of technology and labour process reorganisation in contemporary workplaces, and how workers can be empowered to effectively organise and resist. The next chapter begins by providing the historical context of technological development and labour process reorganisation, before analysing its effects in the three areas of contemporary work studied by the research. This then leads to the generation of three soft-hypotheses that provide initial answers to the research questions and are used to guide the research design.

Chapter 3 - Technology, control and worker organisation in the contemporary workplace

3.1 - Introduction

The previous chapter developed an analysis of the work of Braverman and the critique that followed it, serving to further develop this critique and identify key weaknesses and omissions in Braverman's theories. Through this, the 2 research questions emerged, that are used to guide the design of the research and analysis taking place in later chapters. RQ1 assesses a similar question to that assessed by Braverman, namely the effect of technology and labour process reorganisation on the nature of control within the workplace. The research accepts the need for greater flexibility and allowance for subjectivity than displayed by Braverman, however it also holds that there is an objective truth to the phenomena under examination. This is achieved through the use of critical realism, to allow for multiple interpretations of an objective, existent reality. The main gap that has been identified within Braverman's theories, through engaging with the critiques of his work in the decades following its publication, is its failure to sufficiently theorise working class resistance and explore the possibilities for working class organisation - this forms the basis of RQ2.

The chapter first, provides the historical context of how technological implementation and labour process reorganisation have been used in order to realise the managerial imperative for increased control within the workplace, as well as considering the ways in which each stage opens up new possibilities for effective working class organisation and resistance. Following on from this, the chapter then examines the literature on contemporary developments in the three areas under consideration – platforms, Amazon and manufacturing. It also analyses the different extent and ways in which workers are resisting and emerging strategies, aimed at effectively organising workers within the context of the change happening in their workplaces before concluding the review of the literature and outlining the findings that have emerged from both the previous chapter and this chapter, which will lead into the next stages of the research.

3.2 - The historical context

As noted in the previous chapter, one of Braverman's key contributions was the way in which historicism was reintroduced and recentred within the study of work. Although in many aspects, the research aims to add to the critique of Braverman and further develop his theories, particularly by addressing the gaps and weaknesses that have been identified, the importance of historicism is retained as a crucial element. It is important to situate the study of work within its proper historical context in order to be able to draw comparisons between different periods and be able to develop a fuller understanding of how technology and labour process reorganisation affect the nature of control, and how this impacts upon worker organisation and resistance. This section outlines the historical context to how previous waves of technology and labour process reorganisation have affected the nature of control within the workplace, and how workers have been able to organise and resist. This lays the foundation for the rest of the chapter, which will be focused on assessing the contemporary impacts within the three areas of work studied – platforms, Amazon and manufacturing.

The movement from earlier forms of capitalism to the large-scale production and factories associated with industrial capitalism, was dependent on the development of machinery. However, this was in itself built upon the early development of manufacture within the workshop, which had, according to Marx, developed in two ways – the assembly of workers within different handicrafts within one workshop, under the control of the capitalist; and splitting each handicraft into “various different operations”, with each tasks becoming “the exclusive function of a particular worker (Marx, 1976: 455 - 457). However, although this was to some extent, a rationalisation of production, tasks were still carried out by individual workers, and the speed of production was still limited to the speed at which workers (both individually and collectively) could work. Even before the introduction of machinery, this reorganisation of the labour process was not popular amongst many groups of workers, who viewed it as a degradation of their living and working conditions:

“We have seen that even before the advent of power, the woollen weavers disliked the hand-loom factories. They resented, first, the discipline; the factory bell or hooter; the timekeeping which overrode ill-health, domestic

arrangements, or the choice of more varied occupations” (Thompson, 2013: 337).

With regard to this, it is already clear how the reorganisation of the labour process that saw workers gathered together under one roof, under the control of the capitalist, allowed capital to extend its control over both the working day as a whole, and each individual task within it. With regard to the example of hand-loom weavers, even before the introduction of the power-loom, their relative autonomy over their own labour process (as they had when working in their own homes), was stripped away by the gathering of workers in the factory. Many of these workers understood the way in which the early development of the factory system stripped them of this autonomy and control and placed it into the hands of the capitalist. However, the institutional repression of any form of worker organisation, and the brutal material conditions of the time, left workers with no choice but to enter the factories, lest they and their families end up in the dire poverty and starvation experienced in the old weaving communities which “were literally being extinguished” (ibid: 320-321).

The productivity gains able to be realised by this reorganisation of the labour process were curtailed by the natural limits of handicraft production. This necessitated the capitalist class to find a way of moving beyond this, and their solution was to introduce machinery. This early machinery was primitive, consisting of multiple tools set in motion by a single source of power, however it allowed for significant productivity increases (ibid: 467) – for example, a machine that operated 4 tools at once saw a fourfold increase in productivity. The effect of this was that other manufacturers were forced to employ machinery in order to compete. Marx wrote that large-scale industry “sweeps away by technical means the division of labour characteristic of manufacture” (ibid: 614), whilst “at the same time, the capitalist form of large-scale industry reproduces this same division of labour in a still more monstrous shape; in the factory proper by converting the worker into a living appendage of the machine” (ibid). The effect of this was to strip the worker of the level of control that they had over their own labour process.

This extension of managerial control and authority was developed much further by the work of Taylor (1911). Braverman (1974: 90) argued that Taylor “raised the concept of

control to an entirely new plane when he asserted as an absolute necessity for adequate management, the dictation to the worker of the precise manner in which work is to be performed". Before this, management had controlled labour by means such as gathering workers together in a single place, defining the length of the working day, the setting of production minimums, ensuring workers were at task and so on. Whilst this increased control compared to pre-industrial workplaces, Taylor felt that the control which management had gained over the labour process was far below that which it could achieve. According to Braverman, Taylor's system "was simply a means for management to achieve control of the actual mode of performance of every labour activity, from the simplest to the most complicated" (ibid). For Taylor, the purpose of this work was not about control as an end in itself, but in maximising productivity. However, in achieving this, workers were viewed as mere cogs in the machine, inanimate objects forced to accept their fate – "chessmen" in the words of Taylor (1911: 92) himself.

As outlined in the previous chapter, in section 2.3, loss of autonomy can either be progressive or degrading, based on the wider context in which it occurs, and the underlying factors surrounding this. In the example of the hand loom weavers being forced into the factories, this loss of autonomy was degrading because of the conditions they were subjected to in the factories, the loss of communities and a drop in living standards (Thompson, 2013). Nevertheless, despite the loss of autonomy and control suffered by workers, the factory system also offered new possibilities for organisation and resistance. In contrast to the cottage industries and 'outworking' associated with pre-industrial work in the old weaving communities for example (Thompson, 2013), in which workers were geographically dispersed and often worked in the home, the gathering of workers in a single workplace offered the potential for the much more effective recruitment, organisation and collective resistance of workers. It helped to foster a sense of collective identity - the 'collective worker' – particularly where management used harsh methods to enforce discipline and control upon the workforce. This concentration of workers also strengthened their 'structural power' (Joyce et al., 2022), as it increased the amount of leverage that they were able to exert collectively over the collective labour process and the operations of the business. This demonstrates how the implementation of technology and the reorganisation of the labour process in ways that ostensibly increase managerial control and weaken

workers, open up new possibilities for organisation and resistance that can effectively counter the managerial imperative for control, and enable workers to win victories and improve their position.

There are historical examples that demonstrate that, despite the managerial imperative to control being a consistent factor in capitalist development, that in many cases, workers have been able to effectively resist this. For example, Beynon (1975) details the way in which Ford workers at its Halewood plant were able to limit the control that management were able to exert over their labour process. There is also the case of dock workers, who over the course of the 20th century, were able to move from a casualised, supposedly unorganisable workforce, into a supremely organised workforce, with a high degree of structural power within the workplace (Marren, 2016). This shows that although the managerial imperative to control is always existent, it is not determinate, and that workers can increase the level of control and autonomy they have in the workplace through effective organisation and exercising their collective strength. Although it can often seem that control is an inherent power of management, it is in reality, bound up within the class struggle within the workplace.

Although mechanisation typically conjures images of factories and heavy machinery, as evidenced through the mechanisation that occurred during the earlier periods mentioned above, there was effective mechanisation of many types of clerical and office work during the decades following the publication of *Labour and Monopoly Capital*, particularly through the advent and implementation of personal computers. This demonstrates how mechanisation was not restricted to the factory floor and permeated out into other sections of the economy. Although much of the terminology around 'mechanisation' or 'automation' invokes a vision of factory floors and heavy machinery, the effect of computerisation is part of the same process, with knowledge that was previously held by workers being embedded into machinery owned by capital. This is an important point to make, in order to be able to draw a link between the effect of technological change and labour process reorganisation in the 19th century and that taking place in the 21st century. Although the workplaces and forms of technology are very different, many of the underlying mechanisms are eerily familiar.

Although technology did play a key role in changing relationships in the workplace during the period following the publication of LMC, the effect of other factors in asserting managerial control cannot be understated. The implementation of Japanese style management practices outside of Japan is often portrayed as increasing efficiency and reducing workplace conflict, yet the nature of implementation is often neglected. Delbridge (1998) provides an example of a Japanese electronics manufacturer with a 'transplant' site situated in the South of England. The plant had "been at least partially successful in establishing the technical systems of JIT [Just-in-time manufacturing] and TQM (total quality management]" (ibid: 178), as well as work organisation and HR practices associated with best practice. However, the plant had failed to implement some of the more supposedly progressive aspects that the Japanese model promotes, such as problem-solving groups, rewards for innovation and a paternalistic relationship between the company and its workforce, that fosters a sense of belonging and loyalty to the company. Delbridge's study suggests that the implementation of 'Japanese' style management is often effectively one-sided, providing management with increasing control over the workplace and the labour process, without providing workers with the supposed benefits.

A further aspect of the changing nature in the relationships within the workplace during this period can also be analysed in the diminishing of the 'Productivity-Social Pact' that had played a key part in the post-war consensus (Hildebrandt, 1988: 60). As part of this pact, workers accepted that management would be in control, as well as the need for the company to increase productivity and profits, in exchange for "... stable employment, assured and growing incomes, appropriate levels of qualification and intensity of work, protection from occupational hazards etc." (ibid). Following the collapse of the post-war consensus, in search of restoring profits, capital moved towards a more finance-driven form, that saw the pay, conditions and organisation of workers attacked in order to restore profitability. Significant defeats suffered by organised labour, opened up the space for many businesses to reorganise the labour process and implement new systems of management and control that allowed them to exert increased control over the labour process, as trade union density and power declined in many major economies, particularly the UK.

Although the defeats suffered by organised labour during this period have often led to defeatist assumptions about the potential for workers to effectively organise and resist, it remains the case that each advancement in technology, each reorganisation of the labour process and each stage of capitalist development opens up new possibilities for worker organisation and resistance. The fact that workers were able to build organisation under much more repressive legislative and managerial systems, including periods of illegality (Thompson, 2013), provides hope that with the right impetus and strategy, effective working class organisation can be developed once again. It is within this context, that the rest of the chapter will examine the effect of technology and labour process reorganisation within the three areas of contemporary work considered within the research (platforms, Amazon and manufacturing) and begin to consider ways in which workers can be more effectively organised in order to assert their latent power within the workplace.

3.3 - Platform Capitalism

The platform as a business model is described by Srnicek (2017: 43), as “digital infrastructures that enable two or more groups to interact. They therefore position themselves as intermediaries that bring together different users: customers, advertisers, service providers, producers, suppliers and even physical objects.” The rise of platform firms has been intertwined with the development of the information age as the increasing importance of connected devices has opened up new possibilities. Srnicek also highlights a tendency towards monopolisation; the more numerous the users who interact with a platform, the more valuable the entire platform becomes for each one of them. Network effects, moreover, tend to mean that “early advantages become solidified as permanent positions of industry leadership” (ibid: 95). Furthermore, the evidence suggests that platform capitalism is also causing a fragmentation of the labour force in the industries where it has taken hold (Friedman, 2014: 172) which makes it harder for labour to organise and further weakens its negotiating power vis-à-vis capital.

One industry in which the above trends can be observed is in the taxi industry, particularly with the global emergence of the ride-hailing app ‘Uber’, which from its establishment in 2009 had by 2017 spread to “over 479 cities in 75 countries

worldwide” (Watanabe et al., 2017: 33). Uber argues that it is not a transport firm but merely a tech firm and that its drivers are not employees but rather self-employed ‘partners’ who use Uber’s technology to connect them with customers; this is an argument that has been refuted by UK courts who have ordered Uber to provide their drivers with employee rights (Fleming, 2017: 703). Uber’s viewpoint is disputed by many of its drivers, who complain about the way Uber enforces certain standards and behaviours on drivers who use the platform, through measures such as the threat of removal from the platform if a driver’s “star ranking” from customers falls below 4.6 stars out of 5 (Rosenblat and Stark, 2016: 3774-3775).

Uber also seek to “structure and control the etiquette and uniformity of drivers’ behaviour” by sending routine messages to drivers “that recommend that passengers give low or high ratings to drivers who behave in particular ways. This feedback is carefully designed to be indirect, presumably to avoid the appearance of a company policy—instead framed as the results of empirical data”. Drivers can face removal from the platform if they refuse to take particular jobs, despite not having information about whether it will be profitable or not before making a decision (ibid: 3762). The taxi industry has traditionally been one in which workers have tended to have a high degree of autonomy and self-employment (Drahokoupil and Jepsen, 2017: 105) and although this has never been complete, the ability of Uber to monitor every aspect of drivers’ performance and use this to influence their behaviour is a clear example of how platforms allow capital to wrest authority and control within the labour process away from workers.

The issue of control in relation to Uber’s system is also explored by Bloodworth (2018), who spent time working for Uber in London. He states that the ‘tech utopians’ in charge at Uber, were asking workers to accept the algorithms running the app as ‘neutral entities’, when in actual fact they were “the creation of those with their own distinct interests – interests very often antagonistic to the interests of those who requested work from the apps” (ibid: 231). That this is the case, can be evidenced by the punitive measures built into the app, such as those outlined by Rosenblat and Stark (2016), many of which are also noted by Bloodworth (2018). Some further measures are outlined by Bloodworth, including the need for drivers to accept 80% of trips and being logged out of the system for rejecting 3 jobs in a row (ibid: 221). Drivers also have no

way of knowing where a customer is going to until the customer is sat in their car (ibid: 220), meaning they are unable to pick and choose jobs based upon whether they think it is worth them doing so. Although some may argue that this is a good thing, and that it brings benefits to customers, it does somewhat jar against the company's argument that drivers are self-employed 'partners'.

The way the app is structured clearly limits the autonomy that drivers (i.e. workers) therefore have, in multiple ways, or to put it in Bloodworth's words "there are several aspects of the job where self-employment seems like a rhetorical illusion which bears little relationship to reality" (ibid: 222). This is further evidenced by the fact that failure to comply can result in a 'summons' to Uber's central offices, with the overriding threat of 'permanent-deactivation' ever present – this is a bizarre set of circumstances for drivers that the company argues are self-employed and supposedly therefore have the flexibility to choose when and where to work. Like with many other examples in the 'gig' economy, the supposed freedom and flexibility that workers are supposed to enjoy, are undermined by forces hidden within technology and algorithms, that as opposed to empowering workers, empower the owners of technology to exploit them. Thus, technology that is presented by platform companies as providing greater control over the labour process for workers, in reality often does the exact opposite.

A further example is provided by the food delivery platform Deliveroo, who like Uber, argue that its workers are actually self-employed 'partners' (Cant, 2019: 69). However, even within supposed 'free-login zones' where workers are supposed to have the freedom to choose when to work, they can be told that they have "to work for at least two shifts of 4 hours between Friday and Sunday twice a month" (ibid) and "to accept 90% of orders and deliver them within a certain time" or face deactivation from the platform. This undermines the claim that Deliveroo makes about workers being self-employed 'partners', with the app merely acting as an intermediary between workers, restaurants and customers. A survey of Deliveroo workers by the 'Independent Workers Union of Great Britain' (IWGB) found that 87% of respondents felt that the status of 'independent contractor' did not accurately reflect the reality of the job and 92% felt that their classification as self-employed meant that they were being unfairly treated compared to a standard employee and that "employers deliberately misuse the self-employed category to take advantage of their workers" (ibid: 69 - 70).

Deliveroo's position shares similarities with that expressed by Uber, that drivers are not contracted to work any hours, are free to choose when they work and that this is a significant contributory factor as to why they should be classed as self-employed. In its finding over the dispute between Deliveroo and the IWGB union, the Central Arbitration Committee found in favour of Deliveroo, that workers should be classified as independent contractors rather than workers, because of a loophole that allowed workers to nominate a substitute to carry out their work (Central Arbitration Committee, 2017: 28), despite the fact that they accepted that this was rarely used in practice (ibid: 20). The use of the 'substitution' argument despite its lack of practical application, has allowed Deliveroo to exploit a legal loophole in order to avoid the reclassification of workers. Due to licensing issues, this is unlikely to be a strategy that Uber can replicate; however, it may provide a template for firms to use more widely, in order to avoid the reclassification of workers. This is problematic, as the loophole is being used to bypass considerations of the more relevant day to day ways in which the company is able to exert control over workers. The judgement implies that the substitution right, invoked in practice by almost none of the workforce, overrides the control that Deliveroo is able to exert over the workforce when they do log onto the app and work, something that was critical to ruling that Uber drivers should be classified as workers and not independent contractors (The Supreme Court of the United Kingdom, 2021).

As with Uber, much of the debate over whether it is legitimate for Deliveroo to claim that its riders are self-employed, rests upon the level of control that Deliveroo is able to exert over their labour process. Like Uber, Deliveroo enforce certain standards on riders, which is said to include a 90% acceptance rate for orders and to deliver them within a certain time (Cant, 2019: 32). Although it may be seen as reasonable for workers to accept the majority of orders and to deliver them within a specific amount of time, this still reduces the level of agency that workers possess over their own labour process in order to keep working on the platform. In addition to this, workers in some cases have been told that they have to work "for at least two shifts of 4 hours between Friday and Sunday twice a month" (Cant, 2019: 69) or face deactivation from the platform. The classification of Deliveroo workers as self-employed contractors means that they are not protected against unfair dismissal legislation and allows for immediate termination of 'supplier agreements' (ibid: 33) at the whim of an algorithm. This lack of

protection increases the control that capital is able to wield over workers, with the threat of deactivation hanging over them. Although the explicit level of control Deliveroo exercises over its workers may appear to afford freedom and flexibility in comparison to other jobs, in reality the precarious nature of the employment adds a high degree of implicit control that actually affords much greater control to the company. This acts alongside the way in which technology is implemented and the structuring of the labour process, in order to increase both the control that the companies exert over their workers and the levels of exploitation that they subject them to.

The control that Deliveroo is able to exert over the labour process is also outlined by Cant (2019: 58), in his description of Deliveroo's app as a "black-box system", which is "understood by workers in terms of its inputs and outputs, without having a clue about its internal operations". This left workers completely reliant, because according to Cant "... we had no independent ability to co-ordinate the labour process or do things our own way, we had to follow instructions to the letter" (ibid: 59). He then expands on this further:

"When we headed to a restaurant to pick up an order, we had no idea where that order would end up being delivered. Information about the delivery process was only revealed to us stage by stage, to stop us calling up and getting unassigned from orders which were particularly difficult or long. But whilst we could barely work out what we'd be doing in five minutes time, the algorithm had a constant stream of incredibly precise location and speed data, which could be processed alongside order data and all other sorts of metrics to manage our work". (ibid: 60)

This displays a much higher level of control over the individual labour process of workers than would typically be found for that between a company and an 'independent contractor'. The fact that riders are only provided with information stage by stage raises questions – if they are truly independent contractors, should they not be presented with the full complement of information up front, when deciding whether to take an order on? Deliveroo would likely argue that this is necessary to ensure that orders are fulfilled and that riders do not simply attempt to cherry-pick the easiest and

/ or most lucrative orders. However, this deprives drivers of control over a crucial aspect of their labour process – if they are not provided with full information about a job they are undertaking, they are unable to make a judgement about whether a particular job is suitable. The algorithmic decision making and data processing ability that come with platform operations, allows Deliveroo to release information piecemeal to each of its riders at different stages of the process, at any particular time – something that would be a logistical nightmare, if not practically impossible, when using human dispatchers.

Like Uber, Deliveroo's system of management differs from traditional management practices by its use of 'algorithmic management' to replace the human dispatcher, automating most of their supervision and labour process co-ordination responsibilities (ibid: 44 - 45). Cant explains how for many workers at Deliveroo, not having a human supervisor monitoring their every move and instead being managed by an impersonal algorithm could seem liberating, eliminating in human supervision "one of the worst parts of the labour process" (ibid: 43). It is important to note here, that discussions of 'algorithmic management' can often ascribe a sense of agency and self-interest to the algorithms and the technology that they rely upon. This is greatly mistaken, and it is important to remember that the algorithms making decisions within this process, are designed and programmed by humans, explicitly reflecting the interests of management. Although there is not a manager or supervisor physically present or even consciously making decisions, 'algorithmic' decisions are still being made in the interests of management.

In the case of Deliveroo, the company initially had a problem with workers taking advantage of the algorithm's inability to discipline them and ensure they were working properly. Deliveroo's response to this was to scrap the old system of a payment per hour, plus £1 for deliveries, to a piece-rate per-drop system of £4 per delivery (ibid: 51). The introduction of a piece-wage system had several negative consequences for workers, particularly as it put pressure on them to take risks during busy periods to maximise the number of drops in order to compensate for the loss of income during quieter periods. Given that workers delivered using either bicycles or mopeds, this put them at an increased risk of sustaining a serious injury (or worse) on the road – a risk that was compounded by their classification as self-employed workers meaning that

they would not be entitled to sick pay or replacement equipment if an accident did occur (ibid: 57). The precarity of working for Deliveroo was increased by this payment structure, which Cant states “seemed to be determined by two factors: the average wage and level of employment in the area, and the order volume in the zone” (ibid: 110). As more and more workers were recruited in the Brighton area, where Cant worked, the number of drops a worker would be able to perform during busier periods dropped and wage levels had as a result “fallen dramatically” by the start of 2017. This led to the establishment of union networks within the area and a period of industrial unrest and strike action.

Piece-wages are described by Marx (1976: 694) as “the most fruitful source of reductions in wages, and of frauds committed by the capitalists”. He explains that the reason for this, is that “they provide an exact measure of the intensity of labour. Only the labour-time which is embodied in a quantity of commodities laid down in advance and fixed by experience counts as socially necessary labour-time and is paid as such” (ibid). This passage outlines one of the key motivations for platform firms in using piece-rate payments – it allows them to pay only for the time workers are ‘on task’ (e.g. driving a customer or delivering food), whilst allowing them to get away with not paying workers at all for waiting time between tasks. This forces workers to work more intensely in order to make ends meet, with the nature of the piece rate system meaning that “it is naturally in the personal interest of the worker that he should strain his labour-power as intensely as possible” (ibid: 695). The result of this, is that it “enables the capitalist to raise the normal degree of intensity of labour more easily” (ibid). The use of a piece-rate system by platform companies is clearly intended to increase the intensity of labour in this manner, forcing workers to work harder during busier periods and eliminate (or reduce) costs incurred to capital during quieter ones, pushing this onto workers.

Marx also notes that the amount of wages that individual workers will earn will vary under the piece rate system, with some workers earning the average, some below the average and others above, “according to their different degrees of skill, strength, energy and staying power” (ibid: 696). He states that “the wider scope that piece-wages give to individuality tends to develop both that individuality, and with it the worker’s sense of liberty, independence and self-control, and also the competition of

workers with each other” (ibid: 697). The result of this is that “the piece-wage therefore has a tendency, while raising the wages of individuals above the average, to lower this average itself” (ibid). This also hints at a key factor in the drive for platform companies to implement piece-rates – it promotes the potential for individual workers to earn more money by increasing the intensity of work and competition between workers, whilst driving overall labour costs down by lowering the average wage. It also helps to erode the sense of the ‘collective worker’, as competition over co-operation is portrayed as the way in which to maximise earnings.

The implementation of piece-wages also makes it easier for companies to flood the market with workers, without accruing the extra costs that paying them hourly fees would entail. The use of this tactic by Deliveroo in Brighton, as outlined by Cant (2019) outlined earlier in this section, provides one example of this. Platform companies pride themselves on being able to offer speedy and efficient service to customers and ensuring that there is a sufficient supply of workers is key to this. By flooding the market with workers and employing a piece-wage system, this ensures that there is a sufficient supply of labour to meet demand at peak times, at no extra cost to the company. The use of piece-rates means that the company will still pay the same amount per delivery regardless of how many extra workers are logged onto the app trying to access work. This pushes the average earnings per worker down, with workers having to work harder and compete against each other for orders in order to make enough money. This example also demonstrates how companies are not only reliant on applying technology in new ways, but also in resurrecting older forms of exploitation (such as piece-wages) in order to maximise revenue and discipline and control their workforce.

However, as outlined in Chapter 2 and section 3.1, this research looks to go beyond the effect of technology and labour process reorganisation on control and examine working class resistance and organisation in response to this. Cant (2019) documents the embryonic forms of worker organisation and strike action that took place with Deliveroo workers, primarily in Brighton and London. Although the strike action at Deliveroo was ultimately unsuccessful and ‘collapsed’ in the summer of 2017, it provided a blueprint for how supposedly ‘unorganisable’ platform workers can organise and fight for better working conditions – a blueprint that has been built upon

as further militancy amongst platform workers has emerged in the intervening period (Cant, 2019: 157-173). As opposed to more traditional forms of trade union organisation, platform workers have relied upon communications technology such as Facebook and WhatsApp groups to build 'invisible channels' out of the sight of the companies (ibid: 130 – 132). The time workers spend effectively on standby whilst waiting for orders at 'zone-centres' also provided an effective means by which workers could communicate and engage in network building (ibid: 132). Crucially, workers were able to turn their designation as 'self-employed' against the company as it allowed them to circumvent anti-strike laws, meaning they did not have to ballot to take action, did not have to inform the company and allowed them to take part in solidarity strikes and employ 'flying-pickets' (ibid 164 - 168).

Both the strategy and tactics of grassroots unions in organising platform workers can be differentiated from mainstream trade unionism. Joyce et al. (2022: 12) found that grassroots union organising had more in common with 19th century forms of trade unionism than the 20th century approach of mainstream unions, with a greater focus on 'legal enactment' than "collective bargaining". Their research suggests that in contrast to established unions, the organisation of platform workers has been focused on geographical (e.g. city wide) rather than workplace organisation, and that workers power is associational as opposed to structural (ibid: 16). In addition to this, the platform workers they interviewed - from the IWGB's Couriers and Logistics Branch (CLB) – stated that they viewed "legal action as part of an overall strategy of collective action, not as an alternative to it" (ibid: 15-16), which the authors saw as a further parallel with 19th century organisation. They suggest that the extent to which a viable 21st century model of trade unionism can be developed, "is likely to depend—at least in part—on the extent to which unions can (re)incorporate methods drawn from older traditions alongside newly innovated practices to meet new, yet historically familiar conditions." (ibid: 17).

It is clear that a key strategy of platform companies, lies in the individualisation of the labour process – separating the labour processes of workers, introducing elements of competition and attacking any sense of the 'collective worker' amongst their workforce. In doing so, the companies foreground the individualist, subjective figure of 'the rider' or 'the driver', as opposed to the objective figure of 'the worker'. By cultivating this

subjectivist identity amongst their workforce, the companies are acting to prevent the effective organisation of the workforce, in order to prevent workers being able to fight for greater control and fairer conditions, as the exploitative employment relationship is a core part of the business model of many prominent platform companies. Taking this into account, the research argues that is important not to go too far in accounting for subjectivity (as did many post-modernist critics of Braverman), in order to be able to develop the figure of the 'collective worker' around which workers can be organised, according to collective issues, grievances and a sense of solidarity.

It is also interesting to note that despite their hostility to any concept of the 'collective worker' and of worker activism and organisation, both Uber and Deliveroo have made limited recognition agreements with the GMB union to represent workers on their platforms (GMB 2021; Deliveroo, 2022). Although at first glance this appears a positive development, the limited nature of such agreements (focused mostly around rights to join and representation in deactivation hearings), the lack of effective collective bargaining agreements over pay and working conditions and the inability to organise against the structure of the labour process, does offer credence to the claims of grassroots unions that the agreements are primarily an attempt to shut down the strategies, effectiveness and militancy of grassroots unions (as outlined in Chapter 5). The agreement has echoes of the past, in which there was often a 'demarcation' between areas in which management were prepared to negotiate (e.g. terms of employment), as opposed to those that they viewed as exclusive functions of management – e.g. "the organisation of production itself, and often the associated practices of discipline and labour control" (Hyman, 1987: 44). The organisation of workers in response to the methods used by platform firms, is a question that will form a key part of the primary research, as outlined in later chapters.

3.4 - Amazon

A sector in which Schwab's (2016: 40) warning against the robotisation of humanity has strong relevance is within the warehousing sector, with a particular relevance to Amazon's '*fulfilment centres*'. Workers within these warehouses are issued 'inactivity protocols' which aim to prevent workers from being inactive on the warehouse floor (Scholz, 2017: 25). Such tracking can be made through visual observation, but

workers are also tracked using scanners that can be tracked and monitored by supervisors (ibid). Scholz provides one example of a worker in an Amazon fulfilment centre in Leipzig, Germany who was sacked after twice being tracked as 'inactive' - just five minutes after his second alleged transgression (ibid). Like with the 'platform' workers at Uber and Deliveroo, increased surveillance techniques within Amazon fulfilment centres increases managerial control, as workers are fearful of making the slightest transgression in fear of exclusion from the workplace. Schein (2017), outlines a 'culture of metrics' that holds workers "to standards that the company boasts are unreasonably high" (ibid: 1559). Some workers also claim that they're "told by Amazon and outsourced managers to meet productivity goals designed to be unattainable for most in an effort to keep them in a perpetual state of insecurity about their continued employment" (ibid).

A perspective of what life is like working inside one of Amazon's fulfilment centres is provided by Bloodworth (2018), who spent time working as an 'order picker' in the centre at Rugeley, Staffordshire. Bloodworth describes the way in which, in lieu of traditional managerial overview, workers would be provided with "a handheld device that tracked [their] every move as if [they] were convicts out on house arrest" (ibid: 15 - 16), which corresponds with what has already been cited from Scholz (2017) on the ability of supervisors to track and monitor workers. These examples demonstrate how new technologies are transforming the degree of control that representatives of capital are able to hold over individual workers, even in 'traditional' jobs such as order picking in a warehouse. These devices could also be used to log the amount of orders that each worker had completed, with workers being "ranked from highest to lowest in terms of the speed at which [they] collected [their] items from the shelves and filled [their] totes" (Bloodworth, 2018: 16). This can then be used to encourage workers, rather than co-operate, to compete against each other, in fear of the recriminations that might come from perceived underperformance. This is similar to the way in which Uber and Deliveroo encourage competition to divide the workforce and promote individualism, as outlined in section 3.3 above. Although this kind of monitoring is not completely new, the implementation of technology such as outlined here, certainly makes it much easier and more effective for management to control workers by using such tactics, with data often available in real time.

Monitoring within fulfilment centres, however, goes much further than this. According to Evans (2019), “bathroom visits are tracked carefully at Amazon fulfilment centres, according to multiple current and former workers and managers, with each gap in scanning labelled as time off task”. Workers described getting colleagues to continue scanning packages for them whilst they went to the bathroom or even taking orders with them to make it look as if they were still working, with multiple workers stating they suffered from urinary tract infections due to the company’s policy around bathroom usage during shifts (ibid). New technology allows the real-time micromanagement of the entire workforce to this degree, and the ability of management to be able to do this is a clear tipping of the balance of power away from labour and towards capital.

The manner in which the company makes use of technology in order to increase the level of control it is able to exert over the labour process of workers is outlined below:

“Two measurements dominated most hourly employees’ shifts. Rate gauged how fast they worked, a constantly fluctuating number displayed at their station. Time off task, or T.O.T., tracked every moment they strayed from their assignment — whether trekking to the bathroom, troubleshooting broken machinery or talking to a co-worker. The company pioneered new ways to calculate both metrics in the mid-2000s, when a smaller, scrappier Amazon set out to revolutionize warehouses.” (Kantor et al., 2021)

The way in which Amazon was able to utilise this type of technology and the data generated are outlined further below:

“In newer, robotics-driven warehouses like JFK8, those metrics were at the centre of Amazon’s operation. A single frontline manager could keep track of 50, 75, even 100 workers by checking a laptop. Auto-generated reports signalled when someone was struggling. A worker whose rate was too slow, or whose time off task climbed too high, risked being disciplined or fired. If a worker was off task, the system assumed the worker was to blame. Managers were told to ask workers what happened, and manually code in what they

deemed legitimate excuses, like broken machinery, to override the default.”
(ibid)

The scale at which this allows management to monitor workers in real-time is a huge qualitative shift from what would have been possible in a less technologically advanced workplace. Before the availability of such technology, as Hyman (1987: 40) stated, “unless supervision is close and interrupted, the conversion of labour power into productive labour must involve in part the labourer’s voluntary initiative, the acceptance of an obligation to perform a fair day’s work.” Whilst the use of technology at Amazon does not render this argument completely redundant, the ability to monitor workers simultaneously, and the use of technology rather than management looking over workers’ shoulders, creates something of a ‘panopticon’ effect, with workers not knowing if and when they are being more closely monitored by managers. In addition to this, the use of automated monitoring to keep track of metrics such as ‘rate’ and ‘time off task’ means that they are subjected to constant monitoring and surveillance anyway. The effect of this monitoring, and the culture it creates, leads not only to increased anxiety for workers, but also helps to increasingly robotise their labour by shaping not only productivity levels, but also general behaviour within the workplace (i.e. worries about ‘time off task’ affecting the number of bathroom breaks, not stopping to talk to colleagues etc.).

This is further exacerbated by the precarity of the employment relationship, with workers routinely disciplined or dismissed for small infringements (Kantor et al., 2021: Bloodworth, 2018; Scholz, 2017). The following statement also provides an insight into how Amazon uses these factors in order to increase their control over workers:

“The goal, JFK8’s internal guidelines state, “is to create an environment not where we are writing everyone up, but that associates know that we are auditing for T.O.T.” Workers could not readily see their T.O.T. totals, increasing anxiety.”
(Kantor et al., 2021)

The result of this is that workers continually live under the fear of being ‘written up’ and facing disciplinary action for being too slow or taking too much time off task, even when their actual statistics may be way above triggering this. This creates a culture of fear

amongst staff, helping management in “setting the pace” and “keeping the whole warehouse in rhythm” (ibid). There is a parallel here with the way in which assembly lines were speeded up in factories such as those operated by the Ford Motor Company in order to drive forward productivity (Braverman, 1974; Beynon, 1975), however the way in which this is embedded within technology within Amazon’s fulfilment centres obscures it to a much greater degree and does not provide the same obvious points of conflict and resistance for workers. The individualisation of performance measurement through the use of individualised performance metrics and data analysis, can also help to blunt collective resistance and solidarity, with some workers embracing the competitive element and believing that it is the fault of other workers if they can’t keep up, as seen with platform companies.

There are parallels between Ford’s approach and that of Amazon. The use of higher wages to act as a carrot, for the stick of imposing rigid controls on the labour process and reorganising it to ensure greater control for management is one example. Ford was also “fundamentally and entirely opposed to trade unions” (Beynon, 1975: 29), to the extent that his ‘Service Department’, “policed the gates of his plants, infiltrated groups of emergent union activists and posed as workers to spy on men on the line” (ibid: 30). This is an eerily similar approach to that of Amazon, who consistently run anti-union campaigns, refuse to recognise trade unions or allow union officials onto the premises, to the extent of security guards physically chasing union representatives off Amazon sites (Bloodworth, 2017). Ford’s most successful innovation was the reorganisation of work through the assembly line, with humans increasingly becoming subordinate parts of the machine that was the factory – to put this in Marxist terms, the robotisation of human labour. The reorganisation of work at Amazon’s fulfilment centres can be viewed in a similar light, with workers’ labour becoming robotised through a reorganisation of the labour process.

There is also another similar parallel between the approach of Amazon and Frederick Taylor. In its 2020 Annual Report, Amazon states that they “seek to be Earth’s most customer centric company” (Amazon, 2021: 3) and lists the first of their four ‘guiding principles’ as “customer obsession rather than competitor focus” (ibid). Steve Yegge, a former senior Amazon employee who defected to Google also stated that, “in many ways they’re a world class operation – primarily in ways that matter to customers;

employees, not so much. But I guess in the end it's the customers that matter" (Stone, 2014: 252). When discussing the fact that under scientific management, workers who are proven to do twice as much work are not paid twice their previous wage, Taylor states that:

"At the first glance we see only two parties to the transaction, the workmen and their employers. We overlook the third great party, the whole people – the consumers, who buy the product of the first two and who ultimately pay both the wages of the workmen and the profits of the employers. The rights of the people are therefore greater than those of either employer or employee."
(Taylor, 1911: 177)

Although it would be too much of a stretch to say that Jeff Bezos and Amazon have deliberately implemented a Taylorist management system, this outlines some clear parallels between the two approaches. In both the Taylorist and Amazonian approach, workers are parts to be subsumed as parts of a greater machine, aimed at providing the maximum possible efficiency and optimal outcomes for customers. Yet in both cases, workers are subjected to increasing alienation from their work and increasing exploitation. Although under Taylor's scientific management methods, the absolute wages of workers increase, the fact that wages do not rise in line with output means that the amount of surplus value that capital is able to extract increases, thus increasing the level of exploitation even with rising absolute wages. In Amazon, the system of management and the degree to which workers are monitored and pushed, similarly leads to increasing exploitation and surplus value extraction.

It is not only in fulfilment centres where Amazon are introducing technology to monitor the performance and behaviours of staff however. Asher-Schapiro (2021) details the experiences of a courier delivering packages for Amazon in Denver in the USA, of creeping surveillance measures implemented by the company. This was initially through Amazon's 'Mentor' app (i.e. platform) that "constantly monitored his driving, phone use and location, generating a score for bosses to evaluate his performance on the road" (ibid). The worker stated that he was docked money for the app logging that he had been using his phone when it rattled as he drove over a bump and he was then asked to post selfies to another app called 'Amazon Flex' at the start of each shift. The

worker stated that “the final indignity” was “Amazon’s decision to install a four-lens, AI powered camera in delivery vehicles that would record and analyse his face and body the entire shift” (ibid). The cameras are fitted with sensors that identify if a driver, yawns, drives without a seatbelt or appears to get distracted – the worker stated that after the end of a shift, he was shown by his supervisor the images that had been captured. Each time “an anomaly in his behaviour” was detected by the AI, “... a yawn, a glance at his phone – it started recording and saving the footage” (ibid).

Amazon argues that “access to the footage [is] limited, and video would only be uploaded after an unsafe driving incident [is] detected” (ibid). However, the courier is still monitored throughout the whole of the working day and is aware that even the slightest ‘wrong’ movement or facial expression may trigger the system to start recording. Where Amazon has implemented the system, couriers have not been given the option to opt out and have been told they would be unable to continue working for the company if they did not agree to work in vehicles fitted with the device (Asher-Schapiro 2021; Palmer, 2021). Some other Amazon couriers have also stated their belief that the cameras “don’t address the aggressive delivery targets that make drivers prone to reckless behaviour” (Sandler, 2021). This highlights how couriers are subjected to pressure from both sides by the company – the company imposes difficult to meet delivery targets, whilst simultaneously subjecting couriers to invasive surveillance and enforcing rigid behavioural conditions upon them. If they take the necessary care and attention, they could be disciplined for not meeting delivery targets, whereas if they cut corners in an attempt to meet targets, they could be disciplined for displaying ‘wrong’ behaviours – not to mention the increased risk of accidents. This subjects workers to a highly stressful working environment, deprives them of control over their own labour process and leads to alienation and the robotisation of the individual.

The combination of ‘Taylorist’ scientific management with technology that provides ever greater scope for micro-analysis of workers’ every move has been branded in some quarters as ‘*digital-Taylorism*’ (Cole et al., 2020). The ability of new technologies to monitor and record the work process and the performance of workers provides the opportunity to take scientific management to a whole new level. Therefore, ‘*digital-Taylorism*’ provides an opportunity for capital to increase its control over labour even

within more traditional sectors of the economy such as warehousing. However, the example of Deliveroo workers outlines that there are limits to which workers can be pushed and as a result there is likely to be limits to the amount of control that management can squeeze out of labour in this manner before workers begin to push back. This may further incentivise management to automate work within such sectors, but this is likely to be subject to further tensions between the cost of capital vs labour, resistance of workers and regulatory issues.

Despite the hostility of Amazon to the organisation of workers, and its stubborn refusal to recognise the rights of workers to collective bargaining or join trade unions, there have been some signs that worker organisation is beginning to improve amongst its workforce in the UK. Despite attempts by both GMB and Unite to organise within Amazon, trade unions had found it difficult to reach and organise workers. Yet following the outbreak of spontaneous acts resistance at the company's Coventry facility in response to an insufficient pay offer (Middleton and Butler, 2022), trade unions have made something of a breakthrough, leading to a series of strikes at different facilities (Stewart, 2023). Although the fact that the breakthrough arrived because of an insufficient pay deal as opposed to poor working conditions does raise questions over the effect of technological control and how this can be used to drive organisation, nevertheless this has begun to emerge as a factor behind action being taken by workers (Middleton, 2023). The forms that such organisation takes, and the strategy and tactics developed as a result, will be critical in forming effective worker organisation in response to technological implementation and labour process reorganisation, not only in Amazon, but more broadly in workplaces across society.

3.5 - Manufacturing

Technological implementation and labour process reorganisation is also having a significant impact on the manufacturing sector. The UK government commissioned a report, published in 2017, to “set out a vision for growth across and increased productivity across the manufacturing sector by unlocking the potential of Industrial Digital Technologies (IDTs)” (Department for Business, Energy and Industrial Strategy, 2017: 7). The report argues that there is “strong evidence that IDTs will create jobs” (ibid: 48), through a number of different means, including new types of jobs that

emerge as a result of new technology, “employment opportunities where the customer pays for ‘use’ instead of ownership” (ibid) and jobs created by the reinvestment of growth resulting from productivity increases. The report suggests that IDTs will lead to higher paid jobs as the higher-skills requirements “command a wage premium”.

The Made Smarter review also acknowledges the fact that IDTs will change the nature of work but argues that in addition to the potential of technology to automate whole jobs being overstated, that automation “provides the opportunity for humans to focus on higher-skilled, higher-quality and higher-paid tasks” (ibid: 51). It provides an example of a BMW factory in Spartenburg in the USA, where the introduction of ‘cobots’ (robots working alongside humans) has led to a 50% increase in productivity with no job losses, whilst workers who had previously carried out the tasks performed by the robots were “promoted from machine operators to robot programmers” (ibid). However, the report was industry led, and its list of contributors contains a wide range of businesses, as well as some research institutions, but no trade union or worker representation whatsoever.

One area where advanced manufacturing companies differ from Amazon and platform firms, is in the skill levels of lay workers. The German manufacturing giant Siemens outlines one of its operational risks as being a shortage of skilled workers, as outlined below:

“We have ongoing demand for highly skilled employees and a need to enhance diversity, inclusion and sense of belonging in our workforce. Our future success depends in part on our continued ability to identify, assess and hire engineers, digital talent and other qualified personnel. We must also integrate, develop and retain them after they join us, which appears increasingly relevant in times of a new, increasingly virtual working environment.” (Siemens, 2021: 38)

This suggests a recognition from Siemens that its workforce has skills that are in demand elsewhere, and also that it has a much smaller pool of workers from which to choose. This is in contrast to platform companies, or Amazon fulfilment centres, who have access to a much larger pool of workers and are able to leverage this over their workforce when they attempt to organise or assert their rights. This means that vis-à-

vis other groups of workers such as couriers, Uber drivers, food delivery workers, the balance of power within the workplace is more favourable to skilled manufacturing workers. As technology continues to develop, this reduces the power of less skilled workers, however for many high-skilled workers, there is the potential that their skills could become even more in demand, and the balance of power may actually shift favourably in their direction. However, this also has to be balanced against the possibility that the automation of certain tasks may de-skill some jobs and leave them open to a wider pool of workers.

The potential for labour augmenting technology in advanced manufacturing, is outlined by Sébastien Boria who is the 'R&D Mechatronics Technology Leader' for Airbus' 'Factory of the Future'. Boria states that:

“In the case of a manufacturing facility, smart tools can help simplify the production process and improve efficiency by removing physical data logs and manuals. Operators must focus on their operational tasks, during which they need to keep their hands free for using the appropriate tools.” (Boria, n.d.)

He goes on to add that:

“Developing an airplane involves tens of thousands of steps that operators must follow with many checks in place to ensure quality. By adding intelligence to the system, the smart tools understand the actions that the operator must perform next and automatically adjust the tools to the proper settings, which simplifies the task for the operator. Once the action is completed, the smart tools can also monitor and log the results of the action, which improves the efficiency of the production process.” (ibid)

What Boria is describing here is an implementation of technology that does not seek to replace human workers, but rather seeks to automate certain tasks within the process, that enable the worker to concentrate on their main objective rather than having to constantly adjust the settings on their tools or machinery, reducing the risk of mistakes due to human error. This has clear benefits for management, in reducing the risk of mistakes which according to Boria, “could take hundreds of thousands of

dollars to fix” (ibid) and it makes the job of the operator easier, allowing them to concentrate on their main tasks much more closely and reducing the risk of errors. However, this also transfers knowledge of the labour process away from workers and embeds it into machinery. Although existing operators will retain their production skills, as new operators are added they will lack some of the skills and practical experience of their predecessors, which will result in a gradual deskilling over time. This may lead to a ‘hollowing out’ of jobs in the industry, with highly skilled programmers in charge of the machines, whilst the jobs of skilled operatives become semi-skilled or even unskilled.

In its 2020 annual report, Airbus also provides information about its plans to make a reduction of 15,000 jobs as a response to the Covid-19 pandemic – the company was able to negotiate both mitigation measures with governments and working time adaptation (i.e. a reduction in working hours) with its workforce, meaning that the ‘restructuring plan’ now amounts to a loss of around 6,100 jobs, almost a two-thirds reduction (Airbus, 2020: 101). This suggests that in future, if the automation of tasks reduces the amount of work necessary, it may be possible for workers and their representatives to negotiate a reduction in working hours rather than large numbers of job losses. This gives rise to the question of whether increasing productivity can provide workers with a reduced working week without loss of pay, something that is likely to depend on the relative strength of the workers at that particular time.

A further way in which advanced manufacturing firms differ from Amazon and platform firms is with regard to their attitudes towards worker organisation and trade unions. Companies such as Airbus and Siemens for example, provide official recognition to trade unions and accept the principle of collective bargaining and the rights of workers to organise. There are a variety of reasons for why this is likely to be the case, including the ‘corporatist’ history of many such companies and the higher-skill levels of workers, which leads them to have much greater ‘structural power’ within the workplace. This leads to a situation in which workers are much better treated and better paid than their contemporaries in the platform economy or Amazon. However, the comparatively good relations between the major trade unions that represent workers in manufacturing and major manufacturing employers (compared to grassroots unions and platform firms), can also blunt the perspective of workers on the nature of the class struggle, leading

to an economic focus on wages, without questioning the broader nature of control within the workplace.

It is important to consider the example of an area such as manufacturing, both in terms of the effect of technology and labour process reorganisation and worker organisation, in order to be able to adequately understand the effects of factors such as skill levels, reserve labour force and the importance of union density and recognition vis-à-vis platform jobs and Amazon. This can help to draw out factors that are more specific to each area of work, and those that can be drawn more generally, which is of particular importance in identifying the underlying mechanisms that are common across all areas of society, in different workplaces. In terms of worker organisation, it is also important in providing an example of workplaces in which workers have a high degree of 'structural power', in contrast to the 'associational power' of platform workers in particular. In doing so, this can help to better understand the effect of technology and labour process reorganisation more broadly, and also to contribute to the development of a more rounded theorisation of worker organisation and resistance.

3.6 - Conclusion

This chapter provided a historical context for the way in which technological implementation and labour process reorganisation have affected the nature of control within the workplace, but also crucially, how this has thrown up new avenues and possibilities for worker organisation and resistance. It is important to be able to situate contemporary phenomena within this historical context, in order to be able to draw links between different stages of capitalist development, and better understand the underlying dynamics of technological change and labour process reorganisation. Crucially, this also allows for a better understanding of working class resistance to the managerial imperative for control, and ways in which workers have utilised new possibilities in order to effectively organise against this. This understanding can be used, in order to develop a better conceptualisation of the nature of the class struggle within the workplace today, how technology and labour process reorganisation are affecting the nature of control, and how workers can be empowered to most effectively organise and resist.

The chapter then provided an overview of how technology and labour process reorganisation are affecting the nature of control within the three contemporary areas of work considered within the research – platforms, Amazon and manufacturing. Companies such as Amazon, Uber and Deliveroo provide a glimpse of how technology and labour process reorganisation can be used to exploit increasingly atomised workforces. The nature of the technology that has been utilised by such companies offers new levels of control and surveillance than would have been imaginable at many earlier stages of capitalist development. They have also made use of exploitative and insecure employment models through which to gain further implicit control over their workforce. Yet, like with all other stages of capitalist development, this throws up new possibilities for the effective organisation of workers. As outlined by Joyce et al. (2022), this is a factor that is under-researched, and this is something that forms a crucial part of this research. Not only understanding the effects of technology and labour process reorganisation on control within the workplace, but how workers can be most effectively organised to resist and assert their own power and interests. In doing so, this can address one of the key inherent weaknesses in Braverman's theory, as outlined in Chapter 2.

The chapter explored the two research questions (outlined at the end of chapter 2), which are included again below, for clarity:

RQ1 – How is new technology and labour process reorganisation affecting the nature of control in contemporary workplaces?

RQ2 – How can workers be empowered to effectively organise and resist the managerial imperative to control?

After section 2.2 provided the historical context, sections 2.3, 2.4 and 2.5 applied these questions to the three areas studied by the research – platforms, Amazon and manufacturing. Through the analysis of the literature within these sections, initial answers to the research question were provided, through the development of 3 'soft-hypotheses', that informed upon the initial stage of the primary research, 2 of which are related to RQ1 and 1 of which is related to RQ2, as shown below:

- SH1: That technology and labour process reorganisation are being applied within platforms and Amazon in a way that significantly extends managerial control (RQ1).
- SH2: The effect of technology and labour process reorganisation is much less in manufacturing firms due to a variety of factors, including skill levels and worker organisation (RQ1).
- SH3: There is the potential for much greater resistance and organisation of platform and Amazon workers, however this is dependent on the development of effective strategies by trade unions and the wider labour movement (RQ2).

The relationship between the research questions and soft-hypotheses is outlined in the diagram in Figure 1.1, which is included again below in Figure 3.1 in order to provide clarity to the reader:

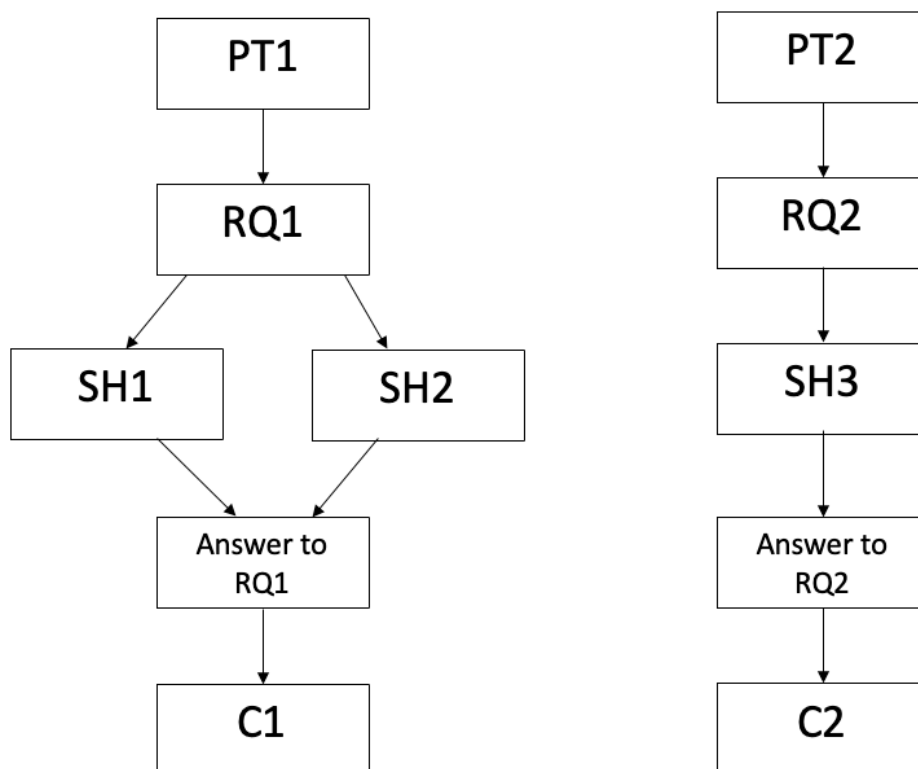


Figure 3.1 – RQ formulation & relationship chart

The purpose of these soft-hypotheses, and their relevance to the wider research methodology and design is outlined in greater detail in the next chapter. The soft-hypotheses were used to guide the initial research design, questions and coding – this provided a bridge between the theoretical work that was developed throughout Chapters 2 and 3, and the primary stages of the research. Following the methodology and analysis chapters, these soft-hypotheses will be re-assessed, refined and reconstructed based on the data that emerged from the research and analysis that has been conducted. The next chapter outlines the methodology of the research, the research approach and explains and justifies the use of critical grounded theory. Following this, the research design and analysis is also explained and justified in detail.

Chapter 4 - Methodology

4.1 - Introduction

Having consulted the relevant literature and given consideration to a number of methodological approaches, the methodology that has been selected for use within this research is '*critical realism*'. A key factor in the selection of critical realism as the methodological approach for the research is the ontological belief that there are power relations and structures that operate independently of human knowledge and thus "there is a distinction between the real structures and mechanisms of the world and the actual pattern of events that they generate" (Bhaskar, 2008: 46). Bhaskar makes a distinction between what he terms as a '*transitive dimension*', in which "the object is the material cause or antecedently established knowledge which is used to generate the new knowledge" and an '*intransitive dimension*' in which: "the object is the real structure or mechanism that exists and acts quite independently of men and the conditions which allow men access to it" (ibid: 17).

Three distinct domains of "the real, the actual and the empirical" are identified by Bhaskar (2008: 13); the domain of the empirical is what humans perceive to be the case, the domain of the actual is the events that actually occur "in space and time" and the domain of the real is "constituted of the mechanisms and structures which generate (and explain) events" (Vincent and O'Mahoney, 2018: 6). Vincent and O'Mahoney use an example relating to a study of a "fixed roadside speed camera" (ibid) to explain the concept of the three domains – they argue that a "traditional positivist approach", which may measure the speeds of cars and undertake a regression analysis to show correlation between speed cameras and slower speeds, would miss out on "the most complex element in the processes – the human" (ibid). They argue that although an alternative post-structuralist approach can produce useful insights, "when discourse is over-emphasised, and the self is seen as constructed, then resistance, social structure and the wider historical context can be missed" (ibid). They argue that the application of a critical realist perspective "not only accepts the distinction between the empirical (the appearance of a speed camera) and the actual (a speed camera with no film), but also seeks to discover the (deep) causal

mechanisms that relate the appearance of the camera with the person, asking what variety of causal relations must exist in order for the empirical events to occur” (ibid).

The application of a critical realist methodology enables what Belfrage and Hauf (2017: 254) refer to as a “useful third way between the naïve realism of positivist research and the radical constructionism of much postmodernism”. Critical realism accepts the ‘*external reality*’ associated with positivism, but also allows for different interpretations of that reality by individuals, acknowledging both structure and agency and interdependencies between them (Belfrage and Hauf, 2015: 8). The ‘structure-agency dualism’ (Thompson and Vincent, 2010) and the analysis of the interplay between the two, is an integral part of critical realism, echoing Marx’s notion that “men [sic] make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past” (Marx, 2001: 7).

In an academic inquiry such as this research it leaves us with a need to move from theory that is abstract to the ‘real’, or ‘concrete’ (Sayer, 1992). For this purpose, critical grounded theory (CGT) is useful. In CGT a logic is adopted between three milestones: the construction of proto-theory, research questions and soft-hypotheses (Belfrage and Hauf, 2015). The relationship between these three allows the researcher to design the investigation as a theoretically-led piece while confident in the methods deployed in the search for robust evidence. The proto-theories codify the analysis that takes place as a review of the most pertinent literature takes place. From this, research questions are constructed that are based in concepts and ideas previously accepted, in this case provided mainly by Braverman (1974) and his critics. These research questions require further reflection and in Chapter 3, by looking at them in a contemporary setting, three soft-hypotheses are developed. It means that the use of literature to proto-theorise helps construct research questions from which soft-hypotheses are presented. The importance of this is that the research is moved from the level of abstraction towards a more concrete form that guides the design of the primary research investigation (Belfrage and Hauf, 2015). This logic enables the researcher to provide answers from the evidence gathered to the research questions and in an epistemological sense, is an iterative process from abstract to concrete to abstract to concrete. It provides the researcher with some confidence to say the

research uncovers theoretically-led concrete research, or in other words, 'truth' in the field of study.

This chapter begins by providing situating critical realism within the context of alternative theories, which are used to explain and justify why critical realism is a suitable methodology with which to undertake this research. The next section analyses the relationship between critical realism and Marxism, showing why critical realism is an appropriate methodology to use when conducting research that is strongly influenced by Marx's writings. Following this section, the discussion moves onto the research approach, outlining why 'critical grounded theory' has been chosen as a suitable research approach for the research, as well as outlining in greater detail the concept of 'soft-hypotheses' that have been used to guide the research. The next section addresses the specifics of the research strategy and design, including sampling strategy, the type of data generated and the specific plans of how to gather research. The discussion then concludes by outlining how the data is analysed and is developed into a framework that will provide a better understanding of the effect of technological implementation and labour process reorganisation on the nature of work, and ways in which workers can be empowered to organise most effectively against this.

4.2 - Situating critical realism

A representation of how critical realism differs from more mainstream theories can be provided by considering the '*Roman myth of Cacus*' (Ollman, 2003: 12), in which a half-man / half-demon lived in a cave and only came out at night to steal oxen:

“Wishing to mislead his pursuers, Cacus forced the oxen to walk back into his den so their footprints made it appear they had gone out from there. The next morning, when people came looking for their oxen, all they found were footprints. Based on the evidence of these footprints, they concluded that, starting from the cave, their oxen had gone into the middle of a field and disappeared” (ibid: 12-13).

This example shows how a focus on the empirical, without consideration of the underlying mechanisms, can lead to very wrong assertions about what has occurred. In providing an alternative explanation to mainstream explanations (as outlined in the literature review), a critical realist approach can be used to argue how they “presuppose a flat ontology based on methodological individualism, atomistic relations and an unstratified, (naturally given) society” (ibid: 102). This can be especially applied to the positivism of ‘*marginalism*’ and the ‘*neoclassical*’ approach, which portray the economy (and society) as made up of ‘*utility maximising individuals*’ seeking to achieve the outcome which best satisfies their preferences (Trigg, 2010: 60). Even if such a viewpoint was accepted at the empirical level, it would still be committing the ‘*epistemic fallacy*’ (Bhaskar, 2008: 36) of taking what appears to be the case as fact and as given, rather than further investigating why things are as they are and how what is observable relates to what is ‘*real*’. The neoclassical approach collapses ontology into epistemology, by upholding “the view that statements about being can be reduced to or analysed in terms of statements about knowledge” (ibid). The inability of mainstream theories to investigate the domain of the ‘*real*’ and the generative mechanisms that underlie society and the economy are a key weakness of such theories and an area in which critical realist research can help to build a much better understanding of social and economic phenomena.

Critical realism also seeks to chart a different path to interpretative research approaches such as hermeneutics, which derives its name from the Greek term ‘*hermeneuein*’, meaning ‘to interpret’ or ‘to understand’ (Crotty, 1998: 88). A key figure associated with modern hermeneutics is the philosopher Martin Heidegger - Heidegger’s belief that “philosophy is ontology” and that “only as phenomenology is ontology possible” (ibid: 96), highlights a key area of difference between critical realism and hermeneutics, namely hermeneutics’ blurring of the lines between the intransitive (real) and transitive (actual, empirical) dimensions. Heidegger’s aim was to embark upon a “phenomenology” of the human being, in which the ultimate aim was to “grasp the meaning of being itself” (ibid: 97), yet this entails a focus on what Bhaskar terms as ‘*experiences*’, which he argues are often “out of phase” with events and as a result, out of phase with the underlying mechanisms, meaning that this only corresponds to the domain of the ‘*empirical*’ and not to that of the ‘*actual*’ or the ‘*real*’ (Bhaskar, 2008: 13). Thus, critical realism is a much more suitable approach for this research, as it

seeks to examine how underlying mechanisms affect the way in which technology and labour process reorganisation impacts upon the nature of work, and worker organisation and resistance.

The critical realist viewpoint also necessitates a rejection of post-modernism, particularly in relation to Nietzsche's statement that "The subject is multiplicity that built an imaginary unity for itself" (Van der Pijl, 2009: 276). As Van der Pijl points out, this would mean that "we arrive at as many different worlds as there are people; everybody is a maker of his/her own imagined universe, people float through each other's worlds on different wavelengths" (ibid). This is, once again, a collapsing of the intransitive and transitive domains into one, with reality portrayed as dependent upon the perceptions and / or beliefs of individuals, with an allowance for '*multiple worlds*'. Although critical realism does allow for multiple interpretations of the world, it differs from post-modernism in its ontological perception that these are only interpretations of a separate, single reality, rather than the constitution of reality itself. In terms of the research area, it means that although different individuals may have differing views about the impact of technology and labour process reorganisation and / or worker organisation, these are interpretations of an external reality. This also means that, unlike with a post-modernist approach, different interpretations will not be perceived as equally valid, with critical realism holding that "some theories approximate reality better than others, and that there are rational ways to assess knowledge claims" (Bygstad et al., 2016: 84).

This critique of post-modernism can be linked back to the way in which Martinez Lucio and Stewart (1997), Spencer (2000) and Carter and Choonara (2022) are critical of the subjectivist response to Braverman as outlined in Section 2.3. As outlined in Chapter 2, the research seeks to allow for the subjective perceptions of participants, whilst still centring the ontological truth of an external, objective reality. Unlike with a post-modernist or subjectivist approach, the research doesn't have to treat all perceptions as equally valid but can use these perceptions to try to better understand the external, objective truth that underlies them. This demonstrates how critical realism is a suitable research approach to use, in allowing for much greater flexibility in terms of incorporating the subjectivity of individuals than Braverman, without abandoning the core objective ontology underlying both his and Marx's work.

4.3 - An epistemological approach to critical realism and Marxism

The extent to which Marx and critical realism complement each other has been a subject of debate within academia – some, such as Bhaskar argue in favour of the complementary nature of the two, as does Callinicos, who, whilst sceptical of some aspects of critical realism, stated that “there’s a sense in which the subject of our discussion, namely the relationship between critical realism and Marxism, is an established fact. I think the relationship between the two is very deep” (Bhaskar and Callinicos, 2003: 89). There are those however, who are somewhat more sceptical about the relationship between Marxism and critical realism, including Roberts (1999), who argues that “critical realism in fact pursues a different theoretical project to that of Marxism” (ibid: 21) and that the “dualism” that he accuses critical realism of, “reduces Marx’s practical insights to one of theory and method” (ibid: 43). Roberts concludes by providing a table of “implicit differences” between ‘*Marxist materialism*’ and critical realism and questioning critical realists’ commitment to “*change the world*” (ibid: 44). However, Roberts fails to distinctively convince that critical realism and Marxism are incompatible, with many of his arguments against critical realism failing to stand up to scrutiny, particularly the claim that critical realism separates theory from practice (ibid: 43) – a claim that can be undermined by the application of critical realism with critical grounded theory, as will be outlined later in this chapter.

The suitability of critical realist research and a Marxist analysis is outlined by Collier (1998). One parallel that Collier draws, is between the critical realist concept of different ‘*strata*’ (i.e. the three domains) with the Marxist concept of ‘*base and superstructure*’ (ibid: 264-265); the base acts as an underlying mechanism that influences the development of the superstructure. For Marx and Engels, Collier argues, this base / superstructure distinction is taken to represent ‘the material (or economic) versus the rest’ (ibid: 265). In the analysis of capitalism, the economic influence of the base acts as an underlying mechanism, affecting the development of factors within the superstructure (such as political or ideological concerns) – in critical realist terms, the different levels of the superstructure represent the domains of the actual and the empirical, whilst the base represents the domain of the real, with the economic laws

of capitalism acting as the “deep causal mechanisms” (Vincent and O’Mahoney, 2018: 6) influencing the superstructure.

This perceived dominance of economic matters over other factors (such as political, ideological or cultural) is often portrayed as being ‘*economically deterministic*’, with critics arguing that the prioritisation of economic matters over other factors leads to an over-simplified account of a much more complex reality and web of causation. The response to this is to differentiate between vertical and horizontal causality (ibid: 271-272). Collier describes ‘*horizontal explanation*’ (or ‘*dominance*’) as “the explanation of events in terms of various generative mechanisms operating conjointly, of which those events are the output resulting from a given input”, whereas he describes ‘*vertical explanation*’ (or ‘*determinance in the last instance*’) as “the vertical explanation of some of those mechanisms (the upper storey ones) in terms of others” (ibid: 271). Collier argues that this does not mean that certain mechanisms are more effective than others (i.e. economic rather than ideological or political), as at the level of horizontal causality “generative mechanisms of any stratum may play their part, and no-one can say in advance what the relative weight of the various parts may be” (ibid: 272). Whilst at the level of vertical causality, “it is true that the ideological and political mechanisms are what they are because the economic (and more generally, material) ones are what they are – and not at all vice versa” (ibid), this does not mean that only lower-level economic (or material) factors influence the development of events, but that the generative mechanisms of higher-level factors (such as political, ideological or cultural) are derived from those of lower-level factors.

For the current research, vertical causality can be seen as the lower order factors (e.g. economic and technological mechanisms), influencing the higher order factors (such as ideological or political), which arise in reaction to the development of the lower order factors. However, an acknowledgement of horizontal causality reflects the fact that the further development of the phenomenon in question can be affected by the higher order factors just as much as the lower factors - for example, legislation that is driven by political considerations could act to stunt the further development and implementation of technology that would otherwise have occurred. As Joseph (1998: 94) puts it: “critical realist methodology would reject economic determinism as it would reject any other form of reductionism”. Nevertheless, he also states that critical realism

“fully supports the view that the stratification of the social world has a hierarchical character, albeit a dialectical and overdetermined one, rather than something resembling a wedding cake” (ibid). This recognises the primacy of economic and technological factors, without falling into simple economic or technological determinism and discounting the influences of higher order factors such as political or ideological interests.

The epistemological positioning of the research is built upon this foundation of critical realism and Marxism. It means that the researcher can occupy a third position between the extremes of positivism and interpretivism, allowing for an independent reality that is nevertheless experienced differently by individuals. The critical realist domain of the ‘real’ and the Marxist conception of the ‘base’ represent the independent material reality underlying society. However, the critical realist domain of the empirical in particular, and the Marxist conception of the superstructure, represent the areas in which the perceptions of individuals differ. The movements between these different areas also represent the Marxist movement between the abstract and concrete, and the retroductive movements associated with critical grounded theory (as described below in section 4.4). The research questions are developed from the assessment of the objective, independent material reality. The development of the soft-hypotheses moves the research into the empirical / superstructure area, in which the perceptions of individual participants are investigated, analysed and combined in order to refine and reconstruct the soft-hypotheses. The research then moves back to the real / base area, in which the refined and reconstructed theory is used to answer the research questions and refine our understanding of the objective, independent reality that exists at this level of abstraction.

4.4 - Applying critical grounded theory

The research approach that was for this research is ‘*critical grounded theory*’ (Belfrage and Hauf, 2015: 7). The development of grounded theory itself is credited to Barney Glaser and Anselm Strauss with their 1967 work ‘*The discovery of grounded theory*’. The purpose of grounded theory was to generate “new theory from data, as opposed to testing existing theory” (Birks and Mills, 2011: 2) – this is particularly appropriate in an emerging research area such as that of the current research, in which knowledge

and theory are limited. By using an approach that seeks to build new theory from the data, rather than testing severely limited existing theory, much richer knowledge and understanding of the subject in hand can be developed through the course of this research. This theory emerges initially through the soft-hypotheses that emerged at the end of Chapter 3 as initial responses to the research questions, which are then developed and reconstructed through the research process.

Critical grounded theory (CGT) differs from both '*classical*' and '*constructivist*' versions of grounded theory, as outlined by Belfrage and Hauf (2015: 7) when they state that: "while the classical version of grounded theory is founded on a positivist epistemology, subsequent generations have explored radical constructivism. Our critical version is founded on critical realism and thus occupies a third meta-theoretical position". The development of CGT therefore provides a method through which a critical realist researcher can develop theory from the data, whilst staying true to the philosophical position of critical realism. Unlike classical grounded theory, CGT embraces 'proto-theories' or 'pre-concepts', which are worked through in an initial deskwork period and used to guide the development of the research questions. The researcher then analyses relevant scientific literature, and other documents such as media or policy documents, before using them to construct "soft hypotheses" (ibid: 11), which are used to move the research from the abstract to the concrete and provide initial answers to the research questions. These hypotheses are not however, "tested for verification or falsification as in quantitative methods", nor are they "bracketed or suspended as in constructivist grounded theory", but rather "consciously put into dialogue with observations made in the field and with conceptualisations of participants" (ibid: 12). This allows for the use of retroduction in the research process, which in turn "allows for the informed, but tentative and relatively open-ended vertical movement in research from the abstract and simple to the concrete and complex" (ibid), thus enabling a constant movement between the three critical realist levels of the empirical, actual and real and between the transitive and intransitive dimensions (as outlined in Section 4.1).

A key tenet of Marx's work, was his ability to move between the abstract and the concrete, using the abstractions to build theoretical models that in turn informed upon the more empirical, concrete material found in his work. This is outlined by Beamish

(1992: 167), when he states that Marx “continually returned to his early philosophical training when working through complex issues. By working abstractly within a specialised vocabulary, he could develop a theoretical skeleton with which to detect areas that needed further theoretical or empirical development, or aspects of his work that needed empirical illustration”. As Marx’s understanding of political economy developed, he continually moved back and forth between the abstract and the concrete, making use of both methods in order to develop an ever more advanced understanding of political economy. The abstract moments helped him to conceptualise how society and the economy worked, whereas the concrete moments helped him to empirically ground his theories into the real world. Given the definition of CGT provided in the previous paragraph, the similarities the method has with the method used by Marx himself demonstrates the suitability of using CGT as a research approach in research that uses the writings of Marx as an important reference point and influence.

There is a further parallel with Marx’s method outlined by Belfrage and Hauf (2015: 12), when they state that “empirical data analysis employing a CGT method serves to construct rich and conceptual frameworks able to refine our understanding of the social at higher levels of abstraction”, which in critical realist terms means to refine our understanding of things at the ‘real’ level or in the intransitive domain. The use of retrodution in CGT is also outlined by Belfrage and Hauf (2017), who highlight that it involves both a ‘deductive moment’ and an ‘inductive moment’. In the deductive moment, “existing theories and concepts are worked through and applied to the research to generate initial conceptualisations that sensitise the researcher’s understanding of observations and guide dialogue with participants” (ibid: 260), in contrast to the approach of classical grounded theory. In the inductive moment, the researcher “immerses herself in the field, before working up empirical data through deskwork into emerging conceptualisations, refining previous concepts, deepening understanding, altering explanations and reconstructing existing theory in order to appropriate the real-concrete as a concrete-in-thought” (ibid). The result of this is “not an objective grounded theory discovered in the data, but a *critical* grounded theory reconstructed through a retroductive research process” (ibid), in which the soft-hypotheses are revisited post-analysis and used to provide answers to the research questions.

A key reason why CGT is an appropriate research approach for the current research lies in the link it provides between a critical realist research philosophy and developing new theory that is grounded in the data gathered during the research process, enabling the constant movement between the data that is gathered from the research (transitive domain) and a more abstract theoretical model (intransitive domain). The initial soft-hypotheses, emerging from the literature review informed the questions that were asked to participants taking part in semi-structured interviews. The data from these interviews were then analysed and used to develop theory, which informed the questioning at the empirical level, with this acting as a “continuous, spiral movement between the abstract and the concrete, between theoretical and empirical work, involving both an interpretative and a causal dimension of explanation” (ibid). Hoddy (2019: 120 - 121) states that he found the application of grounded theory techniques informed by critical realism useful for “moving from an analysis of the empirical or concrete experiences and realities through a mode of inference and abstraction that permitted getting at the real relations, structures and mechanisms of causal interest”. For this research, these factors enabled a movement from the initial soft-hypotheses developed from the literature, to the empirical statements of the participants, and then on to the underlying relations, structures and mechanisms of the effect of technology and labour process reorganisation on the nature of control within the workplace, and the organisation and resistance of workers to this.

4.5 - Research strategy and design

When formulating the research design, a key initial step is to consider issues relating to the ethics of the research and process of gaining ethical approval. This is important in terms of ensuring the interests and safety of both the researcher and participants are protected, but it also provides an opportunity for the researcher to reflect upon what they want to achieve with their research and how they want to achieve it. The process of acquiring ethical approval for this research has enabled reflection upon the research itself and influenced how the research has been designed, in order to ensure the best possible research process, as well as to provide positive experiences for the researcher and participants. Part of the ethical approval application outlined that the research seeks to be as inclusive with participants as possible, including them in the

research process and ensuring that the data gathered is as representative of their perceptions as possible. In addition to this, the need to outline steps in the research design as part of the process has helped to crystallise the research design and plan for analysis, as will be outlined in the rest of this chapter.

The research design is qualitative. The focus of the primary research is a series of semi-structured interviews with representatives from trade unions, workers and academics. The research was designed in this manner, using a key informant approach in order to gain the insight of experts who have a well-informed and well-developed understanding of the phenomena under investigation. Given the semi-structured nature of the interviews, there was some degree of variation. There were some questions that were asked to all participants, whilst some were tailored towards the more specific knowledge area of the interviewee. Additionally, scope was built into the interview design for extra questions to emerge out of the discussions with participants, in order to prevent missing out on important data due to attempting to keep to too rigid a structure. The list of general questions used within the interviews is provided in the example interview schedule in Appendix 2, along with a list of example targeted questions, selected from a range of different interviews.

Initially, the research was designed so that the interviews would, as much as possible, take place face to face, as this allows for a better rapport to be built between the interviewer and interviewee (Bryman and Bell, 2015: 219). However, due to the Covid-19 pandemic and the subsequent restrictions imposed, all interviews took place via video-call software (primarily Zoom), with no face-to-face interviews taking place, in line with research guidelines. The interviews with participants also provide material located within the transitive domain. The key focus of the analysis however, was to develop an understanding of things at the 'real' level (i.e. the intransitive domain) and identify the generative mechanisms at play and how these are affecting the way in which new technology is being implemented, the associated labour process reorganisation and worker organisation and resistance.

The necessity of changing the interview structure to being online as opposed to face to face, over which there was no choice due to the government's Covid-19 restrictions, did change the context in which the interviews occurred. There was a loss of the

informal interactions that occur before and after in-person interviews, which help to build rapport between the interviewer and interviewee. Additionally, it is also harder to read body language and judge reactions to questions online, than it is when sharing a room with an interviewee. The timing of the primary research stage during the Covid-19 lockdown period and the subsequent restrictions, did affect the nature of the research and the context in which it occurred. It made accessing participants more difficult in some circumstances, particularly where the nature or process of conducting their own work had been affected by the pandemic and restrictions. Nevertheless, the flexibility built into the research design allowed for the necessary amendments to be made, allowing for the research to take place in an effective and robust manner.

The effect that having to adapt the ethics and research design to the Covid-19 restrictions and the need to conduct all interviews virtually was significant. As outlined above it provided a different research context to if the research had been able to take place physically, in face to face meetings. Roberts et al. (2021), outlined the effect on this on their own research, in the following way:

“We find that switching to a virtual modality affected nearly all aspects of our research process, from designing our research questions to recruitment, data collection, analysis, and dissemination. In particular, we found that the virtual space presented unique challenges—and some unique opportunities—in ensuring that our research process was rigorous and equitable.”

This is not to say that the need to conduct interviews virtually has a negative impact upon the research, as the authors state, it also presents some unique opportunities. However, it presented a challenge in terms of shifting the ethics and research design at a critical point of the research, particularly given the unprecedented nature of a global pandemic. Nevertheless, by taking the time to carefully consider the research design, this was accounted for sufficiently and allowed for a robust research design that was suited to the specific, unprecedented conditions of the pandemic, whilst allowing for the collection of quality data from participants that has been used to provide strong research and analysis.

Participants were selected using non-random, purposive sampling (Saunders et al., 2019: 321). Due to the intensive rather than extensive nature of the research, the selection of participants was based upon accessing those who could provide the best insights into the phenomenon as opposed to targeting a broad sample of the population, as is usually the case with random sampling. The form of purposive sampling used, is '*theoretical sampling*', which Saunders. et. al describe 'as "cumulatively chosen according to developing categories and emerging theory based upon your simultaneous collecting, coding and analysis of the data" (ibid: 323). The research design will also follow a '*sequential approach*' in that it will be an evolving process which "begins with an initial sample and gradually adds to the sample as befits the research questions" (Bryman and Bell, 2015: 430). The data and theory that emerged from the initial primary research stage led to the identification of additional participants, who could provide a further insight into the phenomenon in question and provide the emerging theory with greater depth and richness. Thus, the sampling strategy that was chosen for this research is crucial in ensuring that the best participants were identified and the data and theory that emerge were as rich and robust as possible.

The number of interviews that took place was 18. The research was designed as intensive rather than extensive, as explained in the next paragraph. The research is not seeking to sample a large, representative selection of people, in order to find a generalised view of the phenomena under question. It is rather designed in order to ask a selection of experts, carefully selected in order to account for multiple organisations and perspectives within the wider labour movement. This includes senior representatives of the Trades Union Congress (TUC) at both national and regional level, large TUC affiliated unions (Unite and GMB), smaller TUC affiliated unions (Prospect and Community), a grassroots union (IWGB), labour academics and workers involved with trade union activity. The number of interviews is consistent with providing for each of these different types of organisations and categories within the labour movement. There is a clear choice to be made between intensive and extensive research, with it being beyond the scope of a PhD investigation to achieve both – given the methodology outlined, an intensive research project was more suitable, as this provides the level and depth of data necessary to uncover the underlying mechanisms under investigation. Whereas an extensive study, using surveys for example, might

provide a large representative sample, but the amount of in depth data generated is likely to be limited and insufficient. The interviews conducted for this study lasted for between 45 mins and an hour, and have provided a large volume of rich data, consisting of 92,673 words, an average of 5,149 per interview.

A distinction between 'intensive' and 'extensive' research approaches is outlined by Sayer (1992: 243). The initial distinction between the two categories is defined as follows: "in intensive research, the primary questions concern how some causal process works out in a particular case or limited number of cases. Extensive research, which is more common, is concerned with discovering some of the common properties and general patterns of a population as a whole" (ibid: 242). As mentioned above, this research will be focused on intensive research, consisting of the gathering and analysis of primary data in Chapters 5, 6 and 7. The number of interviews is supported by the quote above from Sayer – it is not about the maximisation of the number of interviews in order to find general patterns, but the depth of the interviews that are conducted, in order to uncover causal processes. This is outlined further by Sayer (ibid: 243), when he states that intensive research is concerned with the "causal explanation of the production of certain objects or events".

This is in keeping with a critical realist approach, which seeks to uncover the causal mechanisms underlying social phenomena, rather than seeking simply to describe them at a more surface level. Sayer lists the limitations of such an approach as the extent to which they are generalisable or representative. A well-designed selection of candidates, can help to give a sufficiently broad representation of viewpoints, which can also help to mitigate the problem. The research design included careful selection of participants, in order to allow for the inclusion of different perspectives, organisations and ideologies within the labour movement. Due to both time and space considerations, a primary research stage that was both intensive and extensive would be somewhat beyond the scope of research such as this. Therefore, there is a clear trade off to be made between intensive and extensive research, and for research such as this, intensive research is the more suitable choice.

Care must also be taken to ensure the quality of the research design; Saunders et al. (2019: 217) provide what they term as "alternative quality criteria" that is more suitable

for qualitative research than traditional criteria such as validity and reliability that are more associated with quantitative research, drawing upon the work of Lincoln and Guba (1985). This theme of alternative quality criteria for qualitative research, drawing upon the work of Lincoln and Guba, is also cited by (Bryman and Bell, 2015: 400 - 404), who outline two primary criteria for assessing a qualitative study: '*trustworthiness*' and '*authenticity*'. Trustworthiness is subdivided into four sub-criteria, each of which has an equivalent criterion in quantitative research (shown in brackets): '*credibility*' (internal validity), '*transferability*' (external validity), '*dependability*' (reliability) and '*confirmability*' (objectivity).

'*Credibility*' here refers to the plausibility of the account that the researcher arrives at, which will then determine its acceptability to others (ibid: 401). For this criterion to be met, "emphasis is placed on ensuring that the representations of the research participants socially constructed realities actually match what the participants intended" (Saunders et al., 2019: 217). Saunders et. al outline a number of steps that can be taken to achieve this, including building trust with participants, the use of reflection using a different person to discuss ideas with and checking data, analysis and interpretations with participants. This can be achieved for this research by the careful building of relationships with participants and including them as much as possible in the research process in order to ensure that the data gained from them is as accurate and true to their view as possible.

'*Transferability*' refers to the researcher providing "a full context of the research questions, design, context, findings and interpretations" which provides the reader with the opportunity to "judge the transferability of the study to another setting in which the reader is interested to research" (ibid). This aspect can be provided for by expressing clearly what is intended within different stages of the research, building up a solid literature review to provide an initial context to the research and continuing to provide solid reasoning, evidence and records throughout the research process in order to provide the reader with a solid explanation as to the context of the research, the elements of the research design and the basis of the findings and interpretations, in order that the methods used can be as transferable as possible to other, future studies.

'Dependability' means to record “all of the changes to produce a reliable / dependable account of the emerging research focus that may be understood and evaluated by others” (ibid). Keeping a record of changes is integral to providing a guide as to how the research process progressed, which is integral in ensuring all three of the other aspects of trustworthiness and particularly in ensuring transferability, in terms of ensuring that the steps taken are as easy to follow as possible. *'Confirmability'* means to ensure that “whilst recognising that complete objectivity is impossible in business research, the researcher can be shown to have acted in good faith” (Bryman and Bell, 2015: 403), meaning that “it should be apparent that he or she has not overtly allowed personal values or theoretical inclinations manifestly to sway the conduct of the research and findings deriving from it” (ibid). To ensure confirmability, all participants must be treated fairly and equally, with no pre-judged perceptions or perceptions that emerge during the interview or research process allowed to interfere with the process and potentially contaminate the quality of the data and / or analysis.

Returning back to the two primary criteria, as well as ensuring trustworthiness, the criterion of *'authenticity'* must also be met. Authenticity is also subdivided into five sub-criteria: *'fairness'*, *'ontological authenticity'*, *'educative authenticity'*, *'catalytic authenticity'* and *'tactical authenticity'* (Saunders et. al, 2019: 217; Bryman and Bell, 2015: 403). In order to meet the criteria of *'fairness'*, the research “must fairly represent different viewpoints amongst members of the social setting” (Bryman and Bell, 2015: 403). In order for this research to meet this criteria, a number of differing viewpoints will be included within the research, from various different perspectives within the wider labour movement. *'Ontological authenticity'* is described as research that “helps members to arrive at a better understanding of their social milieu” (ibid). The purpose of the research is to provide a better understanding of how new technology and labour process reorganisation is affecting control within the workplace, and how workers can effectively resist and organise against this – the research will meet the ontological authenticity criteria by doing this, providing participants from different perspectives with a better understanding of how this is affecting them and others.

The inclusion of differing (and in some cases opposing) viewpoints will help to meet the *'educative authority'* criterion, which is defined as helping members to “appreciate better the perspectives of other members of their social setting” (ibid). This will occur

both through considering the viewpoints of others through the research questions and also upon reflection of the findings and analysis of the finalised research. '*Catalytic authenticity*' is defined as research acting as "an impetus to members to engage in action to change their circumstances" (ibid). One of the key contributions of the research, is an analysis of how workers can be empowered to effectively organise within the context of contemporary technological change and labour process reorganisation, which is a clear indication of how this criterion is met. Although it cannot be known at this stage whether the research will act as an impetus to members to engage to change their circumstances, it will certainly be the aim of the research to do so. This also applies to the final sub-criterion '*tactical authenticity*', which relies on whether the research has "empowered members to take the steps necessary for engaging in action" (ibid). Like with the previous sub-criterion, it will be the aim of this research to empower readers to take the steps necessary by providing evidence of the steps that need to be taken and a series of recommendations.

Displaying an awareness of the need for reflexivity within the research process is also an important element. Saunders et al. (2019: 814) describe reflexivity as "self-examination, evaluation and interpretation of your attitudes and beliefs, reactions to data and findings, and interactions with those who take part in the research and acknowledgement of the way these affect both the process and outcomes of research". Reflexivity is particularly important with relation to findings that may come as unexpected or as a surprise compared to what a researcher was expecting to find. Findings and interactions with people who take part in the research may influence the direction that research at a later stage takes, so it is also important to allow for flexibility within the research process to accommodate this. Too rigid an approach may hinder the richness of the data that can be generated, so flexibility must be shown – for example, interactions with participants may amend or add to the type of questions being asked within the semi-structured interview process. Although it is also important not to allow too much flexibility and undermine the integrity of the research, the right amount of flexibility can allow for the strongest possible research process to take place.

Self-examination by the researcher during the process is also an important aspect of managing the research process. In line with the philosophical positioning of the

research, it is important to recognise that although an objective reality does exist at the level of the '*real*', individuals have their own individual perception that is a reflection of this reality, and the researcher is no different in this sense. It is important for the researcher to reflect upon their own attitudes and beliefs at different stages of the research and consider how this is influencing its development and the effect it is having on the shape the research is taking.

4.6 - Qualitative research coding and data analysis

Following the collection of data, the research design must consider how the data is to be analysed. The semi-structured interview data was coded and then analysed using Atlas.ti software, helping to identify crucial trends and information within the data. This was analysed using 'directed content analysis', which allowed for the constant movement between the abstract and concrete, as is consistent with the CGT method. This made use of the soft-hypotheses developed within the earlier chapters. As outlined by Hsieh and Shannon (2005: 1283) "the theory or prior research used will guide the discussion of findings. Newly identified categories either offer a contradictory view of the phenomenon or might further refine, extend, and enrich the theory." As the analysis developed, this helped to "develop a theoretical skeleton with which to detect areas that needed further theoretical or empirical development" (Beamish, 1992). The initial coding and analysis, and developing the 'theoretical skeleton', informed upon gaps that were present, and showed where further research and analysis was needed to provide a robust piece of research. This is consistent with both the use of CGT and Marxist methods.

The construction of the theoretical skeleton necessitated a constant movement between the abstract (theory) and the concrete (the data that has been harvested) in order to draw out the "mechanisms and structures which generate (and explain) events" (Vincent and O'Mahoney, 2018: 6) – events here, referring to the data that has emerged from the study. An example of this can be found with Marx, whose theory of the division of labour initially consisted primarily of a study of theoretical work on the division of labour (abstract). However, when he returned to the subject of machinery, his increased knowledge of the concrete history of machinery and labour "also affected

his presentation of the division of labour in *Das Kapital* by providing considerable concrete, illustrative material for his arguments” (Beamish, 1992: 113).

The initial coding was developed through the initial assessment of the literature, which led to the development of the 3 soft-hypotheses outlined at the end of Chapter 3. In line with using Directed Content Analysis, as the early interviews were analysed and coded using the codes developed from the initial soft hypotheses and initial interviews, new codes began to emerge from the data. These were then used alongside the original codes, in order to structure and guide the next interview. In turn, when each interview was analysed, new codes would emerge. There was then a retroductive return to the earlier interviews, to re-analyse and apply the new codes that had emerged from the most recent interview. This meant that there was a constant re-engagement with the data that had been generated from interviews, with concepts being continually refined throughout the research process. The codes generated can be found in Appendix 3a. Some of the key codes that emerged were used to guide the structure of sections in Chapters 5 and 6. The identification of key codes consisted of a dual process of identifying codes that were consistently present across a range of interviews, as well as those relevant to testing and reconstructing the soft-hypotheses and in turn, providing answers to the research questions.

As each interview was processed, they were placed into one of three categories – Academia / Research, Grassroots unions and TUC affiliated trade unions¹ (Appendix 3c). These categories were developed in order to clearly show the different positioning within the wider labour movement of each participant. As the analysis developed, the ‘TUC affiliated trade unions’ category was subdivided into three subcategories – Large general TUC affiliated unions, Smaller TUC affiliated unions and TUC officials (Appendix 3d). This was to allow for different categories within the broader category of the TUC and its affiliated unions, with large general, mass membership unions such as Unite and GMB being very different from smaller, more professionally focused unions such as Community and Prospect. This division and subdivision into these

¹ One participant was representative of both the ‘Academia and Research’ category and ‘Grassroots unions’ category, and was included in both, hence the total number of cases in these categories adding up to 19 rather than 18.

categories, was a key part in the emergence of the different ideological perspectives outlined in Chapter 7. Although the list of participants has been provided in Appendix 1 (in line with the ethical approval), each participant has been randomly assigned a pseudonym for the in-text references, from Participant A to Participant Q

4.7 - Conclusion

By moving between the abstract and concrete, and understanding both, Marx had enabled himself to understand the role that the concrete specifics of machinery had played in affecting the specific division of labour within the capitalist economy, providing him with a much better understanding of the role that generative mechanisms (such as the earlier social division of labour and the mechanisation of human labour) had played in creating the observable conditions of production. For the current research, by combining the abstract (the research questions) with the concrete (an analysis of the soft-hypotheses in the context of the viewpoints of participants), the abstract and concrete can be synthesised in a framework that can uncover the underlying mechanisms affecting the phenomenon at hand and lead to a much more informed and well-developed understanding of it as a result.

The research uses a critical realist research methodology, in order to account for the need to recognise different perspectives (i.e. subjectivity), without abandoning the idea of there being an objective, external truth. The epistemological positioning of the research, particularly the critical realist concept of the different perceptions of participants being subjective interpretations of an existent, objective reality, allows the research to achieve this. This addresses one of the common issues identified within the post-Braverman critique of his work (as outlined in Chapter 2), without abandoning the core concepts that underlie it, in favour of post-modernist conceptions of subjectivity. Furthermore, the use of critical grounded theory as the research approach allows for the design of the research to fit around this methodology, particularly the retroductive movement between the abstract and the concrete allowing for the movement between the critical realist domains of the real, actual and empirical. This is achieved through the movement between the research questions (abstract) and the soft-hypotheses (concrete) and back again, reconstructing and refining knowledge of

the way in which technology and labour process reorganisation is affecting the three areas of work researched.

The chapter finished by outlining the design of the primary research stage, and the subsequent analysis of data. It outlined why an intensive rather than extensive research approach was most suitable for the research and justifies the sampling strategy undertaken. The focus was not on accessing as many participants as possible, aiming to provide a representative but insufficiently in-depth sample of the population, but rather to carefully select a number of expert perspectives, representative of specific positions within the labour movement. It provided information on the coding structure that was used, and how this developed throughout the primary research stage, with continual development of new codes and recoding of previous interviews. The division of participants into categories guided the identification of particular ideologies within the labour movement, which is discussed further in Chapter 7. The next two chapters move into the primary research stage and outlines the research findings in relation to 'platform capitalism' and 'industrial capitalism' respectively.

Chapter 5 - Platform capitalism and perspectives within the labour movement

5.1 - Introduction

This chapter focuses on assessing the impact of new technology and the associated labour process reorganisation within platform companies and the impact that this has had on the nature of control within the workplace. Through conducting a series of interviews with experts on the platform economy, the research explores a range of different perspectives within the wider labour movement. As outlined in Chapter 4, the research makes use of a critical realist research position, through which to provide a link between the subjective positions of participants and the external, objective reality that is happening within platform work. In addition to this, the research also analyses a range of different perspectives on how platform workers are resisting and organising in response to the managerial imperative towards control, and to assess participants opinions about the best strategy for achieving the successful organisation of the platform workforce going forward. The analysis that takes place in this chapter will - alongside the analysis on 'industrial capitalism' in Chapter 6 – contribute to the development of specific categories that have emerged from the data in relation to the different ideological perspectives on organisation within the labour movement. These will be outlined in Chapters 7 and 8.

This chapter moves the research into the stage of investigating the soft-hypotheses that were outlined at the end of Chapter 3. The stage of the research process is highlighted below in Figure 5.1:

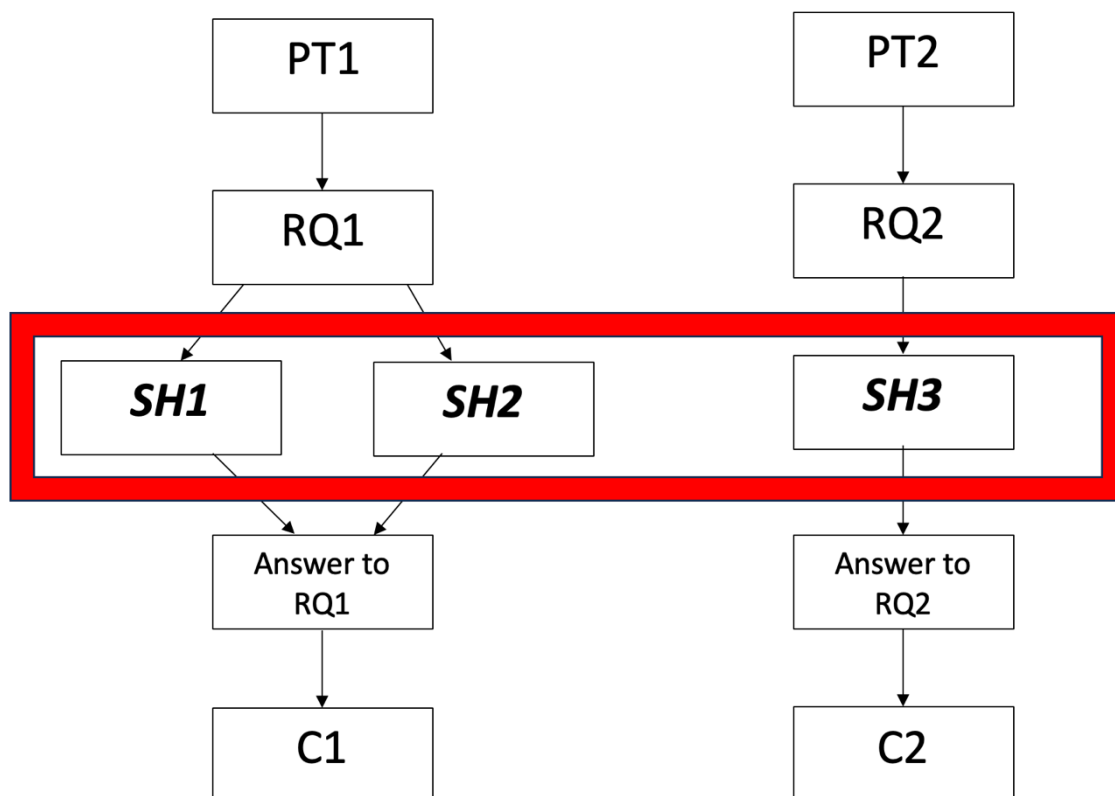


Figure 5.1 – Stage of research

5.2 - Platform Capitalism

Platforms are at the cutting edge of technological implementation and changing forms of work. However, as the consideration of earlier periods of technological implementation in Chapter 3 have demonstrated, a major question that this poses, is the extent to which the effects of technology on work are due to factors inherent within the technology itself, or because of the way in which technology has been applied. The discussion around platforms that took place within the interviews mostly focused on two specific examples that repeatedly cropped up and that also featured extensively in the review of the literature – Uber drivers and food delivery workers, working for platforms such as Deliveroo and Just Eat, although some other groups of workers are also considered (for example Amazon couriers).

There is often a large degree of overlap between platform work and gig economy work, and it is important to differentiate between the two concepts. The concept of the 'gig

economy' refers to insecure employment, with no fixed contracts or guaranteed work, little job security, low pay and limited (or non-existent) employment rights – workers in the gig economy will usually be on either a zero-hours contract or classified as self-employed (Cant, 2019; Bloodworth, 2018; Woodcock, 2021). Although these trends are often also prevalent in platform jobs, what differentiates platform jobs from other gig economy jobs, is the technological aspects – the use of apps to access work, increased monitoring and surveillance through the apps and the use of algorithmic management. The investigation of the effect that technology is having on the platform workforce, is not to question the implementation of technology in and of itself, but rather the way in which it is being applied in order to increase managerial control and the exploitation of workers:

“... one of the wider challenges we face with technology is, technology, as you say, is a good thing... us being able to use computers, us being able to do things like this, makes it more accessible... but that being misused – by organisations and then by individuals, is the challenge. And also, not just using it for the good, not just using it to make the world more interconnected and stuff like that, we're using it to then track people, and monitor people, and get that bit more out of people, rather than seeing that it gives us productivity gains anyway.”²

The increasing proliferation of platforms over recent years (particularly from the second half of the 2010s) has led to much debate over why this is the case, and what platform work is intended to achieve. Participant B sees platform work “as an attempt to organisationally shift the balance between capital and labour”³ and “about taking work that would previously have happened within an organisation and essentially outsourcing it to bogus self-employed contracts”⁴. In workplaces where employees are directly employed, there are limits to the extent to which employers can drive down the wages and conditions of their employees. However, the proliferation of platform work (in conjunction with zero-hour contracts and bogus self-employment) allows

² Interview with Participant I

³ Interview with Participant B

⁴ *ibid*

companies to drive down wages and conditions, with workers in many cases earning below the minimum wage, when non-payment for waiting times are taken into account.

The question of whether or not platform workers should be classified as self-employed is often at the heart of discussions around the platform economy. The UK Supreme Court ruled that Uber drivers should be classified as ‘workers’ (or ‘Limb B’ workers), in large part because of the level of control that the company is able to exert over the labour process (The Supreme Court of the United Kingdom, 2021). The issue of control will be analysed in a later section of this chapter, but it is important to consider here why, if the company is able to control the labour process, why Uber (and other platform companies) are so insistent that drivers should be classed as self-employed? A key reason for this is likely to be the lack of profitability of platform companies – many of them continue to haemorrhage money, only being kept afloat by the venture capital that continues to pour in (Woodcock, 2021: 30). In the context of declining trade union membership, low levels of density and restrictive laws across much of the developed world in particular, finding loopholes to attack the wages and conditions of workers are a convenient way for capital to cut costs and attempt to plug the profitability gap. However, the reasons go much deeper than this.

According to Participant B, platforms are at “the thin end of a much larger wedge, that is trying to reshape work”⁵, there is a clear potential for this to spread out from the gig economy into the wider world of work. Participant B draws a parallel between this and capital’s attempts to seize control of the work process in the 19th century: “... when the first factories were established, they were the thin end of a wedge. It wasn’t that suddenly everyone was working in factories, these new forms of work get tested out don’t they?”⁶. There is a clear implication here, that if platform type work is shown to be an effective way for capital to further increase its control over the labour process, it is likely to be applied elsewhere across the economy, leading to an increasing ‘platformisation’ of work outside of the recognised ‘platform economy’, in much the same way as the capitalist division of labour spread out from the earliest factories to

⁵ Interview with Participant B

⁶ *ibid*

the rest of the economy. In fact, this 'platformisation' of work is already spreading out into other sectors of the economy:

"Now what we're seeing is real expansion into these areas. And into areas which were not traditionally using these forms of employment. So, we're now seeing it in education services, we're now seeing it in the care sector, where carers working from home travel from one place to a resident, or to somebody's home, all timed visits, things like that, all working off of platforms. And no rights, paid very much on the national minimum wage"⁷.

The dissemination of platformisation to other sectors of the economy is also evident with regard to the use of an app for ordering food and drinks in Wetherspoons' pubs:

"It's very interesting, especially with Wetherspoons, because you get this interesting example of how algorithmic management is extending from these overtly 'platformy' things and actually, the way you can use the Wetherspoons app to order... Basically, all that does, is that overrides... there's an in-built limit in a pub, on how much can be ordered at any one time, which is how many bar staff are there on. What the app does, is it basically allows them to override that, so unlimited amounts of stuff can be ordered at any time. Actually, as soon as the bar gets busy, people start using the app to order, because they don't have to queue. It accelerates at times when people want stuff quickly, the capacity to pace workers and then, in the Wetherspoons kitchen, they have big banks of screens that display all the orders, with clicking down timers on them. So that is increasingly like... the use of information technology as a management technique is getting a lot more sophisticated, not only in the platform based workplaces, but more generally"⁸.

There are certain parallels here with conflicts over 'speeding up the line' in Ford and other manufacturing factories (Beynon, 1975), as outlined in Chapter 3. However, the way in which the process of doing so is embedded in the technology makes it much

⁷ Interview with Participant P

⁸ Interview with Participant E

less visible and more difficult for workers to resist. Whereas in a Ford factory, the supervisor would have had to turn a key and physically increase the speed of the line, in the Wetherspoons example, the line is automatically speeded up by the volume of customer orders. This hides the point of conflict within the technology, making it more difficult for workers to effectively resist or contest the pace of work in the same way they would be able to if the 'line' was controlled by a human supervisor. This is further exacerbated by the fact that trade unions are not recognised by the company and membership density is extremely low – Ford's Halewood plant, the site of Beynon's (1973) study was, by comparison, a 'closed shop' with full union membership and powerful union representation on the shopfloor.

The implications that the outwards expansion of platformisation has, is also outlined by Participant B, when he states how Deliveroo, "often talk about policy and talk about the implications of their work not just being for Deliveroo, but for work more widely"⁹. Taking this into account, there is a realisation, even from platform companies themselves, that battles over the platform economy have much wider implications for the world of work. Later in the interview, Participant B also states, "...this is my reading of platform work, is that it's a new way of trying to compose work, to break down previous ways of organising work"¹⁰. This links back into his previous comment about the platform economy being at 'the thin end of a wedge' trying to reshape work. In this sense, platforms are not simply about providing an easier means to provide services or goods to consumers, or about providing 'flexibility' to workers, but are part of a larger attempt to redefine how work is organised and the employment relationship at a more fundamental level. Although platform work is often considered as something separate to what is going on elsewhere in the economy, this shows the importance of considering the effects of platformisation in a wider context.

The attempts to define platform workers as self-employed are an attempt to bypass employment protections that have been built up for over a century. This attempt to use bogus self-employment to reconstitute employment relationships is in and of itself, nothing new. The way in which the platform workforce is fragmented and subjected to

⁹ Interview with Participant B

¹⁰ *ibid*

precarity and insecurity has parallels with earlier forms of exploitative employment practices, notably dock workers in the late 19th and early 20th century. They had no guaranteed hours or terms of employment, with the required number of men being picked out from the crowd by management, with the rest being sent home without a day's work or income, whilst "the uncertainties of underemployment were an omnipresent aspect of dockers' daily lives" (Marren, 2016: 201). The link between the organisation of platform workers and that of dock workers was also made by Participant B¹¹. Although the platform economy is portrayed as something 'new' (and in some senses it is), the exploitative employment relationship, in which workers are stripped of certainty and security, with the costs of employment pushed onto them, has strong echoes with earlier forms of exploitation.

The construction industry provides a more recent example of where workers have been pushed into 'self-employment' in order to fragment the workforce, reduce unionisation and worker organisation, and also to increase the amount that capital is able to exploit the workforce in order to drive up profits:

"... a lot of the new platforms are old forms of exploitation dressed up as something shiny and new. But they're getting away with, what employers have been trying to get away with in construction for decades, which is that bogus self-employment, effectively transferring the risk from the employer to the employee."¹²

The use of 'independent contractors' has also been a way in which employers in the parcel delivery service have transferred risk for themselves onto workers. Amazon has played a key role in the huge expansion and transformation of the parcel delivery sector. As internet shopping has grown over the past decade, couriers have increased massively in number and in most cases, couriers are classed as self-employed and as part of the gig economy. Participant P has been involved with the organisation of Amazon workers and states that although couriers working for other courier companies have negative opinions of the companies, they largely avoid confrontation

¹¹ Interview with Participant B

¹² Interview with Participant J

with them because “they don’t want a row” and “enjoy what they’re doing... out on the road”¹³. However, he states that couriers working for Amazon “absolutely hate everything that they’re doing”¹⁴, due to the increased surveillance and pressure they are put under by the company. He expands on this further by saying:

“... they know that they’re being sweated for every second and getting pressured for every drop, and if they’re late they’re getting text messages saying, ‘why are you late’ and what have you... no thought for road conditions, or how they’re working, just constant pressure”¹⁵.

There are also the contradictory pressures applied on couriers delivering packages for Amazon, to meet aggressive delivery targets (under direct pressure from dispatchers monitoring in real time), whilst their performance and behaviours are monitored to ensure drivers are conforming to certain standards to ensure safety (as outlined in Chapter 3), which make it even more difficult to meet delivery targets. This often places drivers in something of an impossible position – conform to safety measures and face action over missed delivery targets or cut corners to meet delivery times only to face action over breaching safety measures (not to mention the increased accident risk). Amazon’s focus on providing delivery of packages to customers as quickly as possible undoubtedly provides an excellent experience for the customer, however this appears to come at the expense of almost everything else, including the working conditions of its staff and the safety of both couriers and the wider public.

As with the experiences of Uber and Deliveroo workers, there is a definite contradiction in Amazon’s classification of couriers as ‘independent contractors’ (Sandler, 2021), whilst maintaining a high degree of control over the labour process of individual workers. In this regard, Amazon appears to be employing a ‘have their cake and eat it’ approach, maintaining their high degree of control over the work process, whilst offloading employer obligations afforded to full-time, in-house staff, such as sick pay, holiday pay and health insurance, as well as outsourcing potential liability for accidents

¹³ Interview with Participant P

¹⁴ *ibid*

¹⁵ *ibid*

to couriers and / or contractor firms. It is also the case that the ‘flexibility’ that the company claims that independent contractor status bestows upon couriers, also comes with strings attached and consequences if workers choose not to work when the company wants them to:

“... everybody lauds them, saying “well you’ve got the flexibility, you can choose to go to work”. Okay, “So I don’t want to work tomorrow”.... “Oh well, if you don’t deliver parcels, there’s no work for you full stop”. The word ‘flexibility’ has become very much of a one-way street... it is precarious employment, where people can’t budget, they can’t plan... a lot of people are living hand to mouth.”¹⁶

The role of new technologies is also crucial in enabling the real-time surveillance, performance analysis and pressurisation of couriers delivering packages for Amazon. Particularly crucial in this regard is smartphone technology, which enables communication between Amazon’s dispatchers and couriers, and also enables much of the monitoring that provides the company with real-time data, via the apps that couriers are obliged to download and keep running (Asher-Schapiro, 2021). More traditional models of delivery outsourcing would see couriers obliged to deliver a certain number of packages in a certain timeframe, with the management of the work process itself managed either by the courier themselves or the contractor they are directly employed by. Amazon’s micromanagement of the labour process of couriers casts serious doubt on their status as ‘independent contractors’. The experience of these workers demonstrates the way in which management is employing technology, and combining it with a particular organisation of work, in order to maximise the value it can extract from workers, whilst minimising costs and responsibilities:

“So, it’s the misuse of it by individuals, technology itself is good, the Uber model as a taxi thing, is very good, you can track where your taxi is and all of this... it’s then how it’s misused, and is used to undercut and underpay and

¹⁶ Interview with Participant P

stuff like that, it's the capital element of it, that greed of capital comes in doesn't it, once again."¹⁷

"Instead, it gets misused, and it's what sits under them – and that applies to lots of the use of technology in the new world, Amazons, Deliveroos and stuff like that, it's the way it's used to then manage people, and often mismanage people."¹⁸

5.3 - Control over the labour process

It is within this context that the contestation between 'job based automation' and 'task based automation' should be viewed (Arntz et al., 2016). The subdivision of jobs into tasks not only allows for management to increase its control over the labour process as a whole, but also allows it to automate part of it too. Uber provides a good example of this – in more traditional taxi driving jobs, workers would have a high degree of knowledge and control over routes and to some extent, prices, in addition to the more basic elements of the job such as actually driving the car and interaction with passengers. However, by subdividing the job of 'taxi driver' into a number of tasks, Uber was able to automate a number of these tasks – control of the route passed to the GPS map and prices are decided by an algorithm. This deprives the driver of control over their labour process as a whole, giving the company greater control over the labour process of its drivers. This is also the case for couriers and food delivery workers, who are tracked and told to deliver items in a particular order. In this way, knowledge, "is thus absorbed into capital, as opposed to labour, and hence appears as an attribute of capital" (Marx, 1973: 694). This leads to a situation in which workers' labour becomes robotised:

"... it's not about you doing your job, or helping you do your job well... saying to someone, "right, I'm going to tell you the quickest route you can take to somewhere" is a good thing. But, if you're local to the area, and you just know it's just not, you just know you can go and do those 3 houses first and deliver

¹⁷ Interview with Participant I

¹⁸ *ibid*

something, you should have that right, because you... that's what you're paid for, you're paid, to trust... to do your job. And it's almost creating... almost like expecting robotic workers... and then we don't want individuals, we don't want humans, we don't want people to make their own choices.”¹⁹

One of the main issues with this lies around accessibility – the organisation and control of the labour process is hidden within algorithms which may be difficult for someone without a background in technology to understand and are usually fiercely guarded by companies because of their “commercial sensitivity”²⁰. In more traditional supervisory models, it is easier to understand how the decisions made by human managers are made, and easier to spot potentially unfair decisions. However, the way in which decision making processes are embedded within technology, with workers having no immediate contact or right of reply, deprives workers of a sufficient understanding of, or input into, the management of their labour process. This deprives workers of the ability to understand how workloads, job distribution and intensity of work are calculated; what Participant E describes as ‘a black-box system’:

“I think... for me, that black box argument has always been quite convincing. Because, for a Deliveroo rider, all you'll see is... you'll get instructions spat at you and you have no real understanding of the processing that goes on. And people come up with all these crazy, speculative answers, but fundamentally, the worker doesn't understand the rules controlling their own work process. It's actually like, this inversion of Taylorism. So, if the point of Taylorism is that you've got to understand the work, because the worker knows it better than you and you want to take back control... actually it's now the other way around, if the worker wants to work out how their own work is organised, then they don't possess that knowledge in advance”²¹.

In this sense, technology is used to obscure the extent to which workers are able to understand their own labour process and the way it is structured. This is a continuation

¹⁹ Interview with Participant I

²⁰ Interview with Participant J

²¹ Interview with Participant E

of the process unleashed by Taylorism, its logical destination. If Taylorism was an attempt by capital to appropriate the knowledge held by workers and obscure their understanding of the wider context of their own work, the way in which the labour process is structured in platform work is an example of how this can be more effectively realised at a later stage of capitalist development. The ‘inversion’ that Participant E speaks of, is of the need for workers to understand, appropriate and reconfigure the organisation of work, in the same way as management were according to Taylorist principles, in something of a reversal of Taylorism.

There are however, elements to the use of technology that could potentially decrease the amount of direct control that management have over workers. One obvious example of where this is the case, is for platform work, where workers do not have a human manager telling them what do to. In one sense, this can increase the control management exerts by rendering decision making processes difficult to access or understand, however in a case where workers are organised, the ability of the company to respond is limited:

“...it’s quite difficult to deal with a strike if you have no physical management, how do you organise scabbing, how do you mitigate these problems? If you’re looking at workers on a computer screen, for a manager it’s quite a difficult thing to deal with.”²²

In contrast to Amazon fulfilment centres, where human managers still oversee work (with the technology augmenting their position), the reliance of platforms on algorithmic management leaves them potentially vulnerable. Despite the vulnerabilities around non-physical management however, the risks are viewed by the companies as worthwhile. In Participant B’s view, “... that’s the trade-off they make isn’t it? Is that you might get more action, but that you lower labour costs drastically, so there’s a balance for capital there”²³. For management, the gains from driving down labour costs in such a manner, as well as being able to dispense of other employee obligations is worth the risks that come from losing face to face management. The

²² Interview with Participant B

²³ *ibid*

major platforms also have safeguards against this built into their models: the use of ranking systems, surveillance, attempts to create competition between workers etc. It is also helped by the barriers to organisation faced by workers in the platform economy, including the lack of company recognition of unions, the fragmented nature of workforces and the high turnover of staff.

The importance of control to the platform model is also emphasised by Participant O, when he says that he thinks “in the shift towards platforms and the ability to survey [monitor] workers, there is an emphasis on control, and worker voice, worker agency is not even part of the equation”²⁴. He believes that a key reason for this is:

“... because these platforms are designed by programmers, tech entrepreneurs and people like that, not people that actually understand how work is organised, or how different systems of work organisations historically has provided a mutually beneficial relationship”²⁵.

This drives at the heart of one of the main factors in how new technology and contemporary labour process reorganisation is affecting the class struggle between capital and labour – in many cases (particularly in the platform economy) technology is being designed and implemented in a way that almost exclusively serves capital. The failure to consult with workers, unions or specialists in labour processes when designing and implementing such technology, means that the perspective of labour and any potential impacts on workers are not adequately considered. This also drives at some of the key questions regarding platforms: in whose interests is technology being introduced in? And who are the labour process structures being developed in the interests of? In the platform economy in particular, the answer to those questions is undoubtedly in the interests of management and the companies – at the expense of workers.

²⁴ Interview with Participant E

²⁵ *ibid*

The extent to which management has been able to secure greater control, and reduce the agency of workers in relation to the labour process, is particularly pronounced in the parcel delivery sector:

“For the likes of the parcel delivery companies... they’re not being held to account on any of this stuff. People turn up and collect their 50 or 75 or 100 packages or whatever it might be, and they’ve got to go out, and the machine tells them “this is the route you’ve got to take, this is when you’ve got to drop stuff off and if you don’t...”. There’s just no agency over that sort of stuff at all”²⁶.

The way in which technology has been used, in order to make a significant change to the labour process of couriers, has significantly impacted upon the nature of courier work. Previously, couriers would be given orders to complete on the day, but would not be subjected to the kind of surveillance, control and pressurisation afforded by the way in which companies now use technology to control their labour process. A job that would once have had a fair degree of flexibility and agency for individual workers, is much more tightly controlled by companies looking to increase the intensity of work that couriers are subjected to, in order to meet increasingly ambitious promises to customers on delivery times. Although by no means the only company pushing and controlling supposedly ‘independent’ workers in this manner, Amazon is a key player in this regard, particularly through the introduction of apps such as ‘Amazon Flex’ and AI powered surveillance cameras (Asher-Schapiro, 2021).

Although platform companies are often presented as technologically innovative, this is a claim that is quite often overstated. Companies such as Uber and Deliveroo in particular, have not brought new, innovative technologies to market, but have rather piggybacked onto existing technology – the innovation, lies in the way in which they have used this to reorganise the labour process, in order to achieve maximise the level of exploitation and precarity their workforce is subjected to. This is where a certain parallel with the Ford Motor Company lies – although Ford’s reorganisation is often heralded as a technological innovation, in reality this was not the case. Ford simply reorganised the labour process to make more ‘efficient’ use of existing technology. The

²⁶ Interview with Participant J

suggestion that some of the technological sophistication of platforms and algorithmic management is overstated, is also made by Participant B:

“And this is one of the things that I’ve really tried to make a point about, is that I think algorithmic management, which has become such a buzz phrase... I think a lot of what is done algorithmically is not actually that complicated and just used as a smokescreen for getting away with the same things as capital has done historically.”²⁷

The suggestion that the effects experienced by workers are down to the effects of technology, rather than the way it is implemented by management, is useful for management, in deflecting attention away from the conscious choices they have made in the way that it has been introduced and the resulting effects. However, many of the factors that workers most dislike are down to the way in which technology is used and the labour process is structured by management, rather than because of the inherent nature of the technology itself. For example, the fact that information about the delivery process at Deliveroo is only revealed to workers “stage by stage” (Cant, 2019: 60) or that Uber drivers “have no way of knowing where a customer is going to until the customer is sat in their car” (Bloodworth, 2018: 220), is not because of some inherent way in which the technology works, but because of the way the companies have structured the labour process. Whilst it is true that the labour process could have been structured in this way previously, the way that the company has decided to use the technology in structuring the labour process, means that it is difficult for workers to request information or resist, in the same manner as they would be able to with a human supervisor. It would also have been much more difficult, time consuming and expensive for supervisors to achieve if they were having to individually call workers with each piece of information, however the use of technology enables this function to be automated and take place instantaneously.

There would be nothing to stop Deliveroo structuring the labour process, to ensure a more equitable distribution of work amongst its workers or to ensure drivers are provided with full information on a delivery up front. For example, under the piece-rate

²⁷ Interview with Participant B

payment scheme, rather than using a flat payment per delivery, payments could be structured to incentivise riders to take on longer or more challenging deliveries, as opposed to hiding information. The decision by Deliveroo to use technology in order to rank riders, and to distribute work in a particular way²⁸, is an active choice that is made by the companies when they are developing the structure of their workers' labour process. This also applies to companies such as Uber using a system for customers to rank drivers out of 5 stars – this is a use of technology that is used to condition drivers' behaviour in order to afford the company indirect control over their labour process. The way in which Deliveroo uses its technology to allow customers to rank workers is outlined below:

“The other thing, is they rank riders as well, so as you we're saying about Deliveroo having all the data, they will have you at a certain priority level, so if you're a bicycle worker, you're less likely to get orders than if you on a moped or a motorbike. And if you've had instances in the past where you're slower, you're less likely to get orders, but you can't see that.”²⁹

The effect of this, can often be to create a sense of competition between workers, in order to achieve a higher ranking and be assigned more orders. The use of ranking systems is not in and of itself inherently bad for workers. For example, allowing drivers to rank customers (as is the case on Uber's app) can help drivers to avoid customers that may be problematic:

“... those things people like, underneath those, are things people don't like... like being tracked, data usage, how that that then might get used against the taxi driver, if you give them a particular rating... that rating system, in its purest form, could be a good thing – a particularly bad customer gets marked down, doesn't get to use the service, it's the old blacklisting isn't it of homes that used to do runners on taxis, or phone numbers. Taxi drivers who might not be doing their job properly would get down rated. Instead, it gets misused.”³⁰

²⁸ Interview with Participant C

²⁹ *ibid*

³⁰ Interview with Participant I

The negative impact that the rating system has upon Uber drivers, is largely based around the way in which the company is able to use customer ratings as a tool to implicitly enforce certain behaviours and standards upon drivers. The use of the technology in this way, is designed to allow the company control over the labour process of its drivers, whilst simultaneously claiming that it doesn't hold explicit control over them, and that they should therefore be classed as independent contractors. The use of implicit methods of control is also visible on food delivery platforms, as mentioned above by Participant C – workers are aware that failure to achieve higher rankings may lead to a lack of jobs, thus pushing them to a higher intensity of work.

This is further exacerbated through the use of gig economy contracts that don't provide workers with guaranteed hours, meaning that if no orders come through, workers receive no income and companies don't have to pay them anything. This incentivises the companies making use of 'independent contractor' status to continually 'onboard' workers, and saturate the workforce, meaning that there is enough supply to meet demand when it is high, whilst they do not have to bear the costs of dormant workers when demand is low, pushing this instead onto the workers themselves:

“... it's in their interest to have a load of dormant, idle labour sitting about, that's ready, and really desperate to get that order. But it means that you stay on for longer than expected, because you're like “oh maybe half an hour and I'll get an extra few quid”. And as I said, it instils massive division and competition inside the workforce itself, which means... you're trying to one up people, and you're like “oh no, don't join us, we need to do our own thing” or “these people are doing it unfairly”, and it's really difficult actually unionise and fight back against it.”³¹

This is a crucial tactic that is used in order to increase the level of control that management is able to exert over the workforce. The use of insecure employment terms, a large pool of labour and a lack of guaranteed work in this way does share many parallels with the example of dock workers and other earlier forms of precarious

³¹ Interview with Participant C

work, as outlined in the 'Platform capitalism' section of this chapter. This is particularly evident in the food delivery sector:

"We see this now with... you go past any... you'll see this... you go past a McDonalds in the city centre, you go past KFC, you go past Church Street in the daytime, let alone the night time, how many Just Eat drivers... riders are sat around? How many Deliveroos? The Greggs on South Road in Waterloo, the same thing there, they're sat around waiting. Not waiting because they're waiting for an order, just waiting to be nearby to the Greggs, knowing that there's going to be an order soon and they'll get pinged. That is the same thing, just waiting around for work, it's like taxis, only no guarantee of work, but then the expectation you should be available. This is, yes... this is just a new version of an old problem, of secure work."³²

As shown by its parallels with earlier forms of exploitative employment, the use of this tactic, is something that is not inherent within the nature of the technology, but it is certainly aided and abetted by it. Platform companies are able to incentivise workers to work at busier periods by using 'nudges' sent to their phones. The use of technology makes these easier to send to a large database of workers instantly, as opposed to having to call workers individually, which would be both costly and time consuming and also avoids the chaos of masses of workers turning up every morning desperate for work, as was the case at the dock gates. This further reduces the costs of having a large reserve workforce on standby. Once again, the use of technology in this manner is not inherent in the technology used, but a clear choice made by the companies, in order to increase the control that they hold over the workforce.

In noting the effect that the implementation of new technology and labour process reorganisation within platform work is having on the class struggle between capital and labour, it is important to note that these effects are largely socially determined, rather than technologically determined. The fact that technology is being implemented in a way that increases managerial control at the expense of workers, is down to the way in which it is implemented, and whose interests that it is implemented in. The

³² Interview with Participant I

platform economy offers a key insight into how management can make use of technology in order to restructure the labour process of workers, subjecting them to increased exploitation and insecurity and offering management much greater control. The effect of this is to significantly shift the balance of control within the workplace in favour of management. If they are successful in this regard, this form of 'platformisation' is certain to spread to other sectors of the economy, something that can already be observed in areas such as hospitality³³.

5.4 - The legislative context

The development of platformisation is to a large extent, dependent on the legislative frameworks that companies operate within. A key area in which the classification of platform workers has gone down the legislative route, is in the legal cases that have been taken in order to reclassify the employment status of workers. In the example of the Uber case, workers made the case that they should be classified as 'Limb B' workers, offering something of a middle option between full employment and independent contractor status. Limb B status affords workers continuing flexibility, whilst also offering some employment protections, including, "protection against unfair terminations, against discrimination, holiday pay, sick pay, stuff like that"³⁴.

One factor that come up in the research, is that there is not a uniform position amongst food delivery riders in the platform economy about contract status. Some workers would prefer full employment status, whilst others would prefer to be classed as 'Limb B workers', allowing them to retain some flexibility:

"We're actually working at the moment on a campaign up in Sheffield, where Just Eat riders up there, which are currently on platform economy contracts doing pay-per-drop have been told that actually, Just Eat's going to come along and make everything employee contracts, which is not what they wanted to... they want the freedom, they want to be able to multi-app, they want to be able

³³ Interview with Participant E

³⁴ Interview with Participant C

to decline orders or log off for an emergency or whatever, and... there's definitely a conflict, it's definitely a personal thing.”³⁵

However, workers argue that the choice is not as binary as is made out by the company:

“But Just Eat has the infrastructure to – especially Just Eat has the infrastructure to – be able to do both of these things. They can very easily say, “look, if you want a contract that's pay-per-drop, have that, if you want a contract that's hourly rate, do that”, because they have the apps for both, they have people who want both and they have enough demand to satisfy that.”³⁶

This may, to some extent, make pushing for legislation more complex, in terms of meeting the demands of what workers themselves actually want. One thing that workers are united on, is the demand for increased job security and employee benefits, however there can be friction between different elements of the workforce. Although negotiating these kinds of frictions can be tricky, maintaining a focus on areas where there is broad consensus across the workforce is likely to be the best option for trade unions organising within the platform economy, particularly initially. This will enable them to continue to build membership and broad support and improve the base position of workers across the platform economy.

One problem that has emerged following court decisions to enforce workers' rights, is the way in which some prominent companies have ignored the courts findings, and have used the vast amounts of cash available to them (mostly through continued venture capital investment in lieu of profitability) in order to pick off individual cases:

“Because, yes, Uber lost the court case to make their drivers Limb B workers rather than independent contractors, but they've got enough money to keep just

³⁵ Interview with Participant C

³⁶ *ibid*

settling these court cases, where they go, “wait a minute, you’re not doing that, you’re not paying waiting times”, they can just... brush it off.”³⁷

This is also a tactic that has been used by Amazon, as will be outlined in Chapter 7. It also outlines one of the potential drawbacks of focusing primarily on the direct legal route, particularly for smaller, independent unions with limited funds:

“Yes, I mean... it’s really difficult when... there’s the tendency to want to go after these things with the legal route. Because... when we were doing our Deliveroo actions earlier this year, there’s a really clear legal route, and we can argue and go through that, but obviously, when you’re a grassroots union, you don’t have that kind of capital... so you do have to resort to direct action tactics and protests and individual casework and stuff. Not because you can’t do the legal battle, because from all I’ve seen and everyone I’ve spoken to, yes we are on the right side of that... it would be that we just don’t have the resources.”³⁸

The lack of funds, combined with the low density of membership within the platform workforce, may mean that the immediate focus of smaller unions in particular, may need to be primarily focused on “building majorities in the workplace”³⁹, in order to make action more effective, and be able to build the kinds of funds necessary to be able to challenge companies more directly. It may also point to the need for the involvement of major unions in the organisation of the platform workforce in order to be able to provide the kind of financial clout necessary in order to be able to challenge companies in this manner. However, this may also raise difficult questions about the balance between the radical forms of organising pioneered within the grassroots unions, and the financial clout of major unions, who may be less prepared to engage in some of the more direct forms of action practiced by the smaller unions. This will be addressed in the next section.

³⁷ Interview with Participant C

³⁸ *ibid*

³⁹ *ibid*

In addition to this, there is also existing legislation that limits the organising and campaigning tactics of trade unions. Participant A outlines the impact that anti-trade unions laws, particularly those introduced by the Thatcher government in the 1980s, have had on the psyche of many trade unions in the UK:

“Margaret Thatcher’s anti-trade union laws, were really about restricting the power of workers rather than unions, and that’s a subtlety that’s lost, because most of the anti-trade union laws are about punishing the union for what the workers might do, and therefore force the unions to police the workers, in making sure that they obey all the aspects of the law, to do with picketing, balloting, serving notice and all the rest of it”⁴⁰.

Trade unions can be threatened with court action and subjected to severe financial penalties if they fail to comply with anti-trade union legislation, and even something as simple as a clerical error has the potential to void a vote for strike action and enable the process to start from scratch. This has led to a situation in which many unions have become risk-averse and focused primarily on protecting their existing positions and membership. This is in contrast to some of the newer worker organisation around platforms, which has to some extent stepped into a void that has been left by more traditional trade unionism. However, Participant B explains that he doesn’t “blame people in big unions for being risk averse”⁴¹, adding that:

“... it comes out of the economic relationships they’re involved in. If you’re a full-timer for a massive, million person union that’s got declining membership rates, an ageing membership, you’re scared about being taken to the courts, you don’t really know people in new industries, obviously you’re going to be risk averse, it’s not because you’re a bad person, it’s the material conditions you’re organising in.”⁴²

⁴⁰ Interview with Participant A

⁴¹ Interview with Participant B

⁴² *ibid*

If pushed to its limits however, legislation could actually backfire on management in many instances. The drive to push workers into self-employment can actually free them of many of the constraints of anti-trade union legislation. Self-employed workers don't have to ballot for industrial action and rules on secondary picketing also don't apply to them – this makes it much easier for such workers to strike at short notice and also for solidarity strikes and cross-campaigning. Participant E has experience of both working and organising within this context: “it's funny, the employment relationship was... it's a relationship that's condensed as a form of regulation, so when you get rid of it... they [capital] get rid of their own protection”⁴³. Although the organising and action taken in this regard has been extremely limited, it shows the potential for precarious workers to turn exploitative employment relationships and legislation back on employers and use it to their own advantage – if they can be organised on a much larger scale.

5.5 - Worker organisation

The question of how workers can effectively resist the managerial imperative to control is dependent on a variety of factors. Amongst the most crucial of these, is how labour is organised, what kinds of new organisation emerge in response to platformisation and to what extent trade unions “can respond to rapidly shifting patterns of employment and fragmentation of the labour force, to ask how they can organise workers effectively to assert power that their agitation may still hold over production (of both goods and services)” (Hughes and Southern, 2019: 69). If workers in the platform economy can be effectively organised, and the response to management becomes a collective rather than fragmented one, this will significantly restrict the extent to which management will be able to use new technology and labour process reorganisation to extend its control over their workforce. This will also have wider implications, not only for the extent that platformisation is able to spread throughout the economy, but also for the effective organisation of other groups of workers, and the extent to which they are able to collectively assert their interests vis-à-vis management.

⁴³ Interview with Participant E

One of the most pressing issues that has to be addressed by trade unions, is the decline in trade union membership and low levels of density in many of the most precarious sectors of the economy. Participant D describes this as, “a vicious cycle”⁴⁴ for unions, adding that:

“... it’s hard for trade unions to say to the government and to employers, ‘you need to listen to us, we represent workers’, when actually these days they only represent about 20% of workers. But without trade unions being able to exert an influence and have an impact, workers aren’t likely to join.”⁴⁵

The more unions lose members, the less they can claim to speak for the workforce; the less that unions can claim to speak for the workforce, the more members they are likely to lose. In a discussion around the low density of union membership, Participant P quoted a “glaring statistic” that:

“When individuals were asked, ‘why haven’t you joined a trade union?’, 65% of those who responded, answered very simply and said, ‘because we’ve never been asked’. So, the fault is not with the workforce, the fault is with us, we’ve not asked people.”⁴⁶

For the organisation of workers to be effective, trade unions and workers must be able to pioneer new forms of organising that reach into industries with precarious employment models and provide the opportunities and motivation for workplace activism to grow. There are several factors that make organisation of workers more difficult than it was in the post-war period – this is true across the board, but especially in precarious industries such as these. Whereas it was once common for workers to remain in one workplace for their entire working life, this is now comparatively rare, with most people changing jobs a number of times – some very frequently. In addition to this, the legislative framework has shifted to a more hostile environment for trade unions, restricting access in many instances and bringing an end to practices such as

⁴⁴ Interview with Participant D

⁴⁵ *ibid*

⁴⁶ Interview with Participant P

the 'closed shop', which effectively mandated union membership for all workers in a particular workplace or industry. The legislative agenda, in addition to defeats inflicted on organised labour, has led to unions taking a much more defensive, protectionist position – the lack of perceived victories over capital, or set piece battles, may have played a part in demoralising workers and also been a major factor in the apathy towards trade unionism displayed by many workers. All these factors and more must be addressed if the labour movement is able to reassert its power and reclaim some level of control within the workplace.

As mentioned above, one factor that will be crucial in rebuilding the labour movement, is to build membership and activity in the most precarious industries. These workplaces are amongst the most difficult to organise, however it is a crucial building block in the foundations of building a strong workers' movement:

“... one of the lessons that I wish would really come out, is that there's a long history in the labour movement of saying that certain groups of workers are unorganisable; whether it's dock workers in the 1800s, whether it's factory workers in the 20s or whatever, call centre workers in the 90s, and platform workers today, it's like... workers find a way to organise.”⁴⁷

What these groups of workers have in common, is that they were in industries that were amongst the most precarious of their day and were claimed to be 'unorganisable' – yet the example of dock workers shows that through hard work and organisation, they could be organised. Dock workers went from being 'unorganisable', to amongst the most militant and powerful groups of workers (Marren, 2016). The importance of organising in precarious, supposedly 'unorganisable' industries has been central to the labour movement throughout its history. Participant E remarks that: “... one of the points I find most interesting, is that the labour movement has never emerged out of stable comfortable, proper employment”⁴⁸. He goes on to add:

⁴⁷ Interview with Participant B

⁴⁸ Interview with Participant E

“... there’s this misguided pessimism, which says ‘because we don’t have stable, industrial, mass workplaces in the same way that we used to, in the same industries that we used to, therefore the working class is unorganisable’. Well, it’s like... ‘but it always started here’...it’s a concession. You can’t say, ‘oh we don’t have the concessions, so we can’t fight’... how did you get the concession in the first place?”⁴⁹

This shows the importance of being able to organise in industries in which precarious employment proliferates, particularly in the platform economy, in order to be able to win the kind of concessions necessary in order to improve the working conditions and living standards of workers. This could also have implications beyond the platform economy – if supposedly ‘unorganisable’ workers, working in some of the most precarious jobs are able to effectively organise and win disputes, this is likely to inspire workers elsewhere within the economy, particularly within other workplaces with precarious employment models. However, the fact that – particularly in the platform economy and other industries with precarious employment –there aren’t the kind of workplaces that Participant E outlined that were previously there, means that it is imperative for the trade union movement to be able to develop and implement new tactics in terms of both the recruitment and organisation of workers. One element of this, is being able to make better use of digital mediums thorough which to reach workers and through which to provide spaces for effective organisation – something which was acknowledged by several representatives of trade unions who took part in the interviews for this research. This is especially the case with regard to workers in areas and demographics of low density, particularly young workers. One example of this is the use of WhatsApp groups:

“So, in the lecturers’ union, we communicate entirely by e-mail and physical branch meetings once a month. But, most young workers, that’s not how they want to communicate, it feels slow, it feels convoluted... most young workers I know, speak to each other on WhatsApp, so you have to have a union WhatsApp... you have to have Zoom calls so people can join at different

⁴⁹ Interview with Participant E

times... there are new ways of organising that people have to get their head around.”⁵⁰

The importance of WhatsApp groups in being able to organise younger workers in particular, is also outlined by Cant (2019), in the organisation of Deliveroo strikes in Brighton and London. Participant E further outlines the importance of this below:

“But then also, with a lot of the more location based stuff, so say Deliveroo, UberEats, whatever... the fact that you have lots of workers, spending lots of time waiting around in major cities, they have a lot of crossover time, they have these initial in-person networks, that they then generate digitally mediated networks and those provide a substructure, that allow these very powerful instances of strike action to emerge, because there’s actually a very densely organised workforce below the surface of like, complete alienation.”⁵¹

The fact that these kind of networks already exist independently amongst workers, show that they can be an effective form of mobilisation. Although such networks often exist independently, they have also been effectively used by IWGB platform workers in order to co-ordinate action, including at very short notice. This is in contrast to the often cumbersome nature of traditional forms of organising, in which meetings may need to be called, and resolutions voted on. Although this does provide increased flexibility and the ability to react much more quickly, it is a common theme with interviewees that although the use of digital mediums in this way is necessary, it cannot fully replace the role of physical, face to face meetings:

“I think nothing replaces face-to-face meetings. And a lot of our organising... the branch meetings we would usually organise, would have a social afterwards, where you’d eat food together and spend time together, building trust and it doesn’t replace that. But what it does do, is it allows people that can’t make the face-to-face stuff to start getting involved or becomes an easier

⁵⁰ Interview with Participant B

⁵¹ Interview with Participant E

step to getting involved, that people become more likely to do the face-to-face.”⁵²

This demonstrates the need for something of a hybrid approach in the organisation of platform workers, in order to maximise the effectiveness with which they can be organised. Another important element of the organisation of the platform economy that has taken place so far, is that the smaller size of the unions, and their flatter structures vis-à-vis large unions, means that much of the organisation that has taken place has been self-organisation by workers, rather than the kind of recruitment that takes place via larger unions, in which full-time officials or recruitment officers would be able to dedicate their time to this (something not financially viable for many grassroots unions). There are pros and cons to both of these approaches, with workers perhaps more likely to have an initial trust or sympathy with fellow workers. However, full-time officials or dedicated recruitment officers employed by large unions bring professional expertise and are able to spend much more time on this, as opposed to workers who must still carry out their actual jobs on top of any union activities. For maximum effectiveness, a mix of both strategies would be most useful in order to bring as many workers as possible into unions and in order to be able to most effectively organise them.

One of the most important aspects of any potential strategy, is a recognition that worker organisation has to consist of empowering and creating activists rather than just passive union members. This is a strategy outlined by Participant A, when he states that:

“... instead of targeting resources at getting people to join up and then leaving, we want to target resources at getting members to become activists, and become trained activists, who will then recruit people, and are there as contact with the union”⁵³.

⁵² Interview with Participant B

⁵³ Interview with Participant A

He also stated the importance of driving activism and recruitment through existing activists within the workforce, rather than through top-down campaigns, providing an example of a successful union campaign he was involved with in Morocco:

“...that was predominantly workers under the age of 30... there was 150 of them in the union when we started, by the time we were finished there were 28,000... that was 6 months. And all we did was, we focused on the 150 to find activists, to train them, equip them and let them loose to do what they need to do, rather than having full-time union organisers trying to do it from the outside.”⁵⁴

He went on to add that:

“... all the research has shown – and it’s the same all over the world, and the programmes we’ve introduced in Africa and the Middle East have shown that it works – the person who is most likely to recruit someone to a union, is another worker... not an officer, not a professional organiser, not somebody who doesn’t work there”⁵⁵.

One of the striking features of the platform economy is the lack of representation of workers by trade unions, at least in the traditional sense. Platform companies are expressly hostile to the presence of trade unions, and their insistence that workers are self-employed is often used as justification for their refusal to engage in any sort of collective bargaining over pay and conditions. The fragmented nature of the workforce also makes effective organisation much more difficult than in other industries. Much of the organisation that has taken place within the platform economy has been through ‘grassroots’ unions such as the IWGB, the App Drivers and Couriers Union (ADCU) and the Industrial Workers of the World (IWW). These unions have been able to achieve some successes on a small scale, however the question of how to scale this up to a much wider level remains to be answered. Similarly, although there is a recognition from big, established unions about the need to effectively organise within

⁵⁴ Interview with Participant A

⁵⁵ *ibid*

the platform economy, in practice this has been extremely limited. One of the most pressing questions in relation to the organisation of platform workers is how these two different tendencies will interact and what this will mean for the way in which platform workers will be organised:

“I think one of the interesting things in the next couple of years is going to be, what’s the meeting point between the new, radical ways of organising, and unions that are able to do that and act quickly and take risks and so on - and the broader trade union movement. And there are some examples of where that works and is successful, where people are learning from smaller unions and there are some examples of old school sectarianism, where people refuse to talk to each other or work together, which I think is really unhealthy.”⁵⁶

This strikes at the heart of one of the main issues that has always affected trade unionism and worker organisation more generally; the ability (or inability) of different groups (or individuals) to be able to effectively work together in pursuit of their common - rather than sectional - interest. One area in which these tensions can be seen, is the organisation of Uber workers in the UK. There are three different unions representing Uber workers, mostly (but not exclusively) focused around the London area – GMB, the IWGB and the ADCU, resulting from fractures in the campaigns against Uber that have taken place. One of the main issues that has arisen is around Uber’s decision to recognise GMB as the official trade union for its drivers in an agreement that allows for drivers to join the union, for the union to represent them in deactivation hearings and also for Uber and GMB to meet quarterly to discuss concerns and work on ‘key topics’ (GMB, 2021).

When asked about his thoughts about why Uber has changed its previously aggressively anti-union response, Participant P responded:

“I think there were two things, that over the previous couple of years... there have potentially been a number of personnel changes within Uber... and, I think there were two things, two further things. One, I think... maybe Wall Street and

⁵⁶ Interview with Participant B

other advisors, just said that the confrontational potential attitude, that may exist, and the getting into contentious litigation, is potentially bad for business. So, I think that was another potential consideration. And, I think the third was, that they are now a company that is over 10 years old... and whatever companies start out to be, on certain issues, my experience is, after a while, when other companies tend to copy their model and potentially compete against them, that potentially drives a company to become more conservative and to protect what it's got. And there was no doubt about it, it did see, that actually having good relationships, was more beneficial, than always being in a hostile environment."⁵⁷

He then went on to outline some of the concrete examples of how the agreement is working in practice:

"We've chased down a number of issues where there was potentially some contention about it. But it's also raised quite a number of other issues internally in the company, where actually, really good dialogue is taking place, about what needs to change going forward, in terms of complaints against drivers, the suspensions that are taking place, the potential revenge complaints from riders to drivers and things like that."⁵⁸

He further outlines the relationship between GMB and Uber below:

"So, there may be things that sometimes we disagree on, and issues like that, but like in any walk of life, that can be a healthy disagreement. So, I do know they can do the right thing... there are people out there that will always say, "they'll never change" and that "they'll do this", but we've got thousands of members now that are able to prove the exception to the rule now."⁵⁹

⁵⁷ Interview with Participant P

⁵⁸ *ibid*

⁵⁹ *ibid*

The agreement has, however, received more of a frosty reception from the grassroots unions, who represent a larger share of workers. Nader Awaad, the chair of the IWGB's 'United Private Hire Drivers' (UPHD) branch has described the agreement as "particularly weak", arguing that:

"Uber has been allowed to cherry-pick the issues on which it will permit collective negotiations, and the vital issue of pay is not on that list. It should not be up to the employer which workers' rights they opt into, when they listen to workers and when they don't. This is an agreement to fight with one hand tied behind your back." (Awaad, 2021)

The ACDCU were slightly more receptive, describing the engagement of Uber with a trade union as a "welcome development", however they noted that there was "good reason for workers and their unions to be cautious" (ACDCU, 2021). They also stated that they would not be prepared to enter a recognition deal with Uber, as Uber "continues to violate basic employment law such as the right to minimum wage for all working time and holiday pay despite the recent UK Supreme Court ruling in our favour" (ibid). The differences in opinion between trade unions may give an indication as to why Uber have reversed their previous refusal to formally recognise trade unions in any capacity. This is outlined below by Awaad of the IWGB:

"I predict Uber's strategy to defend an exploitative business model unburdened by workers' rights will be to avoid unions altogether, denying workers status where it can; dividing the trade union movement and pursuing toothless agreements where it can't." (Awaad, 2021)

The potential for the trade union response, and the organisation of workers in the platform economy (and more generally), to be adversely affected by competition and poor relations between different unions is an ever-present threat. This is likely to be something that companies will look to take advantage of where possible. Although companies such as Uber are against worker organisation, they may look to undermine more radical forms of organisation, by providing recognition to established unions instead, as the grassroots unions argue has been the case with the GMB / Uber deal.

This has also been the case argued by the IWGB following the recognition deal agreed between GMB and Deliveroo:

“Now as we appeal our collective bargaining case to the Supreme Court, Deliveroo has cynically made this backroom deal with the GMB, which has no record of organising couriers and presents no threat to their exploitative business practices, to protect itself in the event that it loses at the final stage. Deliveroo is undermining the efforts of couriers to pursue their rights through the courts, to organise for a voice at work, and to improve their working lives.” (IWGB, 2022a)

One of the accusations that can sometimes be levelled at more established unions is a focus on ‘economistic’ goals, particularly pay, often at the expense of questioning control over the labour process. Given the generally better working conditions found in unionised workplaces, this would in many ways be an unfair assessment, however it is certainly the case that established unions are much more embedded in the existing social order. Recognition agreements with companies have allowed for improvements in conditions, however these also necessarily restrict the terrain upon which campaigns can be fought. A further issue of disagreement with regard to the Deliveroo / GMB deal is over the employment status of workers, with the deal agreeing that:

“... riders for Deliveroo are self-employed and in business on their own account and Deliveroo is just one of many clients and customers with whom they may work. Riders have an unfettered right to substitution with Deliveroo.” (Deliveroo, 2022)

Although the interview in question took place shortly before the GMB / Deliveroo deal was already revealed, this was also outlined by Participant P. Although he stated that there is a problem with bogus self-employment in many parts of the workforce, that in many cases where this is claimed, this does not correlate with the perspective of workers:

“And that is where we’ve started to develop that narrative more, that actually, it’s not just saying “you’re bogusly self-employed”, it’s actually just recognising

that self-employed people want rights, and that they're denied rights because of this. Now, there's a way of doing that... if they are bogusly self-employed, there is that middle way of legislation in the UK, which is the Limb B worker status model, which we got Uber drivers and Hermes couriers classified as... we're in the throes of negotiating with other companies at the moment, where they have been regarded as a self-employed model, they're not Limb B, and they're definitely not employed, it is a pure self-employed model, because they're allowed... there is unfettered rights to substitution, which is a major right for self-employed people, so they're not controlled in that respect.”⁶⁰

However, the argument that the substitution right means that workers should be classed as self-employed as opposed to as Limb B workers is not shared by many workers or the IWGB:

“... ironically, in loads of the instances that people do use that, they get unfairly terminated, because they have facial ID stuff now, as I'm sure you've heard, where it messes up identities and stuff. So that's really not something that people use very often and it's not something that I think anyone wanted really. I think back in 2016, before they brought in the proper platform pay-per-drop model, no-one was going “oh I want to share my account” and it's really just a thing wedged in there.”⁶¹

The disagreements in this regard highlight some of the differences in opinion within both the workforce and the wider trade union movement. However, it is clear that the use of the substitution right is hardly used or desired whatsoever within the workforce and has been used as a legal loophole by Deliveroo with which to avoid reclassification of workers from self-employed to Limb B workers. GMB's acceptance of the substitution right and the self-employed status of workers, does not correspond to the findings of this research regarding the views of workers and those already organising within the workforce. Although it is true that many workers do want to retain flexibility, this can be retained alongside the increased rights afforded by Limb B status. The fact

⁶⁰ Interview with Participant P

⁶¹ Interview with Participant C

that GMB have not previously organised within the Deliveroo workforce before agreeing the deal with the company, does raise questions about how much input workers had with regard to this part of the agreement. The lack of involvement of frontline workers in agreeing such recognition deals may blunt the extent to which workers are able to fight back against the tactics of management and restrict the terrain upon which such battles are fought.

Although the hostility shown by platform firms towards grassroots trade unions in particular, makes it more difficult to achieve improvements to pay and conditions, it does open up the space to question the existing social order and control over the labour process, which can often be attractive to younger and more precarious workers:

“Wage increases are always important, and new unions fight for wage increases, of course... like London living wage campaigns and so on. But it’s often the other stuff that gets younger workers enraged and engaged in unions, of like having more control over your work, fighting back against the bullying manager, the things that are not immediate economic questions. Which I think, some bigger unions, don’t know how to engage with in the same way.”⁶²

As platformisation trends spread out across the economy, and as ‘young’ workers grow older, the question of addressing these issues is likely to become more and more important for established trade unions, in order for them to survive. As noted however, there remains a distinct lack of representation from the major TUC-affiliated unions within the platform economy (with the exception of GMB’s recently agreed deals with Uber and Deliveroo, although they do not have a majority of members in either). There are a variety of reasons for this, including the fragmentation of the workforce and the lack of a defined workplace making traditional organising and recruitment strategies less suitable and the high turnover of staff. Another reason is that attempts from such unions to organise in the platform economy may also trigger a response from grassroots unions, of them trying to take over or take members⁶³ (as seen with the example of GMB with Uber workers). However, there is a recognition that there is likely

⁶² Interview with Participant B

⁶³ Interview with Participant I

to come a point at which large unions will have to make an attempt at effectively organising within the platform economy:

“I think this about our unions though, and I think this comes to the crunch – we can have loads of money in the bank, you can have loads of buildings, loads of lovely buildings in London... they’re going to be worth nothing, if our movement dies off, and there might just be a point in time, at which... we have to just invest a bit of that money, and maybe it’s bit of a gamble, but I’d see it as an investment, of trying some interesting and innovative stuff. And trying to go out there, into new workplaces in the private sector, into these sectors and so on, and beyond.”⁶⁴

“But it does feel like we are at a crunch point, of “Well IWGB and others are showing these interesting organising tactics, we’ve got the scale... can we do something?” Can we have that conversation?”. Because we need to... There are too many people, not just in... gig economy, platform work, who go into workplaces and there just isn’t a union, there isn’t one there. And I think, that’s what I was saying before, about the employment standards... the gig economy and the platform types are bad for it now... but their practices will spread, to offices and to other workplaces, and shops and others, and bars... anytime now.”⁶⁵

The need for established unions to adapt in order to organise within a changing world of work, in order to reach under-represented groups of workers is also noted below:

“A lot of trade unions... I don’t know if this is a controversial thing to say, but a lot of the unions are, for understandable reasons, kind of focused on their traditional membership bases and maybe haven’t spent as much time thinking about some of the new challenges, and... new potential membership bases, that they could be thinking about. And so, I think in the last 30 years or so, that’s been young workers, in this kind of new working class, that consists of retail,

⁶⁴ Interview with Participant I

⁶⁵ *ibid*

service and hospitality. But it is increasingly, self-employed workers, gig workers, people who are affected by some of these Fourth Industrial Revolution issues.”⁶⁶

The identification of ‘potential new membership bases’ will be critical in the formation of strategy for unions to be able to adapt and grow. An interesting factor in the composition of what Participant D has identified above as ‘the new working class’ that has emerged over the last 30 years, in retail, service and hospitality, is that these are the sectors in which platformisation are likeliest to spread to first, as evidenced by the Wetherspoons example provided by Participant E. They also have similar demographics to the platform economy with workers tending to be younger, lower-paid and less secure. These groups of workers are at the coalface of the conflict within workplaces, and it is critical that they are empowered to organise against attempts to reconstitute the labour process and use new technologies, in order to increase managerial control and the level of exploitation that workers are subjected to.

Although grassroots unions such as the IWGB and ADCU have been involved in major court cases against companies such as Deliveroo and Uber, Participant C argues that this is an option that has limited for use for grassroots unions, arguing that the immediate focus, at least for the time being, should be on day-to-day issues, in order to build the necessary support within the workforce:

“So, I think yes... we’re kind of a pragmatic union, in the way that it’s very much task after task that we can do with individuals, with smaller groups and stuff, that obviously has a bigger effect on consciousness within the workforce, saying like “oh these IWGB people... I joined them and now we’ve got parking spaces around here”. It’s a slower thing, but... whereas Unite can look at fire and rehire and go like, “right we’re going straight for that legislation wise”... we’re still building majorities in the workplace, we’re still mapping out, we’re still expanding throughout these sites. So, at the moment, it’s quite difficult to do big legal cases in that respect.”⁶⁷

⁶⁶ Interview with Participant D

⁶⁷ Interview with Participant C

The kind of groundwork that Participant C is speaking of here, is something that is critical in developing organisation within any workplace, but particularly in precarious and largely unorganised ones. Although developing the class consciousness of workers and linking organisation of groups of workers into the larger class struggle is important, it is critical to first be able to demonstrate to workers that organising will have an impact on their day to day life and allow them to win victories against their employer. It is important to tackle the issues that workers are facing day to day, such as a lack of parking spaces and the threat of unfair termination, in order to build confidence, support and trust within the workforce, in order to be able to effectively fight bigger set-piece battles later on.

Participant C also speaks of the role that crisis can play in leading to people becoming politically radicalised, and also in becoming union activists, having previously been uninvolved:

“... people were saying at TWT, that people get radicalised by crisis. And for our Ocado stuff, they’ve been very happy for the last couple of years and now they’ve been told they’re all going to get made redundant... and out of that we’ve got a few guys who are now elected officials, and are the most insane, hardworking comms officers I’ve ever seen. But, have had the capacity to do it the whole time, and it’s now that you get hit with something like that, that pushes you into the position where you’re like, “I didn’t even realise, now I’m an activist”, you start trying to protect yourself, and you get to the point where you’re like, oh, now I’m doing union work for the strike.”⁶⁸

This is a factor that is a recurring theme in the organisation of workers in the platform economy. Although many platform workers are fearful of joining a union, due to the threat of punitive action by the companies, many workers feel that they have no choice but to join the union in order to be able to protect themselves against the brutality of management. It is the material reality of their situation that leads them to become involved:

⁶⁸ Interview with Participant C

“...you get a lot of people who are like, “oh you know, I make loads of money, I’m having a good time working for myself” or having the freedom or whatever, and these things will come along that are just inevitable, which will push people to be like, “okay”, rather than the thing of “I’m going to join in case something happens”, it’ll be like, “something has happened to me... we need to do something don’t we”.⁶⁹

It is likely that the material impacts of working in the platform economy will continue to push workers towards trade unions. However, the strategy of the unions will be crucial in channelling this energy. This demonstrates the importance of being able to adequately understand the way in which workers are currently being organised in the platform economy, and how this can be expanded and improved upon, in order for the effective organisation of workers to take place. This is, in itself, critical for ensuring that the effect of the Fourth Industrial Revolution is not to lead to further imbalances in power between capital and labour, driving down the working and living conditions of platform workers, and by extension, other workers across society.

5.6 - Conclusion

The research that has been carried out on the platform economy has demonstrated a number of ways in which workers and their representatives view the effect of new technology and labour process reorganisation on the nature of control within the workplace. One of the main aspects of this, lies around the way in which technology is used in order to structure the labour process, and to significantly increase the level of control that management holds over it. Although the lack of human supervision can initially seem attractive to workers, there is an opacity of decision making structures and a lack of effective channels through which to raise issues. The way in which platforms embed decision making structures within technology appears, from the perspective of workers and their representatives, to be a deliberate strategy to reduce accountability and the extent to which workers are able to understand and control their own labour process.

⁶⁹ Interview with Participant C

Another key theme to emerge, is the point that the way in which the labour processes are structured and the management processes employed, are not inherent within the kind of technology used, but is rather an active choice made by the companies. The withholding of information, the use of ranking systems, the saturation of the workforce, the hostility to worker organisation and the use of piece-work, to name but a few – these are all the result of the way in which management has chosen to employ the technology. There is a consistent belief demonstrated by workers and their representatives, that the technological determinism displayed within the arguments of the platform companies is false and should be rejected. Rather, there is a recognition of the active role that platform companies have played in shaping the way in which platform work is structured and managed, and a belief that through effective organisation and resistance, workers can win much more favourable working terms and conditions and win back control.

Although there are some differences in the way that different platform companies operate, ultimately the similarities between them are much greater – as shown particularly by the examples of Uber and Deliveroo. Both companies claim to be technology companies that simply connect independent service delivery ‘partners’ with customers, rather than companies that actually provide the service. Both companies have been consistently loss making, reliant on venture capital pouring in to keep them afloat. Both companies have invested heavily in the development of technology aimed at automating the labour process and eliminating (or at least reducing the role of) workers – with limited success. Although both companies are often heralded as success stories, a serious analysis of their business models shows many fundamental flaws shared by the two companies. The most striking of these, is the consistent losses that have been made by both companies and their reliance on continued venture capital investment in order to stay afloat. An important use of this investment has been for the companies to use it to simultaneously employ inducements to workers and low prices / offers to customers in order to attract both workers and customers to their respective platforms, in order to expand market share as rapidly as possible. However, the continued use of venture capital in this manner is clearly unsustainable, and without finding a path to consistent profitability through technological innovation, it appears unlikely that either company could survive in the long-term, certainly in their current forms.

However, the question of whether Uber, Deliveroo or other individual platform companies will ultimately succeed or fail is secondary to the question of what their lasting effect on work more generally will be. As Participant B outlined, the companies are “at the thin end of a wedge that is trying to reshape work”⁷⁰. Many of the businesses that pioneered the factory system and innovation in manufacturing ultimately failed and were largely forgotten, yet the transformative effects that they had on the world of work (and global society more generally) are still felt today. If the type of platform work typified by Uber and Deliveroo spreads out into other sectors of the economy and becomes normalised, this would have absolutely huge implications for the class struggle between capital and labour. Just as the principles applied in the division of labour in manufacture were then applied broadly across the economy, there is the potential for the ‘platformisation’ of broad swathes of the economy. Platforms have initially taken hold in what were already atomised and insecure sectors of the economy, however there is nothing inherent in the labour process of the jobs in question that makes them more suited than jobs in many other sectors of the economy that are currently more secure, particularly in services.

As outlined above, there is a clear and consistent view that the implications of developments within the platform economy will have much wider implications for the world of work and control within the workplace at a more general level. This is consistent with the viewpoint outlined in Section 3.2 about the importance of considering contemporary developments within a historical context - what has traditionally been seen within earlier stages of the cycle, is that ‘new’ forms of work have traditionally been developed within specific sectors, before being rolled out across the economy. If this is the case, it is likely that elements of platform work, such as algorithmic management, will be rolled out more widely across other sectors of the economy. This makes it imperative to understand the dynamics of platform work and its impacts on control within the workplace and relations between management and workers, in order to enable the effective organisation of workers to prevent management from increasing the level of control they can exert over their workforce.

⁷⁰ Interview with Participant B

As outlined in the interview with Participant B, platforms can be viewed as a way of testing out new forms of work, which are then used to break down older forms of work and compose new ones. One example of where this could be the case is with the attempts by platform companies to redefine the employment relationship and shed employer obligations by forcing workers into bogus self-employment. If platform companies were to win this battle, it would give the green light to companies across the economy to do the same and lead to a huge weakening of conditions across the board. Although the UK Supreme Court ruling on Uber is promising in this regard (without forgetting the contradictory ruling in the Deliveroo case), the existence of the intermediate 'worker', 'dependent contractor' or 'Limb B' category between employee and self-employment may see companies attempt to use them to water down employment protections and employer obligations from that of fully employed workers. In addition to this, legislators and judiciaries in different jurisdictions will likely come to different conclusions. This could potentially lead to a race to the bottom, in which the companies are able to play different countries off against each other and put pressure on them to relax regulations.

One thing that is consistent throughout the viewpoint of labour with regard to platforms, is that the effective organisation of workers will be critical. Historically, wherever workers have been able to organise, they have been able to assert their collective strength vis-à-vis management much more effectively, limiting the control management is able to impose and improving their living and working standards. The lack of effective organisation within the platform economy has been one of the primary reasons that such exploitative employment relationships have been able to be established. The nature of platform work presents challenges that are unlikely to be able to be effectively met through traditional forms of union organisation. This necessitates the development of new forms of recruitment and organisation, via both grassroots and established unions, in order to ensure that a robust and effective organisation of workers can take place in platform workforces. This would ensure that workers are able to prevent the types of new technologies used by platforms (and the associated labour process reorganisation) being used to further increase the control of management and drive down their conditions and experiences of work, and that they are able to demand and win much more favourable terms and conditions and greater control over their working lives.

Chapter 6 - Industrial capitalism and perspectives within the labour movement

6.1 - Introduction

This chapter will focus upon what has been termed as 'industrial capitalism'. Whereas the previous chapter focused upon the use of platforms, in which the workforce is dispersed and lacks a central workplace, this chapter will focus on more 'traditional' workplace settings, in which there is a defined workplace where workers are gathered together. More specifically, the research focuses on two main areas, Amazon fulfilment centres and manufacturing sites (focused upon the automotive and aerospace sectors). Amazon fulfilment centres offer an example of how 'traditional' workspace settings such as warehouses, that have remained relatively low-tech and labour intensive, are being transformed by the way in which technology is being implemented, and the way management is able to extend its control over the labour process to a huge degree. The manufacturing sites offer an example of workplaces where a high degree of automation and technological implementation have already taken place, and where the kind of machinery introduced tends to be more advanced. There are also significant differences in the job security, skill classifications and level of worker organisations in these two industries. They provide an interesting contrast, however it is important to note many of the similarities in the way that management is implementing technology in order to extend its control over the labour process and the control it holds over labour.

The chapter will also compare worker organisation and resistance in each of the two areas – aerospace and automotive manufacturing workers have high union density, structural power and established recognition and collective bargaining agreement with companies. By contrast, Amazon operate an aggressively anti-union strategy, and workers have typically lacked organisation and struggled to resist against managerial control. Nevertheless, there have been some encouraging signs as workers within Amazon have begun to join unions and participated in a number of strikes, which was previously something attempts to organise had failed to achieve. This demonstrates the potential for the effective organisation of workers within Amazon and underlines the importance of understanding the different strategies and perspectives being employed in such attempts.

6.2 - Amazon

It was clear in the review of the literature surrounding the topic, that Amazon was a company that came up repeatedly in a variety of different contexts – and at the primary research stage, this was no different. Participants spoke about the impact of Amazon through its impact on warehouse workers in its ‘fulfilment centres’, its extreme anti-union behaviours and attitudes, its centralisation of power and wealth and the effect of its ownership of large parts of the global web infrastructure, to name but a few. What is clear, is that Amazon is an organisation that will shape and influence the effect that technological implementation and labour process reorganisation has on the nature of managerial control as much as any other – and indeed far more than the majority of nation states. No study of this topic would be complete without considering the impact and influence that Amazon has.

The key battleground with regard to Amazon is undoubtedly in its fulfilment centres. The company projects its fulfilment centres as an exciting and indeed ‘fulfilling’ places to work, offering good pay and employee benefits, with the company putting significant resources into its PR campaigns. However, behind the veneer of these PR campaigns, there are significant problems faced by workers working within Amazon fulfilment centres. The level of surveillance and control that Amazon is able to exert over workers, enabled by the use of technology, is a big qualitative shift from that usually found in more traditional forms of warehouse work. It is a common theme that workers and their representatives have consistently highlighted the negative impacts that the way in which Amazon uses technology to manage its workforce and structure the labour process has. The fact that Amazon has been so successful means that competitors are likely to try and imitate their methods, with many already attempting to do so, albeit none as successfully⁷¹.

In an interview that took place with Participant O, he described Amazon as “a market leading firm”⁷², making a distinction between “leading” and “laggard”⁷³ firms. As a

⁷¹ Interview with Participant A

⁷² Interview with Participant O

⁷³ *ibid*

market leading firm in the warehouse sector, he states that Amazon has “the best technology, the best resources, they’re essentially a monopolist firm, so they’re able to extract surplus value and profits from all parts of their market, because they have the biggest market share, and they’re also able to leverage technology in a way that makes the labour processes the most efficient, and intensive and exploitative”⁷⁴. This makes them an important case to study, as their market leading position means that the way that they manage their workers is likely to be a model that competitors are forced to attempt to emulate in order to survive, as was the case with Ford’s competitors when they introduced the moving assembly line (Beynon, 1975). As Participant A stated, “Amazon is still what every one of its competitors is trying to copy, and none of them have managed to copy it well enough to be ahead of Amazon yet”⁷⁵. Although other firms are extremely unlikely to be able to reach the economies of scale and sheer size and reach of Amazon, they are likely to attempt to copy elements of their organisational and management systems.

As Participant O pointed out above, Amazon leverages technology in order to make the labour process as efficient as possible, maximising the intensity of work that workers are subjected to and by extension the level of exploitation and surplus value extraction. In attempting to eat into Amazon’s dominant market share, other firms will seek to leverage technology in a similar way – for example, other warehouses are likely to increasingly incorporate Amazonian tactics that enable mass real-time monitoring and surveillance of workers. As with platform firms, the effects of technology and the organisation and level over the work process within Amazon fulfilment centres are likely to have a far-reaching impact across the world of work, way beyond their walls. This demonstrates the importance of understanding the dynamics of the labour process at Amazon – not only for the implications for its own workforce, but also for the wider implications it will have for other workplaces in the sector, and across society more generally.

The monitoring and pressures applied by Amazon to their courier drivers, as discussed in Chapter 5, is similar to that applied to staff working in their ‘fulfilment centres’, which

⁷⁴ Interview with Participant O

⁷⁵ Interview with Participant A

Participant B describes as “warehouse work, but a very different form of warehouse work”⁷⁶. Participant J provides an example of the pressure Amazon applies to its fulfilment centre workers: “if you’re late picking items or you’re slow picking items... a machine pings up an automatic warning on your record because you’ve missed your pick target so many times on the run”⁷⁷ – this is supported by the experiences of Bloodworth (2017). There are clear similarities between the pick targets imposed on fulfilment centre workers and delivery targets imposed on couriers. Targets are, in and of themselves, nothing new, however the systematic way in which Amazon monitors and controls them in real time – and produces ‘nudges’ to remind workers of this - puts severe pressure and stress onto workers. It removes agency and control from them and places it into the hands of capital, and leads to workers’ labour becoming ‘robotised’, leading to increased alienation.

There is a clear drive from the trade union movement globally to organise against Amazon, however this runs into another notable policy of the company– the extreme hostility it shows to trade unions, not only in terms of recognition, but also in terms of unions having any sort of presence at Amazon facilities, to the extent of physically chasing union organisers away, as outlined by Bloodworth (2017). The company “is so anti-union that people can’t even take their phones in”⁷⁸ and “if they catch you with a mobile phone, it’s a sackable offence”⁷⁹. As is outlined throughout this research, Amazon is far from unique in its hostility towards, and its refusal to recognise, trade unions, however the extent of its hostility and the lengths to which it goes in this regard, are certainly amongst the more extreme examples, as is also evidenced by its behaviour around the unionisation vote at its Bessemer facility in the USA, where it engaged in a series of underhand tactics to undermine the union and scare voters into voting against the proposal (Greenhouse, 2021). This also provides a further example of where a parallel can be drawn between Ford in the early 20th century and Amazon – although Amazon’s anti-union campaign didn’t employ the overt brutality and thuggish violence employed by Ford’s ‘Service Department’ (Beynon, 1975: 28-29; Doray, 1988: 31), there are similarities with the attempts to scare workers into

⁷⁶ Interview with Participant B

⁷⁷ Interview with Participant J

⁷⁸ Interview with Participant A

⁷⁹ *ibid*

falling into line, and deal with the company directly rather than engaging in collective bargaining through trade unions.

There are a variety of ways in which Amazon is introducing technology in its fulfilment centres – and many of these revolve around increasing the level of control that the company has over the labour process:

“Amazon are the example aren’t they, Amazon have taken clocking in and clocking out of your shift to whole new levels... Amazon have said “you need to fill 40 pallets” to a whole new level, because now they track you even walking to those places, and all of that stuff.”⁸⁰

The example that Participant J provided of warnings being sent to workers who were missing pick targets is another key example of this. Bloodworth (2017: 16) outlines one of the ways in which this is used to control workers: “...each of us carried around with us a handheld device that tracked our every move as if we were convicts out on house arrest”. He then outlines one of the ways in which the data this generated was used:

“We were ranked from highest to lowest in terms of speed at which we collected our items from the shelves and filled our totes. For example, I was informed during my first week that I was in the bottom 10% in terms of my picking rate. ‘You’ll have to speed up!’ I was told by one of the agency reps” (ibid)

As outlined previously, the use of management techniques that measure output and aim to cajole workers into working in a particular way are nothing new. Attempts by companies in the automotive industry to increase the speed of the production line in the late 1960s and early 1970s were met with fierce resistance, with much stronger worker organisation ensuring that they were able to successfully fight this in many instances (Beynon, 1975), with at one point, shop stewards even being in control of the keys to the equipment that controlled the speed of the line, so that management could not turn it up without the workers knowledge (ibid: 139). However, these were

⁸⁰ Interview with Participant I

workplaces that had almost full union coverage and strong systems of worker organisation, in addition to the fact that ‘control’ over the line was dependent on a key accessed terminal on the shop floor (ibid). Amazon’s fulfilment centres by contrast are, as discussed previously, effectively union free-zones – this and the high turnover of staff (Bloodworth, 2017) makes them difficult places to organise. In addition to this, the methods of control are much less visible – there is no ‘key’ to control the pace of work, it is instead embedded in the technology. This would make it easier for the company to increase the pace of work without it being immediately obvious to workers or giving them an obvious route to fighting back against it.

There are some ways in which the type of management employed by Amazon is different from other forms of warehouse work:

“I’ve got on my desk, a flyer that came through my door a few weeks back, about joining the seasonal team at the Amazon warehouse in Sheffield. I’ve got it on my desk, not because I’m thinking about taking it up, but because I looked at the ad, and on the face of it, it’s all about working in a warehouse, it kind of implies that if you’ve ever worked in a warehouse before, this’ll just be the same... and it’s clearly not. The tracking, the surveillance, the extreme monitoring of all parts of your work whilst you’re in that warehouse, is a new and concerning feature of that job, and is I suppose an example of how aspects of how aspects of the... what we are referring to as the Fourth Industrial Revolution, is percolating into working life.”⁸¹

Nevertheless, it is important not to overstate the extent to which this is the case. Although the forms and the extent to which capital is able to exert this surveillance and control over its workforce is indeed new, the motivation is part of the same historical attempt through which management has attempted to maximise this, and many of the forms of exploitation are similar in kind, if not degree:

⁸¹ Interview with Participant N

“But for... much of what looks new, the nexus of exploitation is the same isn't it.”⁸²

Participant F also has experience of organising Amazon workers. Some examples of testimonies from workers they have received are provided below:

“... we've been running the hotline for a few months now for Amazon workers... we've had thousands of contacts... and then when people have wanted to give us a full testimony, they've talked about... so on the word cloud we did on it... are 'unbearable pressure', 'bullying', they talk about managers standing over their shoulders, following them to the toilet, refusing them bathroom breaks. And everything is monitored, so you get your PDA thing, and then your pick rate's monitored.”⁸³

What is new in terms of management techniques, is the application of technology in the manner it is being applied in Amazon's fulfilment centres to monitor and cajole workers in real-time. Before the introduction of such technology, and the ability to process large amounts of data and analyse them, it would simply not have been possible for a company to control such a large workforce in this manner. Amazon has taken advantage of advances in technology related to tracking and data analysis and combined them with a ruthless approach to managing their workforce. This is a key point – the technology in question does not have to be used in this way, it is when it is combined with a management system like that found in Amazon's fulfilment centres that it becomes so problematic. Participant F provides a further example of where Amazon uses data analysis in order to push its workforce:

“...they do a thing called 'power hour'... because what all this surveillance tells them, what the data tells them, is towards the end of your shift, you start to slack off. So, power hour, you've got to up your rate, and if you all up your rate

⁸² Interview with Participant F

⁸³ *ibid*

over power hour, you make a bonus or something, or if you dip below, you all lose money.”⁸⁴

Although the type of technology used here does allow for a much more extensive (and intensive), rapid and real-time monitoring of the workforce, the use of data in this manner, is in many ways, a logical extension of Taylorism. Taylor made use of the best methods available at the time he conducted his studies, however the extent to which machinery was used by Taylor was extremely limited, with his reforms focused more on the reformation of the labour process. Amazon uses technology in a way that enables it to measure worker output and enforce standards, to an extent that Taylor could only have dreamed of. Nevertheless, the use of technology in this way is entirely in keeping with Taylorist methods. The use of technology to advance Taylorist style methods have been branded as ‘Digital-Taylorism’ in some quarters:

“... that phrase ‘digital-Taylorism’ that gets bandied around seems quite accurate... for some managers and some employers, extreme monitoring of their employees, is nothing new. There are just now, new ways of doing it... arguably the ways in which they are particularly more intrusive, are the scale of what’s being tracked and monitored, and then what is done with the data is different, but the level of control over employees that it implies, is nothing new.”⁸⁵

In this sense, the attempts by Amazon in particular (although by no means exclusively) to use technology to control the labour process of their workers is not a new phenomenon or motivation, but Taylorist principles taken to a higher level. There is no evidence to suggest that Jeff Bezos or anyone else at Amazon have been directly influenced by Taylor’s work, and Taylor’s attempts to control the labour process were not reliant upon technology in the same way. Yet, there are clear parallels between the way in which the labour process has been reorganised in order to increase the control of capital and reduce the agency of workers, that justifies the ‘Digital-Taylorism’ narrative.

⁸⁴ Interview with Participant F

⁸⁵ Interview with Participant N

6.3 - Automotive and Aerospace Manufacturing

The effect of technology and labour process reorganisation on managerial control in areas such as platforms and Amazon fulfilment centres has been documented in Chapter 5 and the analysis that has taken place so far in the current chapter. However, another area of interest, is to consider the impact within manufacturing companies in sectors such as automotive and aerospace – workplaces in which employees are regarded as being more ‘skilled’. Crucially, in contrast to platforms and Amazon fulfilment centres, in which the knowledge of the labour process and the way in which it is managed is increasingly obscured to workers, workers in manufacturing generally have a much higher level of knowledge about their own labour process, and the way in which it is managed. Unlike with platforms and Amazon fulfilment centres, union membership tends to be much higher, and there is in most cases, not only union recognition, but an established working relationship between management and trade unions.

When considering the impact that new technology and labour process reorganisation are having on manufacturing, vis-à-vis the impact it will have on platform and Amazon fulfilment centre workers, it is important to note that the balance of power within manufacturing is already different to that of the others. Workers within manufacturing have much more leverage over their employers, due to a variety of factors – such as qualification / apprenticeship requirements, a much smaller pool of reserve labour, stronger union representation and the knowledge they retain about the labour process in their industry:

“So, that’s one of our arguments at the moment, we’re a very niche workforce in AirCo, it’s not like you can just go and get average Joe off the street. We build aircraft... the amount of time and effort it would take into training people, going through apprenticeships, getting people up to speed... if the customer wants their aircraft within the next 6 months, that isn’t going to be feasible.”⁸⁶

⁸⁶ Interview with Participant H

Many manufacturing processes have already seen much greater automation in earlier periods, than in sectors such as food delivery, taxi services and warehousing:

“I think with the automotive sector, you’ve got to take this back, probably to the late 80s. So, 1988 I started in the automotive sector and there was quite a few robots in the factory as I remember it, but there was a lot of people still. But then probably over the next 5, 6, 7 years, if I use the example of the Peugeot body shop where... I worked for Peugeot, I didn’t work in the body shop... but you walked past it and you saw it, a lot of people disappeared and a lot more robots appeared.”⁸⁷

To this extent, much of the initial automation taking place in sectors such as the platform economy and Amazon, has already occurred in sectors such as automotive manufacturing, in earlier periods of technological change. One of the key differences with automation in manufacturing sectors, is that this has taken place in highly unionised workplaces, with effective recognition agreements, where union representatives have been able to secure much more favourable terms for affected workers, such as avoiding compulsory redundancies and finding alternative jobs⁸⁸. This is in contrast to workplaces, such as Amazon warehouses and jobs in the platform economy, which are currently experiencing this sort of initial automation, but are largely unorganised and do not benefit from strong (or in some cases any) recognition agreements. Both of these factors mean that the position of manufacturing workers is much stronger than their counterparts in the platform economy, Amazon and other sectors with precarious employment.

One finding that has emerged from the research, is that workers within jobs classed as ‘skilled’, are more likely to have a positive view of technological change within the workplace, than those working in more precarious sectors:

“...if you are working in a really precarious job, say delivery or Amazon warehouses, I can see why your experience would be very different perhaps,

⁸⁷ Interview with Participant G

⁸⁸ *ibid*

to people who are in more skilled jobs, So, when we check in with our members and ensure we're representing their views, our members always come back very strongly in favour of technology... then they have the second half of the sentence, which is but... it must be done well.”⁸⁹

The greater job security felt by workers in manufacturing is undoubtedly one reason for this. Although there is some degree of suspicion of the future deployment of technology in manufacturing, this is tempered by the level of organisation that workers have, the importance of their accumulated knowledge to the production process and the degree to which the implementation of technology has improved working conditions. Although technology has already had a significant impact on reducing employment levels within manufacturing over recent decades, it has also had a significant impact upon improving the quality of work. Using the example of the automotive sector:

“So, instead of people covered in bits of weld flash and fumes, and working in dirty, smelly environments, they've cleaned it up, the environment, people haven't had to deal with that. Even, from a health and safety perspective, instead of people lifting sheets of metal, and having to wear gauntlets up their arm in the summer, and all sorts of different leather aprons and whatever, to protect them from the sharp metal, a robot's taking that risk. So, yes... would we like to go back to more people employed in the factories... yes, we would. But I think that what we've done, is we've seen it from a quality, environment, safety perspective, being a good thing.”⁹⁰

The benefits to workers in increasing safety at work through automation is also evident within the aerospace manufacturing sector:

“The thing I go back to, and I think of most, and this is where it is a positive, is, ten years ago, the job was very manual, intensive, whereas now I don't think it is. I think there's been a lot of benefits to the technology in our sector, because

⁸⁹ Interview with Participant L

⁹⁰ Interview with Participant G

the technology does enable the worker, it takes a lot of your manual workload from the worker, and we've seen over the years, there's been a massive reduction of accidents within Airbus. Which, if you look at it from a health and safety perspective, that's a massive positive. And I think a lot of that's down to automation."⁹¹

It is not only through increased safety and a reduction in accidents in the workplace, that technology has provided benefits to workers, however. It has in many senses also made many jobs easier, and less physically strenuous for the workers involved:

"Ten years ago, pretty much every hole that you'd have to drill was by hand, you're talking thousands of holes on an aircraft. So, everything... you'd have to get your drills, you'd be hand operating drills, you'd be opening them up, so you'd go through 3 or 4 different drills, and it was quite labour intensive, because you've got your pushing, pulling forces, you've got a lot of fast moving tooling, there's a lot of stuff that goes with that, and now they've been replaced by what you call ADU drilling machines. So, basically, it's like a big gun, you just get it, click it, it goes into a template, you press a button, it drills the hole for you. Things like that... there's been a lot of advances in technology which have been to our benefit... for us on the shop floor, at Airbus, you do see it in that sense where there's a lot of benefits of technology."⁹²

Although workers do see much of the automation that has happened this far as largely positive, there is an extent to which they are more doubtful over what future waves of automation are likely to mean for both the quality and quantity of jobs:

"But going forward, I think the fear is, amongst the workforce, that automation will automatically take over and cover more and more of a role. And then the question is, long-term, how does that affect the workforce and the numbers in the workforce."⁹³

⁹¹ Interview with Participant H

⁹² *ibid*

⁹³ *ibid*

One of the potential impacts that workers and their representatives believe has already been caused by automation, is deskilling of jobs. However, there is a perception that the deskilling has not led to negative impacts on the status, security or wages of workers:

“So, you are technically deskilling the job, because all you’ve got to do now, at the moment, is clip templates on and press buttons... whereas 10 years ago, you were getting the drills, you had to know the sizes, you had to work your markings out, that sort of thing. So, you could say, inadvertently, it does deskill the job, but I don’t think anyone complains about it. People have their moans about if a tool’s not up to scratch, and if it hasn’t been repaired properly and that sort of thing, but it’s pretty standard for a production workplace, for people to be like that. But, if you actually dress it down, it’s deskilled the job, but in a way where... it’s not had an impact on people.”⁹⁴

One of the factors in this is that, crucially, the level of organisation within manufacturing sectors has enabled trade unions to minimise the impact on workers. Unions in the automotive sector have worked to avoid compulsory redundancies and look for alternative work for workers displaced:

“I think the ‘Rover Tomorrow’ deal talked about jobs for life, now whilst that was deemed to be an aspiration, not a contractual right, the fact that we’ve had them sorts of agreements in place, means that... we’ve had voluntary redundancies, we’ve had early retirements, but we’ve pretty much kept a lid on that as a threat to the workforce, from there going forward.”⁹⁵

“But I think that what we’ve done, is we’ve seen it from a quality, environment, safety perspective, being a good thing, and we’ve managed to not have compulsory job losses, as a result of... and I think it’s inevitable that that’s going to continue. And it’s about us keeping control of how it continues and about

⁹⁴ Interview with Participant H

⁹⁵ Interview with Participant G

making sure that there is alternative work there, for people that might be displaced as a result of technology.”⁹⁶

This is in clear contrast to workplaces that do not have trade union recognition and that have extremely low density of membership, such as in the platform economy or Amazon fulfilment centres. In the automotive sector in particular, trade unions have significantly reduced the impact that this has had and have managed to protect the jobs of workers who have wanted to keep them. This in contrast to the platform economy, where workers are routinely subjected to unfair terminations based upon spurious reasons, including many Deliveroo workers at the beginning of the pandemic, which its founder Will Shu blamed upon the company’s finances, despite the fact that workers were paid on a pay-per-drop basis and it cost the company nothing to keep them on their books when no orders were coming in⁹⁷. The strength of organisation within manufacturing, and the power they hold vis-à-vis the companies, ensures that any of effects on workers of technology and other adverse conditions, are much more limited than in sectors without union recognition and / or with low membership density.

One further contrast with manufacturing, compared to the other sectors considered, is the relative cost of replacing workers with technology:

“Again, I think, if you look at it... it makes sense, I suppose, to capital, where it’s low pay and low technology, to put the stuff in. So, your simple scanning thing at a B&Q, or a supermarket, it’s not the most expensive technology and the cost of having to come to an arrangement to get rid of the people... pretty much, they’re not organised in supermarkets anyway, as an example. Whereas, if they come to us and they said, “we’ve got to do this”... it’s high-skilled, high-priced and it would have to be... how can you say it... they payback from that, it makes it less affordable to do. So, I think that’s the other side of it.”⁹⁸

⁹⁶ Interview with Participant G

⁹⁷ Interview with Participant C

⁹⁸ Interview with Participant G

The issue of the level of technology required in order to automate manufacturing processes compared to other types of work is an important one. The kind of operations required by machinery in manufacturing, particularly to automate beyond the current level, are much more complex than the kind of simple, repetitive actions that may be possible in some areas of warehouse work for example. This is also the case for the automation of management processes – it is a much cheaper and more simple operation to develop an app to replace human supervision with algorithmic management for taxi services or food delivery, than it is for the complex systems necessary within a manufacturing site, building cars or aeroplanes for example. This is also a factor that provides an extra layer of protection and leverage for workers in manufacturing, compared to in more precarious sectors.

One area in which there are parallels between platforms, Amazon and manufacturing, is in the level of trust that workers have in the way in which tasks are automated, and the level of control that they feel they have over this, with there being a “mistrust”⁹⁹ from workers on the shop floor towards the “boffins”¹⁰⁰ designing and implementing the technology:

“...there’s a definite mistrust, because the people who are trying to roll this sort of stuff out, sit in an office all day, and there’s a conception of, they don’t actually know what really goes on.”¹⁰¹

“So, you get a lot of design engineers, quality engineers... they come out, they implement these new processes, they come out, they basically say “this is happening”, there’s no consultation with the shop floor workers before this tool’s rolled out, it’s only when the tooling’s rolled out, it’s already produced and made, that there’s alterations made to suit the operator... and from past experience myself, there’s a lot of, basically just, “there’s your tool and get on with it, make it work.”¹⁰²

⁹⁹ Interview with Participant H

¹⁰⁰ *ibid*

¹⁰¹ *ibid*

¹⁰² *ibid*

This has certain parallels with the way in which platform workers feel that they don't have an input into the way that the technology is designed, and the way in which it is used to structure their labour process. One key difference, is that the technology used in manufacturing is not 'black-boxed' in the same way as in the platform economy. Workers in the platform economy feel that the technology is structured in a way that makes it inaccessible and difficult for workers to understand; however, the issue for manufacturing workers on the shop floor, is that they understand the way in which the job works better than the people designing and implementing machinery. Nevertheless, there is a clear and consistent desire across very different groups of workers, to be given a greater input into the design and implementation of the technology that is used to structure their labour process and daily tasks. There is also a clear belief that this would not only lead to a better working environment, but also to a more successful outcome in terms of the effectiveness of technology:

“But you seem to find that, the mistrust comes from, the people who are rolling this sort of stuff out, don't really know what they're doing. There isn't enough consultation with the shop floor to actually get a proper... get something where, if they want to achieve these goals of how many hours they want to take off the job, if they actually spoke to the shop floor, and made improvements based on the people who do the jobs every day, they'd go a lot further than what they would... rather than fighting a battle against us.”¹⁰³

This raises the question of in whose interests that technology is introduced in the interests of. Although workers have seen a lot of benefit from many of the technologies that have been implemented, there is a belief amongst many workers on the shop floor that technology is being introduced in the interests of the company rather than in the interests of workers:

“The belief on this shop floor is, anything new is to benefit the company, not to benefit us, and when we say benefit the company, we see it as to benefit them time wise, to make the job quicker, basically.”¹⁰⁴

¹⁰³ Interview with Participant H

¹⁰⁴ *ibid*

It is difficult to argue with this assessment. The company has easy access to the people who understand best of all how the system of production operates, in its workforce on the shop floor. Yet, its failure to adequately consult them, demonstrates that there is a disconnect between the kind of improvements the company wants to introduce, and the way in which workers on the shop floor feels that the method of production could be improved. As in the platform economy, workers feel that technology is introduced into the workplace in the interests of capital, to increase the levels of control and surveillance they are able to subject their workforce to. Workers in manufacturing believe that companies are introducing new technology for their own benefit, in order to speed up and increase production, maximising the intensity of work and surplus value extraction that workers are subjected to. However, their strong organisation and high degree of structural power makes them much more resistant to the managerial imperative to control, and able to retain working conditions that are comparatively vastly superior to the experience of platform and Amazon workers.

6.4 - The legislative context

The example of Amazon's extreme anti-trade unionism, is one example where the behaviours and business model of a firm is to some extent, legitimised by the legal framework of particular countries. For example, in the UK, although there are thresholds of union membership at which an employer is obliged to recognise a trade union, there is no obligation to allow trade unions access into workplaces to meet with individual members or to recruit. As Participant explains, "we've got to find ways around it, but it's so difficult now to get in workplaces. You've got to reach a proportion of workers to get there, you can't just rock up if you've got a couple of members"¹⁰⁵. She states that her union has an ethos where they "want to work in partnership with good employers", but she believes that one of the main barriers to increased worker voice, and the potential for 'social partnership' between unions, business and government, is "barriers to trade union recognition and access to workplaces"¹⁰⁶.

¹⁰⁵ Interview with Participant M

¹⁰⁶ *ibid*

This is a viewpoint that is also put forward by Participant L. When asked about the 2016 Trade Union Act, he replied that it had made things more difficult, but stated:

“I think we’ve got a bigger problem which is that we don’t have a positive legal framework in this country around access rights and rights to organise. So, if you compared us to most of Europe, to Australia or New Zealand, they have much stronger rights to representation and rights to access”¹⁰⁷.

If there was what Participant L describes as a ‘positive legal framework’ in the UK, that enshrined the right for trade unions to access workers, and – crucially – it was sufficiently policed and enforced, companies such as Amazon would have little choice but to allow trade unions access to workers. The company would certainly continue its propaganda campaigns to dissuade workers from joining, and even in workplaces where unions are recognised (particularly in the private sector) density remains low, however a right to access workers and workplaces would at least give unions a fairer crack of the whip in terms of attracting new members and blunt some of the more blatant abuses of power by management. In the UK however, legislation has tended to make it more difficult for trade unions, rather than easier. Participant L explained some of the ways in which the 2016 Trade Union Act (as well as earlier legislation) has made it more difficult for unions to ballot their members:

“... the law stops us doing digital balloting, so it all has to be done by post, that’s difficult for us... they’ve also imposed some tougher rules over providing to management, a list of who your employees are at a given point and if you’ve got a name on it and that person has now left the company, then your list is incorrect and companies can now challenge you in the law courts”¹⁰⁸.

The imposition of such restrictions on trade unions by the UK government is a clear attempt to make it more difficult for unions to organise strike action – the most powerful tool in the armoury of organised labour. The refusal to allow digital balloting seems particularly unjustifiable, given that secure electronic balloting is used for a variety of

¹⁰⁷ Interview with Participant L

¹⁰⁸ *ibid*

purposes, including selecting leaders of major political parties. This is an obvious example of where legislation has been used to hamper the activities of organised labour. However, there is a view within the trade union movement that the prohibitive nature of the anti-strike legislation can, in some ways, be used to the advantage of labour, one example being the requirement to meet certain ballot thresholds for strike action:

“Yes... and do you know something... anti-strike laws... they’re prohibitive, they’re more difficult than they were... but I don’t know that they’re anti... I think sometimes we need to take another view on them, that if we can turn out a strong ballot result, for industrial action, that’s got to be the first punch from us to the employer. Because, to do that in this day in age, the employer’s going to sit back and go “wow, look at that ballot result, we’re in trouble here, what do we do? Sit down and talk to the union”. So again, it’s got to be seen sometimes as an opportunity.”¹⁰⁹

One of the critiques of trade union activities over recent decades, has been the lack of engagement of active members and low ballot turnouts. Although, as mentioned, part of this is down to restrictive measures such as the non-allowance of digital balloting, it is still the case that many unions struggle to engage the members that they do have. In this sense, the requirement to meet threshold requirements necessitate unions to build at least this level of support amongst the workforce in order to meet the threshold necessary to call action. Although it would certainly be preferable for the legislation on this to be repealed, there is a view held by many within the union movement, that the requirements of the legislation (at least with regard to turnout thresholds) are something that trade unions should be looking to at least meet, and preferably exceed anyway.

This legislation does not only apply to Amazon, or platform companies – it is economy wide. However, in making it more difficult for trade unions to organise and take action, in a context where unions are already severely hampered and suffering from declining power and membership, the government has made it much easier for companies to

¹⁰⁹ Interview with Participant G

take advantage of new technologies to increase the control that they hold over workers and use this to increasingly exploit them. There is also a lack of direct regulation of how technology is used, as Participant L explains:

“At the moment, there’s very few checks on how technology’s being used on others, because of firstly the power of capital at the moment, in modern capitalist societies. Secondly, it’s moving so quickly... we don’t really... regulation, our understanding, is way behind the curve compared to stuff that’s happening. And now you’ve got some big monopolistic powers, like the tech companies”¹¹⁰.

The second of these points raises another major issue – management is able to increase its control over workers, by taking advantage of the fact it is ‘ahead of the curve’ in terms of understanding technological change, compared to governments and regulators, who are always playing catch up with ever changing technology. However, regulation is also affected by the first point that he raises here, regarding the power of capital. ‘Capital’ and its management functionaries have much greater power than labour (i.e. workers and their representatives), not only within the workplace, but also within the political sphere, given the amount of leverage they are able to exert over government, and the amount of lobbying they are able to carry out. This makes it more difficult for workers to be able to fight against many of the injustices and imbalances found within the legislative framework and does make it much more difficult for unions to be able to effectively recruit and organise workers – in many cases, these effects are felt most, where the need for unions and worker organisation to fight for better conditions is greatest.

However, the restrictive effect of legislation is not only to the benefit of capital. In some industries, regulations do affect the extent to which companies are able to exert their control over the workforce:

“It’s not in terms of, what you said, with surveillance and cameras and things like that, we don’t have anything like that. And funny enough, the regulating

¹¹⁰ Interview with Participant L

body, the CAA – and EAS is the other one – they wouldn't allow that, because... there's the old saying, "we're building aircraft, not washing machines, there's no hard shoulder at 40,000 feet".¹¹¹

Another factor to consider, is the extent to which legislation is able to constrain workers, particularly if they feel that 'prohibited' activity is morally justified or necessary. For much of the history of industrial capitalism, much trade union activity was legislated against, yet many workers still participated and were able to win huge victories through good organisation and being prepared to take action despite the potential consequences:

"So, it's not all about labour rights, it's not all about labour laws, when you actually cut through all of that, and cut through regulation, what the change in the labour market is teaching people like me... it's not about rights, it's not about laws, it's not about regulation; the fundamental question is, is it right or is it wrong? And if it's wrong, then let's do something about it."¹¹²

"We had strikes, because people went and done it, not because the law said you could lawfully take industrial action, the law had to change to suit us, and it become decriminalised by Royal Assent. Will we have to do that in the future? Yes, maybe we will. And again, this is where sometimes, the balance of power isn't what the company think we can or can't do lawfully, it's what we may be prepared to do."¹¹³

"In order for the unions to be able to appeal to workers much more than they do now, they have to demonstrate that they are more powerful than those laws and that they should be organising disputes, sometimes in defiance of the law and trusting in their power to win the dispute, rather than saying "Oh no, we can't do this, we can't do that".¹¹⁴

¹¹¹ Interview with Participant H

¹¹² Interview with Participant P

¹¹³ Interview with Participant G

¹¹⁴ Interview with Participant A

Although it can be difficult for, particularly large mass-membership unions, to act outside of the legislative framework, there is an extent to which this has to be balanced with what is morally right and in the best interests of their members. In addition to this, some workers may be prepared to step outside of the union and take action independently if support from the union is not forthcoming. Nevertheless, there are ways in which trade unions can assert the strength of workers through innovative means that still remain within the legislative framework – for instance, the ‘leverage’ strategy of Unite, that will be covered in the next section. However, it remains the case that the legislative framework is a function of the capitalist state, and that unions must be prepared for capital to attempt to use the legislative process to try to outlaw any such strategy that proves successful for organised labour. It is also the case that a well organised labour movement can defeat such prohibitive laws, such as when the decision of the TUC and many unions not to comply with the 1971 Industrial Relations Act (Panitch, 1976: 226), ultimately led to the collapse of Heath’s Conservative Government and the repeal of the Act by the incoming Labour Government in 1974 (ibid: 234).

6.5 - Worker organisation

As with the platform economy, the organisation of workers within industrial capitalism is a critical aspect in determining the extent to which new technology and labour process reorganisation will affect the nature of control within the workplace. One aspect in which industrial capitalism (both in manufacturing and Amazon) differs from the platform economy, is that the organisation of workers is largely focused within large, established, TUC affiliated unions as opposed to smaller, independent ones such as the IWGB. Although Amazon is still a largely unorganised workplace, the attempts to organise within the UK have been driven by GMB and Unite, the third and second largest unions in the country respectively. Similarly, in the USA, attempts to organise have been led by the Retail, Wholesale and Department Store Union (RWDSU), which dates back to 1937 (RWDSU, 2021).

One approach to the organisation of workers, is that taken by smaller, more professionally focused TUC affiliated unions. A core concept of their strategy, is the idea of ‘social partnership’ between trade unions, businesses and government:

“Social partnership is quite common across different countries in Europe and we just don’t seem to be there in the UK, but we see in practice with things like the National Retraining Scheme, throughout Coronavirus, it was government and unions working together to respond to crisis and come up with solutions. So, how can we take that model and best practice, with technology and through trade unions, and actually workers seeing us as not only a necessary body to help them at their work, but actually someone who the government can look to for solutions, who can work in partnership with them, and we’re not just seen as an obstructive body.”¹¹⁵

This point is also made explicitly in relation to the response of trade unions to the implementation of technology within the workplace:

“So, how can we ensure that tech change leads to better jobs and not jobs getting worse, how can we support those workers to adapt to change and should that adoption of workplace technology be a stage to create social partnership between government, employers and trade unions.”¹¹⁶

Social partnership is also something that is argued for by Participant L:

“Large companies, which I think means 250 or above employees, should have a duty to bargain with their employees. Either through a union or it could be a works council, or it could be a works forum... and that would bring us much more into line with other Western European countries, that sense that there has to be some form of social partnership.”¹¹⁷

“I think there is a good moral case, that actually there needs to be some social partnership in how these things are changing, so we are making that argument and trying to influence policy that way.”¹¹⁸

¹¹⁵ Interview with Participant M

¹¹⁶ *ibid*

¹¹⁷ Interview with Participant L

¹¹⁸ *ibid*

This is a very different model of trade unionism to that found within grassroots unions. In contrast to the militancy and conflictual nature of grassroots organisation in the platform economy, there is a strategy of co-operation and a sense of shared values and priorities with government and business. To some extent, this is shaped by the material conditions of which such unions are operating, largely in industries in which they have good relations with employers, compared to the hostility of the platform economy. Yet, there is a clear ideological difference that can be drawn here, between the viewpoint of grassroots unions, in which the interests of workers and management are fundamentally opposed, with that of smaller, professionally focused unions which view mutual interest as best served through co-operation. There is also a greater focus on the legislative framework, as opposed to the active struggle of workers within the workplace. This last point is where there is also a clear ideological point of differentiation with unions such as GMB and Unite. Although such unions are less militant than grassroots unions and tend to have more established relationships with management, they still retain a focus on building power within the workplace, rather than establishing social partnership. In this sense, clear ideological distinctions can be drawn between each group – this will be outlined in greater detail in Chapter 7.

One area in which large TUC-affiliated unions are taking the lead, is in regard to attempting to organise workers within Amazon, with both GMB and Unite being active in this regard. Participant F highlights an example of where the power and wealth of Amazon allows them to absorb the financial cost of legal action taken by workers who have been targeted and, in many cases, unfairly dismissed, for attempting to organise within the company:

“... in the very early days of Amazon UK, a predecessor union that’s now part of Unite, the GPMU, the Graphical, Print and Media Union, they tried to organise at Amazon, and they just sacked the entire committee. When challenged by a guy I know, who is an organiser with us now, on the demo at the gates... he spotted one of the directors coming in to work and said, “this is illegal, we’ll have you in court for this”. And he stopped and says “Haha, yes alright. So that’s 9 people, let’s say it’s a maximum pay-out at tribunal plus cost,

blah blah, blah... we'll add a bit on... £450,000 or whatever it was... I'd call that a bargain, wouldn't you?"¹¹⁹.

This demonstrates the extent to which Amazon is willing, and able, to abuse its dominant market position, in order to absorb the initial financial costs of action taken against them by unfairly treated or unfairly dismissed workers, with the company seeing this as a strategic investment. It also demonstrates the shortcomings of relying on legal means and protections with which to fight against powerful, hugely wealthy transnational behemoths such as Amazon, who view the costs as worth bearing in order to break organising attempts amongst workers. Participant F then outlines how Unite's leverage strategy can be used in order to force unscrupulous employers such as Amazon to the negotiating table and move them away from a position of extreme anti-union hostility to recognising the right of workers to organise:

"We haven't seen much evidence that their attitude has changed dramatically since then, and the attitude's not going to change because we ask them nicely or because we... have some articles in the news, it'll change because they have to. So, our strategy is, we have to lever the company first and move them to a position of neutrality on trade unions, and if we can put them in that position, then that creates, I think, the confidence and the space for workers actually to organise."¹²⁰

A strategy based upon utilising activists within the workforce¹²¹, could also help to organise and recruit members in places such as Amazon's fulfilment centres, where union officials are denied access. This is not to say that unions shouldn't continue to demand access for officials, but utilising activists that they already have within the sites is likely to lead to greater recruitment – which could in any case, help to gain access for officials if enough workers are recruited to meet recognition thresholds. It is undoubtedly the case that workers prepared to act in this manner would be doing so at considerable personal risk given the extreme hostility of the company to union

¹¹⁹ Interview with Participant F

¹²⁰ *ibid*

¹²¹ Interview with Participant A

activity. However, trade unionism has been built upon the backs of workers prepared to do so.

There is also the risk that if unions fail to unionise within Amazon, and force the company into a recognition agreement, that this could have a knock-on effect throughout the rest of the sector:

“They’re now the biggest employer, in one of our core sectors, retail and logistics, and they’re not organised. So, the knock-on of that, is if we don’t organise Amazon, then all these big, well organised firms we’ve got good recognition agreements with, they’re going to be undercut by Amazon... and they do, in pay negotiations, they turn to our shop stewards and say, “well why should we give you a pay rise when these guys are... you’re not competitive, these guys pay less, they don’t have to talk to the union”. So, it’s a real serious threat, unless we do pick them up.”¹²²

This chimes with the findings around the platform economy and ‘platformisation’ in the previous chapter – the struggle within Amazon has much wider implications, for the rest of the retail and logistics sector, and the wider economy. If Amazon is able to successfully evade unionisation of its workforce, and recognition of trade unions, this may not only enable other companies to use this as a bargaining tool in pay disputes, or other disputes, but potentially in some cases to also refuse to negotiate with unions at all, or even withdraw from recognition agreements. The centrality of Amazon in this regard has also been noted by the pro-capital media, with Lynn (2022) stating that “at some point, businesses are going to have to face up to militant unions”, before further claiming that:

“There is only one that can make a real difference. Amazon. In the United States, where it now employs more than a million people, it has been leading the fight against labour organisers. It has developed a range of sophisticated techniques, from posters in distribution centres, to social media ads, to

¹²² Interview with Participant F

personalised letters to staff, to persuade its people that whatever their problems unionisation is not the answer.” (ibid).

In this sense, the battle to unionise Amazon is not only important for the future prospects of its workers (important as this is), but also for the future prospects of other groups of workers, both within the rest of the retail and logistics sector, and also more broadly. This is an important reason why the effective organisation of workers is reliant upon a generalised understanding of the nature of class struggle within the workplace, as opposed to factional or sectional interests.

Although the struggle to unionise Amazon does have huge ramifications for organisation within the rest of the sector, and the wider economy, this should also be viewed as a two-way street. Although the attempts to unionise Amazon are important, there is a view that unions must not lose sight of organising in smaller workplaces and other companies. This could potentially be a way in which unions are able to exert pressure on Amazon to provide recognition and allow workers to unionise, as well as a way of attempting to force them into offering better terms and working conditions for their workers:

“And there’s a question for us to ask... do you go after the Amazons and the Ubers first, and beat the big ones at the top, but they’re much harder to beat. Or do you go after the ones at the bottom and create a pressure from below, whereby people will leave Amazon, because they’ll go and work elsewhere, as we’ve seen with hauliers. If you’re well organised and have good pay and conditions in some haulage firms, you will pull them from the big ones, because they’ll go somewhere where there’s better pay... and where the treatment’s better.”¹²³

There is also a need to think about much greater international co-operation, with trade unions are still broadly constrained within the nation-state. In a context where capital is becoming increasingly transnational, this is hugely problematic in being able to organise workers effectively. Participant N believes that, “it is increasingly harder for

¹²³ Interview with Participant I

workers and organised labour to challenge capital, because it is so centralised”¹²⁴. He uses Amazon as an example to illustrate this:

“... so, if you think about Amazon, can one trade union, the GMB in this country, challenge practices by themselves?... They’re doing a very good job to defend their members interests in this country, but effectively, do you need to have co-ordinated responses across multiple countries, transnational alliances, in order to challenge global platforms, like Amazon or Google?”¹²⁵

However, even where attempts to internationalise the union response to Amazon have taken place, this has still been constrained by the national focus of unions and in many cases, their insufficient response to globalisation, with many of them struggling with “breaking out of their analysis of how it works inside their own economy”¹²⁶. This has led to a situation where:

“...even setting up the Amazon Alliance, you’ve got some of the richest trade unions in the world involved in this alliance, they are still in a situation where they are not really budging from their own national position. They will not adopt a unified, global position on how to deal with Amazon. They have a very low common denominator, which is “we should challenge them when they break the law, we should challenge them over their taxation policy”, but in terms of worker activity, it’s a completely different picture from one country to another.”¹²⁷

The transnational nature of capital versus the national nature of trade unions is a phenomenon that certainly is not unique to Amazon and is one of the main problems facing the trade union movement generally. However, the scale of Amazon, and its’ truly transnational nature offers a stark microcosm of this wider problem. Additionally, the risk factor identified by Participant F within the UK, that failure to effectively organise within – and establish recognition from – Amazon would risk existing organisation and relationships within other companies, can also be applied more

¹²⁴ Interview with Participant N

¹²⁵ *ibid*

¹²⁶ Interview with Participant A

¹²⁷ *ibid*

broadly internationally. This means that failure to better co-ordinate the response to Amazon on an international basis, risks undermining collective agreements in place across the globe.

Unite's leverage strategy, developed under the guidance of General Secretary Sharon Graham during her time in charge of the union's Organising and Leverage department, aims to put pressure on companies where traditional methods of negotiation have failed, through a variety of unorthodox methods, including lobbying actions directed at suppliers and customers of the firm in question, in order to apply pressure from different angles. The development of Unite's leverage strategy shows that the development of innovative and effective ways of organising is not limited to smaller, independent unions and can be successful in a union as big as Unite. The different challenges posed to unions by companies such as Amazon, require new forms of organisation, and it is encouraging to see this approach being so successful at a huge union such as Unite – Graham's leadership campaign stated that the company has a 100% success rate in 12 disputes where the strategy had been employed (sharongraham.org, 2021).

The way in which Unite use leverage is described below:

“So, my dispute is, I'm going to get someone else to settle it, not my members to go on strike. I'm going to get pressure from whoever to try and move the problem.”¹²⁸

“So, almost anyone... we could go to JLR now and say, “go and talk to whoever, there's going to be a dispute there, you'd better put pressure on this employer to resolve the dispute”. We're always looking for that leverage, what is the leverage, how are we going to win a fight, how are we going to win an argument... the aim has got to be, the less pain on our members, the most damage to the company. If we're going to be out for 6 weeks before the

¹²⁸ Interview with Participant G

company feel any pressure, it's a lot to ask people to lose wages for 6 weeks."¹²⁹

One of the key motivations of the leverage strategy is to avoid the need for workers to take industrial action, by forcing companies to resolve issues through applying pressure from multiple directions. The example used above, is using the union's relationship with Jaguar Land Rover, to put pressure on suppliers where other Unite workers may be in dispute, in order to avoid the knock-on effects of a disruption to their own supply chains. The use of tactics such as this, if successful, can prevent members from having to suffer loss of pay, potentially for a significant period, as outlined above. In addition to this, it may also prove more immediately effective in applying pressure to companies from other companies, particularly where there is a dependent relationship. Although in many cases industrial action is still ultimately necessary, the ability to apply pressure to companies through other companies can help to leverage much greater power for workers within a dispute and may help to tip the balance in favour of victory or at least an acceptable solution.

During her election campaign, and in the initial period of her leadership, Graham has emphasised the need to focus on workplace organising and winning victories for workers against their employers. This is a tactic that has proven popular amongst Unite workers on the shop floor, and has increased union activity within workplaces:

"...it's mobilised the workforce, and I'm starting to see a higher level of involvement within the union, and the workforce is a lot more mobilised. So, you can look at it two ways... I think the way I want to look at it, I want to put a positive spin on it, because I was all for Sharon Graham. And... I think it can only be beneficial long-term, that you've got a more organised, more active union, within the workplace."¹³⁰

Increased use of leverage tactics more widely across the trade union would help workers to increase their power in disputes. Indeed, there has even been some small-

¹²⁹ Interview with Participant G

¹³⁰ Interview with Participant H

scale examples of this in the platform sector, with food delivery platform workers striking and using tactics of accepting and then cancelling orders, to cause backlogs at restaurants, causing them to pressure the company. Although this has remained at a small scale, it demonstrates an example of the kind of tactics that could be used to good effect with greater organisation within precarious sectors. It may also provide a good example for organisation within precarious sectors to follow in terms of maximising the pressure that they are able to apply to companies. Although action at the point of production / sale is usually the most effective and immediate way to express worker power, the use of clever and innovative tactics such as that pursued by Unite's leverage strategy, could provide an effective way for workers to target bad employers in precarious sectors. For example, pressurising restaurants (particularly large chains) to make demands of food platform companies in order to continue using them, may be an important tool in forcing the companies to concede to worker demands. Of course, this can never be an effective substitution for organisation and action, but it can act as an important complement and part of a broader strategy to assert the power that workers can build through effective organisation.

Another key part of the way that worker organisation can be successful in winning more control and better conditions for workers within the workplace, is to ensure that there is a proper strategy in place in order to win a dispute:

“If for argument's sake, we're going into pay talks or we're going into a conversation about job security, probably more to the point... we've got a strategy in place, whether we're going to have the dispute, if we're going to get into a dispute... how are we going to prosecute that dispute... so, are we going to do that the week before the summer shutdown, so we can encourage people to vote for something because it's an extra week's holiday almost? It sounds stupid, but they're things you've got to do to get a result... what is going to move the employer then? Well, if you do it just before the summer shutdown, new registrations in September, it could impact. Well actually, it's not just before the summer shutdown then, count back a bit, because the cars have got to be in place, ready for the summer shutdown for the new registrations, the same with

March. So, I think you've always got to have those thoughts in your mind, of what is your leverage?"¹³¹

Another finding from manufacturing, was the extent to which automation was not seen as the biggest threat to either the quantity or quality of work found within the sector:

"I think it will be very expensive, when you talk about people fitting harnesses and clips and those sort of things, nuts and bolts inside the door panels... there's going to be less benefit in automation doing some of them things. The worry perhaps to us is, not that automation will do that, but that you could get people in to do that from another company... that means a door comes in ready-made, ready painted... there would be all sorts of issues with that, but if that work was outsourced, that's probably more of a risk than automation."¹³²

An example of outsourced work undermining the conditions of workers is outlined below:

"Yes... I think if you look at Vauxhall, Ellesmere Port, it's a good example... a lot of their sub-assemblies, is done away from the track... well they're all done away from the track... but they're done by, I think it's Mitie they use, unless it's been passed onto someone else, the contract, and they get less than the main production workers. So that's probably a bigger threat to us than automation, and again, is it deskilling jobs, yes it is, is it cheapening them, yes... and potentially that then becomes a risk of more automation in the future."¹³³

The use of outsourced workers has been a consistent tactic used by management, in order to undermine well organised and powerful groups of workers; as outlined by Marren (2016), this was one of the tactics used to undermine the strength of dock workers in Liverpool and elsewhere in the late 1980s and 1990s. In addition to this, the outsourcing, de-skilling and 'cheapening' of jobs, may make it easier for companies

¹³¹ Interview with Participant G

¹³² *ibid*

¹³³ *ibid*

to automate some of these jobs in future, by making the costs of doing so less prohibitive. In this sense, it could act as a reorganisation of the labour process, that makes it easier for future technology to replace workers, or at least to further increase the level of control that capital has over the labour process, subjecting workers to further deskilling and alienation. Whether this potentiality is ultimately realised, the short-term effect is nevertheless to undermine well-organised groups of workers in sectors such as manufacturing and reduce the power that they have within the workplace. This makes it imperative that workers continue to be well organised, and that traditional organising strategies and tactics are used alongside more innovative ones, such as leverage, in order to protect and extend the conditions and security that workers currently enjoy in this sector.

6.6 - Conclusion

There are many ways in which the effect of new technology and labour process reorganisation on the workforce is different in industrial capitalism to the platform economy, and it is also the case between the different areas that have been considered in this chapter, Amazon fulfilment centres and manufacturing. Yet, although there are differences between the different industries considered, there are also many similarities. There is a clear and consistent attempt by capital, across all industries, to implement technology in a way that deskills the workforce, and transfers knowledge of the labour process from workers to management. It is also implemented in a way that gives management greater control over production or service delivery and reduces the level of agency and control that workers have. The differing extent to which this impacts upon workers, depends on the existing relations and conditions that they have vis-à-vis the company.

For workers in Amazon fulfilment centres, the insecure employment contracts, lack of organisation and union recognition, the classification as 'unskilled' and the large pool of labour, all play a part; the existing imbalance in power allows the company to use technology in a way that gives it much greater control over the collective workforce and the labour process of each individual worker within it, significantly impacting upon the control it holds over them. For workers in manufacturing, the much more secure employment terms, the strong levels of organisation and union recognition, and their

classification as skilled workers (reducing the pool of labour), all contribute to restricting the impact that the implementation of technology and labour process reorganisation has on the nature of control and the extent to which management is able to maximise it. Although its introduction does help to gradually increase the control that capital exerts, and slightly tip the balance of power in their favour, this is a delicate process, as the power and leverage that workers retain, means that they could cause huge problems for capital if they were to reject the way in which technology is implemented.

One of the key findings to come out of this chapter, is the importance that the level of organisation of workers has on being able to limit the amount that management is able to utilise technology in order to increase its control over the labour process. This is highlighted both by the way in which manufacturing workers have managed to resist many of the worst excesses, and also by the extent to which Amazon fulfilment centre workers have been left almost powerless to resist the way in which their labour has become robotised, and the level of control that the company is able to exert over them. In considering these factors, it is clear that the effective organisation of workers is critical in asserting the latent power of precariously employed workforces, in order to prevent the use of technology to further exploit workers and concentrate ever increasing amounts of power into the hands of management. Through the work that has been undertaken in this chapter and the previous one, the following two chapters will outline a theorisation of contemporary worker organisation in response to new technology and labour process reorganisation and assess ways in which workers and their representatives can develop a strategy that most effectively empowers workers to resist and to organise effectively in order to win back control within the workplace.

The next chapter uses the research and analysis outlined in this chapter, to reassess the three soft-hypotheses outlined at the end of Chapter 3. The updated and further developed theory that emerges from this, is used to provide answers the two research questions, with this subsequently leading on to the two main contributions that emerge from the research, which will be outlined in further detail in Chapter 8.

Chapter 7 – A post-Braverman perspective of control and worker resistance in the workplace

7.1 - Introduction

The preceding chapters have outlined the findings and subsequent analysis of the primary research stage. The purpose of this chapter, is to provide a link between the concrete findings of the research with the abstract conceptualisations that were outlined within the earlier chapters. The analysis that takes place in this chapter reassesses the research questions and the soft-hypotheses that emerged at the end of Chapter 3, outlining the development of a 'post-Braverman' theory of control and worker resistance in the workplace. It uses the data that emerged from the interviews, that was subsequently coded and analysed, before being outlined in Chapters 5 and 6, in order to refine these concepts and reconstruct them according to the research and analysis that has taken place, in line with the CGT method (outlined in Section 4.4).

The soft-hypotheses that emerged from the analysis that took place in Chapter 3, and which research question they are linked to, are outlined again below:

- SH1: That technology and labour process reorganisation are being applied within platforms and Amazon in a way that significantly extends managerial control (RQ1).
- SH2: The effect of technology and labour process reorganisation is much less in manufacturing firms due to a variety of factors, including skill levels and worker organisation (RQ1).
- SH3: There is the potential for much greater resistance and organisation of platform and Amazon workers, however this is dependent on the development of effective strategies by trade unions and the wider labour movement (RQ2).

Through an assessment of the research findings and analysis, outlined in Chapters 6 and 7, this chapter will reassess the soft-hypotheses in order to refine and reconstruct them, in line with the CGT method as outlined in Chapter 4. Sections 7.2, 7.3 and 7.5 will address each of these soft-hypotheses in turn. Section 7.6 follows on from Section 7.5 to outline three distinct trade union strategies that have been identified from the data. The refined and reconstructed theory is then used to provide the answers to the research questions, in sections 7.4 and 7.7 respectively. The relation between the research questions and soft-hypotheses is outlined below in Figure 7.1, which also outlines the stage of the research that this chapter covers. The table outlines the full development and relationship between each different aspect, from proto-theories → research questions → soft-hypotheses → answers to the research questions → contributions:

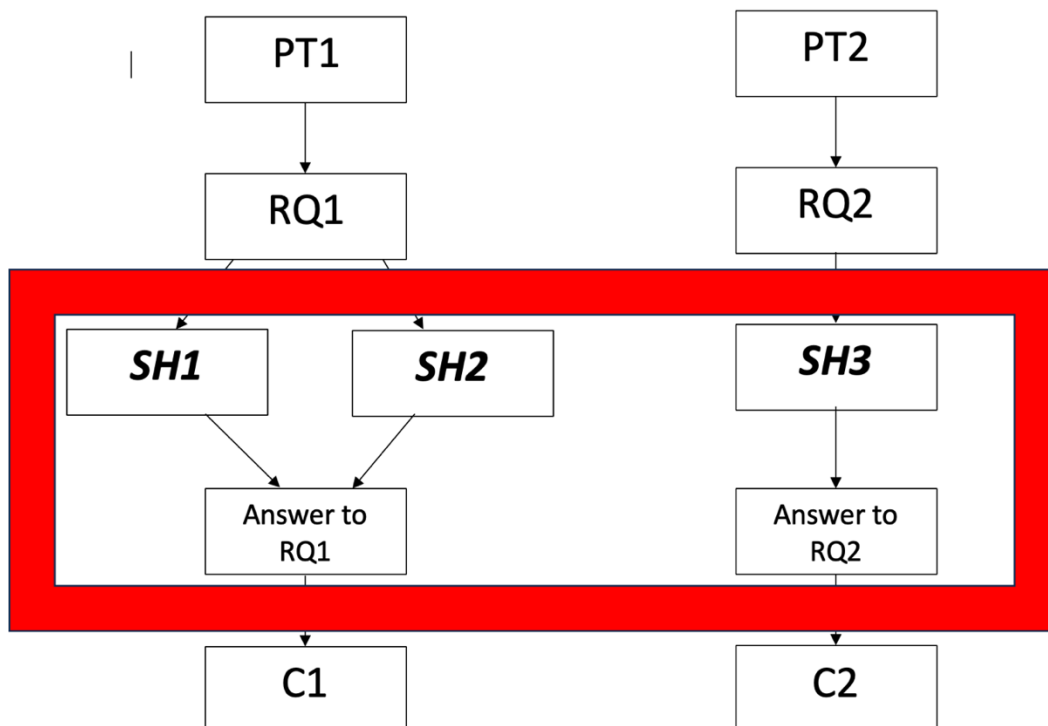


Figure 7.1 – Stage of research

7.2 - An assessment of SH1 in the context of the research and analysis

This soft-hypothesis was '*that technology and labour process reorganisation are being applied within platforms and Amazon in a way that significantly extends managerial control*'. It was developed from the examination of the literature relating to platforms and Amazon, and specifically that literature related to the way in which technology is being applied and how the labour process is structured within these workplaces. As outlined in Chapter 3, the literature suggests that within platforms and Amazon, technology is being applied, and the labour process reorganised, in a way that extends managerial control over both the labour process as a whole and each individual task within it. One of the key objectives of the primary research stage, was to assess expert perspectives from within the labour movement, to attain their views on to what extent this is the case. This was then considered alongside the theoretical development of the concepts in the earlier chapters, in order to provide a reconstructed and refined theory.

For platform companies, the way in which the companies are able to withhold information, release it to workers piecemeal and hide decision making processes gives them a significant level of control over the labour process. This is consistent with the process explained by Braverman (1974: 170-171):

“In the first form of the division of labour, the capitalist disassembles the craft and returns it to the workers piecemeal, so that the process as a whole is no longer the province of any individual worker. Then, as we have seen, the capitalist conducts an analysis of each of the tasks distributed amongst the workers, with an eye toward getting a grip on the individual operations. It is in the age of the scientific-technical revolution that management sets itself the problem of grasping the process as a whole and controlling every element of it, without exception.”

The way in which platforms have been able to utilise technology, has enabled them to achieve this to a much greater degree than would have been possible in Braverman's time, particularly in transient industries such as taxi-driving (Bloodworth, 2018) and food delivery (Cant, 2019). The ability to release information to workers piecemeal is

a crucial element in being able to control them. Although theoretically possible in earlier times, the logistics of doing so for large numbers of workers would have made it logistically unworkable and inefficient. However, the use of technology and algorithmic management removes these barriers. Additionally, the use of GPS technology with which to track workers, means that management gains knowledge of, and control over, something which would previously have been at the discretion of the worker, including routes taken, any time the worker stops / takes a rest and the time taken (within reason). This enables capital to extend its control over both the labour process as a whole, and each individual element of it, as outlined above by Braverman.

Similarly, in Amazon fulfilment centres, the way in which management uses technology to track and monitor workers, gives them a significant amount of control over the labour process, and deprives workers of agency (Kantor et al., 2021). The ability to monitor every worker in real-time, particularly through the use of monitoring scanning via handheld devices, also increases the control of management over each individual element of the labour process, allowing management to control (i.e. increase) the intensity of work and the levels of exploitation that workers are subjected to (Bloodworth, 2018). This is a striking example of new technology not leading to more humanoid robots, as is often suggested. One example of a more humanoid robot is Boston Dynamics 'Atlas' Robot, which is powered by a control system and hardware that "give the robot the power and balance to demonstrate human level agility" (Boston Dynamics, n.d.). Despite the fanfare around such robots, their potential application is extremely limited and there is no immediate prospect of a viable route for implementation of such humanoid robots within workplace settings.

By contrast, the evidence in both the literature (as outlined in Chapter 3) and in this research (in Chapters 5 and 6) outlines a number of ways in which the application of technology, and the re-organisation of the labour process, are subsumed to technology, and in which the worker's activities are 'determined and regulated' by the technology (for example with the distribution of tasks in platform work or the scanning of items in Amazon fulfilment centres). What this actually leads to, is not more humanlike robots, but its opposite – the robotisation of human labour. This may provide the path to which the automation of tasks within the workforce (and although not yet imminent, ultimately some jobs) proceeds. Not through technological development

making machines more human like, but in robotising human labour to such an extent that it becomes easier to incorporate tasks into machinery.

Some of the critical literature looking at platform capitalism more specifically, does suggest that the nature of platformisation is built upon enabling management to hugely increase its control over workers, and subject them to increasing levels of surveillance and exploitation (Cant, 2019; Bloodworth 2018; Rosenblat and Stark, 2016). This is also suggested by the specific literature around Amazon fulfilment centres (Scholz, 2017; Evans, 2019; Kantor et al., 2021). This is supported by the primary research and analysis outlined in chapters 5 and 6, in which there is a consistent view among participants that the way in which technology is being implemented, is to increase the control that management holds over all aspects of the labour process, and to allow it to increase the levels of exploitation that workers are subjected to. The findings therefore support the viewpoint of this critical literature, which suggests that from the viewpoint of workers, the implementation of technology is serving to deprive them of control over their own labour process, and increasing the intensity of work, subjecting them to greater levels of exploitation.

Braverman argues that the increasing centrality of machinery divests workers of control over the labour process, as “the control of humans over the labour process turns into its opposite and becomes the control of the labour process over the mass of humans” (Braverman, 1974: 193). In much the same way as Marx’s analysis on machinery has become increasingly borne out by later developments, the same can be said of Braverman’s analysis. The way in which new technologies are being applied in areas such as the platform economy and Amazon fulfilment centres are much more applicable to Braverman’s statement than any workplace would have been at the time he was writing. The use of technology to implement algorithmic and black box management techniques, obscure the labour process and to monitor and control workers, has enabled the inversion of the control of human workers over the labour process, to a much greater degree (Cant, 2019).

The use of handheld scanners and the measurement of ‘time off task’ within Amazon fulfilment centres, means that workers are scared to lose any rhythm in completing tasks, or in many cases even to talk to colleagues or take a toilet break (Kantor et al.,

2021). One of the oft cited claims about robots is that they do not need to take breaks or slow down due to tiredness, but the structure of the labour process at Amazon is increasingly attempting to push workers in this direction. The result of this is to have a significantly negative impact on the health and well-being of workers, with some describing the pressure on them as 'unbearable', as outlined in Chapter 6. The lack of worker organisation is clearly a major element in this, however it is also the case that Amazon and the major platform companies, have achieved rapid growth and market leading positions through the ruthless exploitation of their workforce. Although it is aided and abetted by the lack of organisation, their extreme hostility to trade unions is borne out of the fact that their business model is based upon this ruthless exploitation of their workforces, over and above the 'usual' levels of exploitation found within the capitalist workplace.

The use of surveillance through technology has been implemented in industries with precarious employment models such as platforms and Amazon, with this not being the case within aerospace and automotive manufacturing sites, as outlined in the quotes from the interview with 'Participant H' included in Chapter 6. This is an example of where the increased leverage held by manufacturing workers, in terms of their 'skilled' classification and level of organisation, makes it more difficult for capital to impose such measures. The level of control that this enables in platform industries and Amazon is significant – it allows for workers to be assessed in real-time, judged on their data, and perhaps most tellingly of all, invokes a sense of always being watched (Woodcock, 2020). The use of technology in this manner is overwhelmingly viewed as a negative phenomenon by workers and their representatives and is seen as representing an attempt by management to significantly shift the balance of control in the workplace (as outlined by the interviews in both Chapter 5 and Chapter 6). Although the *extent* to which this has enabled management on platforms and in Amazon to control the labour process, and remove agency from workers, is something new, it is part of the same historical imperative from capital as Taylorism – the attempt to control the labour process and subjugate the workforce (Cant, 2019; Bloodworth, 2018; Kantor et al., 2021).

The implementation of the assembly line by Henry Ford (as outlined in Chapter 3) and the platformisation seen today, both represent examples of where the labour process

was reorganised to make more 'efficient' use of existing technology, through which to significantly increase the intensity of work that workers are subjected to. In both cases, there is often a misunderstanding as to what is taking place, with both often being referred to as technologically innovative. However, this is not the case – neither Ford, nor contemporary platforms pioneered, developed and introduced new technology, but rather reconstituted the labour process to take advantage of technology developed and introduced elsewhere. As a result, it is true that both Ford and platforms were innovators, but this innovation lay in the reorganisation of the labour process rather than being technologically based. In both cases, the intensity of work was significantly increased by using technology that had been developed elsewhere to control the pacing of work and to extend managerial control over the whole process.

As mentioned above, a key similarity between Ford and platforms, is the way in which they utilised existing technology through which to re-organise the labour process and increase the intensity of work. The simplicity of the moving assembly line is described below by Braverman (1974: 195):

“The moving conveyor, when used for an assembly line, though it is an exceedingly primitive piece of machinery, answers perfectly to the needs of capital in the organisation of work which may not be otherwise mechanised. Its pace is in the hands of management and is determined by a mechanical device the construction of which could hardly be simpler, but one which enables management to seize upon the single essential control element of the process.”

Ford did not come up with some ingenious new piece of machinery, but rather utilised existing, simple machinery in a way that enabled them to adapt it to significantly extend managerial control and increase the intensity of work. The same can be said of the way in which platform companies have utilised existing technologies– the kind of apps used by platform companies are relatively cheap and easy to develop, but allow them to significantly extend their control over the labour process and the intensity of work that workers are subjected to. In addition to this, technologies that are key to this control, such as smartphones, mobile internet and maps (e.g. Apple or Google Maps), are effectively piggybacked on by the companies.

Despite the similarities however, there are also a number of differences. The way in which technology is used in this way, means that more extensive control is gained by management and away from workers through platformisation, than was possible under Fordism - platformisation takes place at a higher stage of capitalism than Fordism. As such, the change in the labour process takes place with more sophisticated technology, allowing for the extent to which the reorganisation of the labour process can increase the control of capital, to be far greater. In much the same way as the initial introduction of machinery in the factory allowed management to move past the limits of handicraft production (as outlined in Chapter 3), the type of technology that has been developed in later stages of the cycle, has allowed for a reorganisation of the labour process that allows management to move past the limitations of in-person management (i.e. limitations on the number of workers that can be monitored and controlled at any one time by human managers). This enables management to extend its control over the labour process, allowing for both intensive and extensive management of workers, in a way, and to an extent, that was not possible before.

As outlined in Chapter 3, in Ford factories, the speed of the line was increased by being physically turned up, often using a key, by a supervisor or foreman (Beynon, 1975), providing an obvious point of conflict and resistance for workers. However, for platforms, the decision-making processes are constituted as algorithms embedded within the technology, rather than conscious decisions made by human managers (Cant, 2019), with the process for increasing the speed of the 'line' effectively outsourced to customer demand. The use of technology to restructure the labour process in this way, not only increases the intensity of work, but does so in a way that obscures the nature of the management process and also removes obvious points of conflict and makes it more difficult for workers to resist. This demonstrates how at a higher level of technological advancement, the sophistication of the technology allows for the re-organisation of the labour process to increase managerial control, in a way that obscures it within the technology and makes the overtly political nature of the way in which technology is applied less apparent.

Using food delivery platforms as an example, in a more 'traditional' structuring of food delivery work, work would be distributed by a supervisor or dispatcher. This would mean that there would be a person ultimately responsible for designating jobs, and

who workers could address any issues with. However, the way in which decisions are made algorithmically and work distributed through the app, obscures this and closes off ways for workers to directly question and influence the distribution and management of work. The same is also true for Uber drivers – where work would traditionally have been distributed by a human dispatcher, this is now done algorithmically via the app. This prevents workers from being able to properly understand or question how decisions are made. Yet, it is also true that there is a danger of assigning a false agency to the algorithms making decisions. They are designed by human programmers to serve the interests of management, and as such are naturally reflective of management biases and shaped in their image. Although they underestimate the difficulties associated with it, the assertion of Thompson and Laaser (2021: 153) that these controls are “knowable and contestable” does contain truth. Yet, the obscuring of decision making processes in such a way, at the very least throws further obstacles in the way of workers being able to understand and contest them.

The explicit links that are drawn between the way in which existing technology was used in order to restructure the labour process and increase the intensity of work at Ford, and the way in which the same processes are taking place with regard to platform work, is an original contribution of this research, demonstrating one of the ways in which it contributes added value and knowledge. One effect of this, is to push back against claims that platforms represent something ‘new’, providing a historical example of where claims of technological innovation were used to obscure the true nature of how the reorganisation of the labour process, using existing technology, extended managerial control, increased the intensity of work and subjected workers to increased exploitation. This also demonstrates that ‘platformisation’ represents old forms of exploitation and control dressed as something new, something also evidenced by their reliance on casualisation and anti-union behaviour. This makes a contribution to understanding the true nature of platforms, and the way in which capital uses ‘exciting’ discourses, in order to mask the repackaging of old forms of exploitation and control.

There are also some similarities that can be observed between the tactics employed by Ford in the early 20th century and those employed by Amazon in its fulfilment

centres in the 21st century. The introduction of the moving assembly line at Ford revolutionised the system of production to such an extent, that the label 'Fordist' is often applied to the era in which such systems of management spread throughout the economy. The sheer scale, size and power of Amazon, means that Amazon may well have a similar effect, indeed Amazon's competitors are already beginning to attempt to integrate aspects of Amazon's management systems in order to attempt to compete. The spread of Amazon style management techniques, and the way in which it uses technology in order to increase control over the labour process throughout the economy would not only drastically increase the power of capital over labour, but would lead to a greater robotisation of human labour at a more general level, and - given the experience of Amazon workers that has been outlined in Chapter 3 and Chapter 6 – lead to a worsening of conditions for workers more generally. How this can be combatted is outlined in the sections relating to worker organisation.

One term that has been used to describe the way in which technology has been used to restructure the labour process of workers is 'Digital-Taylorism' (Cole et al., 2020). This outlines similarities with the way in which Taylorism revolutionised and extended managerial control and led to a significant restructuring of the labour process, but also differences in how this is achieved (i.e. through technology rather than the 'pure' labour process reorganisation of Taylor). The link with Taylorism suggests not a slight, piecemeal reorganisation of the labour process, but a significant one, that is having a demonstrable impact upon the nature of work and power relationships within the workplace. It also suggests that its effects won't be confined to the sectors of the economy in which it is initially applied, but will permeate throughout all sectors, creating a lasting and significant impact.

Marx (1976: 505) noted that "the transformation of the mode of production in one sphere of industry necessitates a similar transformation in other spheres". It is notable that he also states that "this happens at first in branches of industry which are connected together by being separate phases of a process, and yet isolated by the social division of labour, in such a way that each of them produces an independent commodity" (ibid). This is supported by the evidence and arguments put forward in this research, for example, the link between the exploitation, surveillance and management systems that both workers in Amazon fulfilment centres and couriers are

subjected to. This is necessary to keep the process as a whole functioning effectively. But what Marx is suggesting here, is that this transformation will ultimately spread to other sectors of the economy, and this is something supported by historical precedent (as outlined in Chapter 3). This suggests that as such management practice becomes established in workplaces with precarious employment models, it is likely to become increasingly adopted in more secure workplaces, such as in automotive and aerospace manufacturing, in which it has not yet been adopted.

Braverman (1974) states that Taylor's work saw management control assume 'unprecedented dimensions', and this is also something visible with platforms and within Amazon fulfilment centres. This particularly relates to real-time monitoring and tracking. For example, management in warehouses would previously have given workers quotas and would check at particular intervals whether workers had done this. However, the way in which Amazon has used technology to structure its workers' labour process, has led to a situation where Amazon can see if a worker has stopped scanning for a couple of minutes to take a toilet break (as outlined in Chapter 3). This means that the company is not only exercising control over the amount of work that the worker does within a particular period, but can now extend this control to what a worker is doing at all times, reducing the agency that workers have (e.g. to take a toilet break and make the time up throughout the rest of the shift).

This can also be demonstrated by the way in which platforms have extended control to previously 'unprecedented dimensions'. One example of this can be provided by the way in which control over the labour process of couriers has been affected by the implementation of platforms, as outlined in the 'Control over the labour process' section of Chapter 5. As outlined by Participant P¹³⁴, couriers previously had a relative degree of agency over routes to take, in which order to deliver parcels and the amount of time taken (within reason). However, the use of platforms and surveillance has allowed companies to be able to micromanage the labour process of couriers, dictating all of the above, tracking it in real time and being able to apply pressure on couriers if they aren't conforming. This removes the agency that had previously existed within

¹³⁴ Interview with Participant P

their labour process and implements a level of control that was previously unprecedented and would in many respects have been unachievable.

One of the key ways in which Taylorism increased managerial control over the labour process, was through the “separation of conception and execution” (Braverman, 1974: 124). What Braverman describes here is a phenomenon that is now taking place in present day industries, particularly within Amazon fulfilment centres and on platforms. However, a crucial difference lies in the way in which these processes are embedded within technology itself, rather than carried out by human management or supervisors. Although the way in which the technology and algorithms operate are still determined by human input, the day-to-day operations and management of the labour process – through the distribution of tasks and performance monitoring – are largely carried out autonomously by the technology itself. This represents a qualitative difference from the way in which this was achieved through Taylorist reorganisation. This means that despite the similarities, the type of reorganisation within platforms and Amazon represents something different, a digital form of Taylorism. This provides a justification for the ‘Digital-Taylorism’ narrative.

The examples provided above have demonstrated the similarities between Taylor’s methods and those employed by contemporary firms such as platforms and Amazon. However, in contrast, the systems implemented by the latter, whilst still consisting of a reorganisation of the labour process along Taylorist lines, have been dependent upon embedding these changes within technology. With regard to this, there are some similarities with the centrality of pre-existing technology to the way Ford re-organised the labour process within his factories. Although the way in which platforms and Amazon have restructured the labour process to extend control shares many similarities with Taylorism, the centrality of digital technologies in allowing them to achieve this, does lead to a qualitative divergence away from ‘pure’ Taylorism. Thus, the combination of Taylorist principles, with the use of digital technologies, justifies the use of the term ‘digital-Taylorism’, to describe the way in which managerial control is being extended to ‘unprecedented dimensions’ within platforms and Amazon. The research contributes to the development of the Digital-Taylorist narrative, by outlining parallels between Taylorism and the contemporary reorganisation of the labour process and outlines how both are based around the extension of managerial control

and reduction of worker autonomy, theoretically grounded in the work of Marx and Braverman.

It is important to note that this analysis is not intended to serve as a deterministic or fatalistic conclusion. As outlined in Chapter 2, one of the weaknesses of Braverman's analysis, was his failure to account for the class struggle within the workplace and the agency of the collective worker. One of the main reasons that platforms and Amazon have been so successful in using technology and labour process reorganisation to extend managerial control, is because of the weak organisation and fragmented nature of their workforces. If the collective worker was able to be effectively organised within these workplaces, they would be able to contest the use of technology and labour process reorganisation in this way and be able to resist and challenge the amount of control management was able to achieve. This demonstrates the importance of the effective organisation of the collective worker, which is outlined in section 7.5 of this chapter, providing the updated theory to SH3.

7.3 - An assessment of SH2 in the context of the research and analysis

This soft-hypothesis, suggested that *'the impact of contemporary technology and labour process reorganisation is much less in manufacturing firms due to a variety of factors, including skill levels and worker organisation.'* It is observable from both the literature, and the primary research, that this soft-hypothesis is backed up by the available evidence. It is also clear that, as asserted within the soft-hypothesis, that this can be attributed to a variety of factors, including both skill levels and worker organisation. Another key factor that became clear during the primary research stage in particular, was the fact that advanced technologies already played a major role within such workplaces, and in many senses the implementation of technology was at a much later and more developed stage than within either platforms or Amazon. What could also be observed, was that the other factors mentioned, particularly skill levels and the strength of organisation, had meant that the impact of technological implementation had been much less severe¹³⁵. As one example, although job losses had taken place, a union representative of automotive manufacturing workers stated

¹³⁵ Interview with Participant H

that compulsory redundancies had been avoided due to agreements made between the union and companies to achieve this through measures such as voluntary redundancies, redeployment and retirement¹³⁶.

The fact that workers in automotive and aerospace manufacturing have so far been able to avoid such brutal levels of surveillance and control, is in large part, due to the strength of organisation of the workforce. However, there is also the factor that the business models of the companies in these sectors are – for a variety of reasons - generally not built upon the same level of ruthless exploitation as those in the platform economy and Amazon. Workers within aerospace and automotive manufacturing sites are producing expensive, advanced machinery or items, with little or no margin for error and potentially catastrophic results if things go wrong – as outlined in Chapter 6: “we’re building aircraft not washing machines, there’s no hard shoulder at 40,000 feet”¹³⁷.

In contrast, workers in the platform economy are delivering a service to deliver food and workers in Amazon fulfilment centres are packing and sorting items in a warehouse. The higher margin for error in the latter cases, means that companies are able to subject workers to an increased intensity of work and drive them to much higher levels of exploitation, safe in the knowledge that the consequences of any mistakes would be much less severe, making it easier to pin the blame onto individual workers (Cant, 2019; Bloodworth, 2018). This is not to say that because this level of pressure and exploitation is not applied to workers in advanced manufacturing, that they are not subjected to it to some degree, however. Although unions are able to block the kind of unfair disciplinary and management processes used by Amazon and platforms, they can still often use unofficial methods in order to put pressure on their workforce to act a certain way¹³⁸.

There are not the same problems as found in industries in which precarious employment proliferates, with workplaces already tending to have strong membership

¹³⁶ Interview with Participant G

¹³⁷ Interview with Participant H

¹³⁸ *ibid*

density and established recognition agreements and relationships with employers. In terms of advanced manufacturing sites, the challenges for trade unions may be more based around turning passive members into more active trade unionists, in order to ensure that the strength of trade unionism within such workplaces is not broken. This is likely to help protect against any future attempts by management to use technology to erode the conditions of workers by tactics such as deskilling or technological unemployment through automation, as well as through outsourcing, employing more agency workers or 'fire and rehire'. The problems faced by workers in manufacturing are likely to remain more 'attritional' than the more obvious and immediate issues facing workers in precarious industries. However, it is important that trade union representation and strength is not allowed to slide, as this has played a major role in protecting the position of workers within manufacturing sites.

There is a sense amongst manufacturing workers that technology is introduced in order to enable to reduce the time taken to make the product, enabling for both a quicker cycle for individual products and the production of more overall, without this being reflected in improved pay for the workers on the shop floor making it work¹³⁹. This suggests that the impetus to use new technology to increase the intensity of work that workers are subjected to, without proper consultation or associated benefits for workers, is present in manufacturing, as well as in sectors with precarious employment models. The incentive for capital to reduce the amount of labour time necessary to produce a particular product is outlined below, providing a further example of the relevance of Marx in assessing the effect of contemporary technological change:

“Capital employs machinery, rather, only to the extent that it enables the worker to work a larger part of his time for capital, to relate a larger part of his time as time which does not belong to him, to work longer for another. Through this process, the amount of labour necessary for the production of a given object is indeed reduced to a minimum, but only in order to realise a maximum of labour in the maximum number of such objects.” (Marx, 1973: 701)

¹³⁹ Interview with Participant H

The drive within aerospace manufacturing to reduce the number of cycles a product can be completed in, reducing the amount of time it takes, is reflective of a drive that has been apparent throughout the history of capitalist development, as noted by Marx above. This can be done either through the development and introduction of machinery (as was the case in the phase of 'Early Industrial Capitalism'), or by re-organising the labour process in order to dramatically increase the intensity of work that workers are subjected to (as was the case with Taylorism and Fordism). The contemporary example of aerospace manufacturing, is more analogous to the former, with technology being developed and introduced, in order to reduce the amount of necessary labour time to produce a product, increasing both the absolute level of overall production, as well as the amount of surplus value that can be extracted from the workforce.

It is also the case that workers and their representatives in automotive and aerospace manufacturing are likely to view the implementation of new technology more positively than workers (and their representatives) on platforms or in Amazon. One of the key reasons for this, is that the implementation of technology within their workplaces have led to significant improvements in health and safety, and a reduction in the likelihood of workplace accidents¹⁴⁰. It has also served to make jobs less manual, reducing the physical strain that is put onto workers¹⁴¹. This can be contrasted with the platform economy and Amazon, where technology and labour process reorganisation are used in a way that increases the intensity of work, increases the physical and mental strain on workers and increases the risk of accidents due to the pressure being applied to them (Cant, 2019). Taking this into account, it is understandable that the clear benefits that workers can observe related to technological implementation is likely to lead to them having a more positive view of technology generally. This can also be attributed to the fact that these benefits have largely accrued without the observable worsening of conditions and loss of control evident on platforms and within Amazon.

For workers in aerospace and automotive manufacturing, although the implementation of technology does, to some extent, involve the deskilling of jobs, and a decreased

¹⁴⁰ Interview with Participant G

¹⁴¹ Interview with Participant H

level of control compared to more intensive, craft type work, nevertheless workers retain a much greater degree of control over their labour process, both individually and collectively compared to workers in industries with precarious employment such as platforms and Amazon fulfilment centres. There is, however, the danger that the development and implementation of machinery ostensibly to help workers and quicken production, may in the long run play the same role as outlined above. In this way, although manufacturing workers do retain a higher degree of autonomy and control over their labour process, the underlying dynamics and ultimate direction of travel are the same as for platforms and Amazon. Although the speed of change, and resistance it is subjected to, will differ from industry to industry, the laws of capitalism and the advance of technology and control will ultimately appear across industry as a whole (Marx, 1976). This is one factor in the need for greater industrial unionism and cross-sectional organising in order to provide a sufficient and united labour response, which will be outlined in greater detail in later sections of this chapter.

In summary, SH2 is supported by the evidence gathered during the primary research stage, with management not using technology or labour process reorganisation to increase its control to anywhere near the extent of platforms or Amazon. As outlined previously, however, the fact that workers in aerospace and automotive manufacturing have been able to avoid the use of technology and labour process reorganisation to extend managerial control to the extent seen in the platform economy and Amazon, should not lead to complacency. The managerial imperative to control can still be evidenced, and although technology has not been introduced in a way that has significantly shifted control in favour of management, it is still clear that new technologies are being designed and implemented in a way that serves their interests. It is imperative that workers are able to remain well organised and retain their status, in order to prevent management being able to erode their position and be able to introduce technology and re-organise the labour process in a way that significantly extends their control.

7.4 - Answering RQ1

The refined theory arising from the re-assessment of SH1 and SH2 above provide the answers to this research question – ‘How is new technology and labour process reorganisation affecting the nature of control in contemporary workplaces?’. The first point to be made is to differentiate between the areas of contemporary work considered within the research. The observable effect of new technology and labour process reorganisation on control is very different in platforms and Amazon than in automotive and aerospace manufacturing. As outlined in previous sections, there are a variety of different reasons for this, including the respective strength of worker organisation, company attitudes to trade unions, skill levels, the type of work being done and the effect of previous waves of technological implementation.

The research suggests that there is an observable effect of technology and labour process reorganisation being used to extend managerial control within the workplace. This is particularly evident with regard to platform work and within Amazon. A key part of this is the way in which surveillance (both visual and digital) is used to monitor workers in real-time and to condition the way they behave in the workplace. Although supervisory functions in this manner have always been a key aspect of management, the way in which technology is being used by platforms and Amazon allows management to monitor workers intensively and extensively at all times. This significantly extends the scope of managerial control and reduces the autonomy and flexibility that workers have over the performance of tasks and the labour process as a whole.

For platform work, the distribution of work through technological means (via the app), means that there is no point of contact for the worker to ask questions or raise grievances with, as there would be with a human supervisor. The way in which tasks are distributed piecemeal by the app, also increases the control of management, by retaining knowledge of the process as a whole, with workers only receiving information step by step and unable to make an informed judgement over whether to take a particular job or be able to plan sufficiently. The assessment of work that takes place through the app, covering factors such as acceptance rates, time taken for deliveries and abundance to routes, provides management with information on worker

performance that is not available to the workers themselves. The impact of this is outlined in Section 5.3, when Participant E describes the way in which Deliveroo workers have instructions “spat at [them]” and don’t “understand the rules controlling their own work process”¹⁴². This is further outlined by the view of Participant C, who states that Deliveroo ranks riders and determines their priority level for orders according to this, with this information being unavailable to workers themselves. This further increases the control that management is able to exert, as well as acting as a way of conditioning worker behaviour.

It is important to note that the technology does not have to be used in this way, and the labour process does not have to be structured in the way that it is either. The fact that platform companies have chosen to use technology in such a way, and structure the labour process in such a way, is a conscious, political choice that has been made. The combination of these factors, alongside the choice to use precarious employment models, based around bogus self-employment, insecurity and low pay, demonstrate clear behaviours by the companies to maximise the intensity of work that their workers are subjected to, by maximising the level of control they are able to exert over them. This demonstrates that the effect of new technology and labour process reorganisation on control within platforms, clearly allows management to extend its control over both the labour process as a whole, and each individual task within it.

These effects can also be observed within Amazon. The way in which technology is used to monitor workers is not because of any inherent factors within it, but rather because of a conscious political choice made by the company and its management. Many of the key functions relate to the control it allows them over the behaviour and performance of workers. The fact that they are being monitored for their productivity and any ‘time off task’, means that workers are conditioned to behave in certain ways. It extends managerial control, by applying it to each and every detail and task within the labour process. This has led to a situation where workers are fearful of leaving their work for a few minutes to take a toilet break, because of the risk of this being logged as ‘time off task’ and potentially leading to being disciplined by management. This has led to a situation which workers have described as making them feel under

¹⁴² Interview with Participant E

“unbearable pressure”¹⁴³. The effect is to increase the intensity of work, and condition worker behaviour and performance, in a way that leads to a clear robotisation of human labour and leads to increased alienation for the workforce.

It is also clear that the effect of new technology and labour process reorganisation has clearly had much less of an impact on control within automotive and aerospace manufacturing. As mentioned in the previous section, this is due to a variety of factors, including strong worker organisation, management attitudes to unions and the skill levels of the workforce. Additionally, workers within automotive and aerospace manufacturing retain a higher degree of knowledge of the labour process as a whole and have greater structural power within the workplace. This has meant that the introduction of technology has not served to increase the level of managerial control over workers as it has done to both platform and Amazon workers. Nevertheless, it remains the case that workers have not been consulted on the technology introduced, which has been designed and introduced in the interests of management¹⁴⁴. Therefore, there remains a clear risk that the long-run effect of technological implementation could be to extend managerial control within these industries too. Whether this comes to pass will depend on the extent to which workers are able to remain well organised, retain status and resist any management attempts to undermine this through technological implementation and labour process reorganisation.

In providing the answer to RQ1, the first contribution of the research is outlined below. This will be outlined in greater detail in Chapter 8:

Contribution 1 (C1) – The research contributes a post-Braverman perspective on how technology and labour process reorganisation are affecting the nature of control within contemporary workplaces, particularly in emerging areas of work such as platforms and Amazon.

¹⁴³ Interview with Participant F

¹⁴⁴ Interview with Participant H

7.5 - An assessment of SH3 in the context of the research and analysis

This soft-hypothesis, posed that *'there is the potential for much greater resistance and organisation of platform and Amazon workers, however this is dependent on the development of effective strategies by trade unions and the wider labour movement'*. As outlined at the end of the previous section, one of the key themes that has ran through the research, is addressing the gap in Braverman's theories relating to the power of workers to resist and organise against the managerial imperative to control. This is done within the context of considering how workers can be effectively organised in order to resist the way in which management is using technology and labour process reorganisation to extend its control within the workplace. It is clear that well organised workforces are able to more strongly resist some of the worst excesses of the use of technology and reorganisation of the labour process in order to increase managerial control. It is just as clear that many of the companies at the forefront of this are expressly hostile to trade unions and worker organisation and are reliant on the fragmented and insecure nature of their workforces for their business models to succeed, or in many cases to be viable at all.

In the absence of full worker control of the company, it is difficult for workers to gain enough of a say in the way in which technology is implemented. Despite this, there is a variety of ways in which workers can use their leverage in order to adversely affect production or the delivery of services. One example of where this was successfully carried out (at least for a time) is outlined by the way in which workers in Ford factories towards the end of the Fordist period were able to leverage the high level of density and relative consciousness amongst workers, to limit managerial imperatives and regain a certain level of control (Beynon, 1975). However, this is dependent upon the effective organisation of the workforce. In well organised workforces, such as those in aerospace and automotive manufacturing, unionised workforces are able to threaten major disruption, damage to the company's brand and consequences for the company if they try to use threats of automation or displacement against the workforce.

The difference between well-organised manufacturing workplaces and unorganised workplaces such as Amazon fulfilment centres is illustrated by the fact that manufacturing companies are well aware that if they push the changes imposed on

workers too far, they will likely be faced with industrial action, disruption to production and potential loss of face. In contrast, companies such as Amazon are able to exploit the lack of organisation of their workforce, alongside insecure employment terms and large reserve pool of labour, in order to impose draconian changes and working conditions upon them, with little recourse available for resistance. This further demonstrates the importance of being able to effectively organise workers in precarious workplaces such as Amazon fulfilment centres, in order to be able to increase the costs of acting in such a manner for the company and enable workers to be able to stand up to such draconian practices.

The nature of platform work is different, with workers lacking a central workspace and being much more fragmented, operating from different locations across the town or city where they are working. However, it has become a noticeable trend that large numbers of platform workers congregate outside of particular restaurants where they anticipate orders will be likely to come from (particularly large chains such as McDonalds)¹⁴⁵, whilst waiting for orders (Cant, 2019). Not only does this provide an opportunity for workers to come together and discuss issues, but may also offer a place at which trade union activity and attempts to organise can be focused. Additionally, given the nature of management in the platform economy, there are no supervisors or managers physically present attempting to prevent this from happening (as would have often been the case in Ford factories). This is one aspect in which the technologically based nature of platform management could provide an opportunity for the effective organisation of platform workers.

There is a consistent understanding within the labour movement, that trade unions must adapt to the material conditions in industries of low density, particularly those such as the platform economy and Amazon. There were examples cited in Chapter 3 of groups of workers who were claimed to be 'unorganisable', such as dock workers, who through hard work and effective organisation became one of the most well organised and powerful groups of workers. This was corroborated by the primary data, in which some participants drew explicit links between groups of workers who were painted as 'unorganisable' in the 19th and 20th century (such as dockworkers), and the

¹⁴⁵ Interview with Participant I

way in which many workers in contemporary industries with precarious employment (such as platforms, Amazon and hospitality) are often portrayed as such. The 'New Unionism' that emerged in the late 19th century "appeared to differ from the old both in tactics and in organization" (Pelling, 1976: 101) and was focused on the organisation of unskilled and low paid workers with low entrance fees and more militant tactics., This was opposed to the exclusionary 'protectionist' organisation based around protecting the relatively privileged position of the skilled trades on which the 'old' unionism was based. In much the same way as the 'New Unionism' of the late 19th century adapted to material conditions in order to organise 'unorganisable' workers, so must the 'New Unionism' of the 21st century as outlined in section 7.5.

One finding that has emerged from the research, is that there is a variety of opinions within the labour movement about the best strategy and tactics to organise workers. The TUC and its affiliated, larger unions, tend by their very nature to be more conservative and risk-averse. There is a greater desire to work in partnership with companies, particularly where the company management is receptive to this. In many cases, long standing relationships between the unions and companies have led to relatively collegiate relationships. By contrast, grassroots unions have a much more militant approach to organisation. Their narrative is framed around class conflict to a much greater degree, and there is a lack of established relationships and official recognition, with relations with companies being much more frayed. It is undeniably the case that a major factor in this is the material reality of the workplaces that grassroots organisation tends to be focused on, workplaces with precarious employment models, with employers that are hostile to worker organisation.

Although established trade unions are undoubtedly representative of the labour position in a way that the Labour Party is not, it is still the case that they are institutions that are integrated into the framework of the capitalist state. Although many syndicalist unions, particularly in the early 20th century, sought to challenge the authority of capital and to ultimately overthrow the capitalist state (Darlington, 2008), the decline in syndicalism has led to trade unionism operating within the boundaries of capitalist rules. In many senses, trade unions act as an internal check and balance on capital, preventing at the very least *average* wages and conditions being driven low enough to spark open rebellion against the system. The established form of trade unionism

under capitalism therefore has a dual, dialectical purpose – to represent the interests of workers in opposition to those of management, but also to keep the labour movement tied into the framework of the capitalist system. Emerging grassroots unionism is largely free of this institutional intertwinement with the capitalist state and firms, and usually has a more radical political standpoint.

The organisation that has so taken place within grassroots unions has shown innovation in the kind of action taken and has proven that the organisation of supposedly ‘unorganisable’ workers is possible. A key reason for this, is that such unions have much flatter structures, in which organisers tend to be fellow workers. However, it has been limited in scale, and there are difficulties in being able to effectively unionise such large, transient workforces, particularly without access to the kind of resources available to large unions. On the flip side, although large unions do have access to large resources, and are able to employ full time organisers, their structures are targeted more towards more ‘traditional’ forms of employment. As a result of this, larger unions generally don’t have the same level of understanding of platform work as grassroots unions and are unable to reach into existing networks of workers in the same way as activist organisers embedded within the workforce, as is the case within grassroots unions (Cant, 2019; Woodcock, 2021).

There is a clear need for some sort of synthesis between these two approaches. Grassroots unions are likely to find it difficult to organise to a sufficient level without much greater resources, particularly in terms of being able to employ full-time organisers across the country with the remit to recruit and organise as many members as possible and managing campaign networks. Although large, established unions do have the necessary resources for this, there is a problem with recruiting and organising members, with the nature of platform work making it more difficult to organise workers in the way larger unions are used to. Greater co-operation with and learning from grassroots unionism, may help them to expand their base into new areas, and bring committed activists, with good organisational skills into the mould. However, the history of the organised labour movement is scarred by divisions and infighting that have only served to undermine the collective interests of workers, and this is an ever present threat, as evidenced by the way in which GMB’s controversial recognition agreements with Deliveroo and Uber have cut out the IWGB and ADCU, who view it

as undermining the existing organisation of workers through grassroots unions, to which the majority of organised workers are affiliated. This is one area in which the labour movement is divided, between the gradualist, reformist approach of established TUC-affiliated unions, and the more radical and militant tactics employed by grassroots unions.

Grassroots unions are not organising within Amazon fulfilment centres, and the tensions between established and grassroots unionism do not exist there - however, a different problem is posed by the aggressive anti-unionism of Amazon. Although there are challenges posed by the composition of the workforce, and the turnover of staff, Amazon fulfilment centres are a more 'traditional' workplace site in terms of workers being physically grouped together, and perhaps more amenable to 'traditional' forms of union organising. The level of anti-unionism, the financial clout of the company, the strict nature of surveillance and in-person management and its willingness to spend large amounts of money to fend off worker organisation, means that the resources available to the large unions are necessary to organise workers effectively to fight back against this.

A primary issue is to ensure that attempts to organise by different unions – with attempts being made by both Unite and GMB – do not result in competitive behaviours and the fragmentation of the organised workforce. This is something that could be easily exploited by a company like Amazon, and it is crucial that different unions attempting to organise the workforce are able to work together in order to present a united front against the company. The problem of potential competition between unions, and the need to adopt some form of agreement over which companies organise in which area and joint campaigning / organising strategies, were also noted by several participants. This is something that has been noted by union representatives and the TUC in the interviews that have taken place as part of this research. The problems with competition and issues between unions can be seen in the case of Uber drivers, where the unionised part of the workforce (which represents a minority in itself) has already split into 3 different fragments, making it harder to provide a united front against the company.

It is not only in terms of different unions that workers and their representatives must be able to co-operate more effectively. In order to be able to effectively resist management using technology and labour process reorganisation to increase their control, workers and their representatives must be prepared to work more collectively and collegiately across national boundaries. Steps have been taken in terms of transnational organisation with the 'Amazon Alliance', although more work needs to be done in order to move many unions beyond their own national situation¹⁴⁶. In addition to this, there is also a demonstrable need for greater co-ordination across sectoral and occupational boundaries, with much greater scope for 'industrial unionism'. In the areas that have been researched, there are large differences related to worker organisation, that manifest in a number of ways. There are significant differences in the levels of unionisation within different workforces, in the recognition (or lack of) from companies and in terms of the type of trade unions that workers are represented by.

Nevertheless, these differences should not detract from the common interests held by workers across all of these sectors and beyond. One of the major problems that has faced the trade union movement historically, is to move past the sectional interests of different groups of workers and to be able to present a united front against 'management' at a broader, macro level. This has been worsened over recent decades by the progressive weakening of the trade union movement, and neoliberal legislation that has prevented secondary strikes and made cross-sectional action much more difficult to achieve. The challenges posed to trade unions by contemporary technology and labour process reorganisation is no different in this regard. Although at first glance workers in different industries or different roles within a company appear to be experiencing different effects and have different priorities, the overall trends facing them remain the same. As such, asserting the power of the collective worker, and preventing management increasing its control, can only effectively be achieved at a collective level.

This outlines the fact that through sufficient worker organisation, workers are able to mount a fightback for control, and this applies as much to the contemporary situation

¹⁴⁶ Interview with Participant A

as to historical periods of change. The attempts to organise within both the platform economy and Amazon, as well as the strength that workers in manufacturing already have, offers hope that workers will be able to sufficiently organise and assert their strength against the excesses of capital. There are some examples of how workers and unions are attempting to organise in these industries in Chapters 5 and 6, but such organisation remains limited, and there are serious questions to be answered as to how this can be expanded.

Through the research that has taken place and the subsequent analysis and coding, three distinct trade union strategies can be identified, that are outlined in greater detail in the next section of this chapter:

- Social-Democratic Trade Unionism
- Social Partnership Trade Unionism
- 21st Century New Unionism

7.6 - Trade union strategies

This section provides detail on the three distinct trade union strategies that have been identified by the research. It outlines the characteristics of each of the three strategies and what differentiates them from the other two:

Social-Democratic Trade Unionism

This strategy is associated with the TUC itself, and the majority of its member unions – of particular interest for the current research, are Unite and GMB – as indicated in the ‘Large TUC affiliated union’ category that emerged from the Atlas.ti analysis (See Appendix 3d). One of the key characteristics of Social-Democratic trade unions, is their acceptance of the division between the industrial and political, and their delegation of the latter to the Labour Party, through its affiliation structure. This can be differentiated from the ‘syndicalism’ of many unions in the early 20th century in particular, in which there was no clear distinction between the political and the industrial (Darlington, 2008). Syndicalist unions looked beyond immediate workplace

demands to broader demands around the organisation of the economy and society. By contrast, Social Democratic Trade Unionism is not dedicated to overthrowing capitalism and replacing it with a form of worker-led democracy in the same tradition as syndicalism, but rather seeks to reach accommodation with management within the capitalist system, regarding bread and butter issues such as pay and working conditions.

Although unions such as Unite and GMB are 'general unions' in which workers within a wide range of sectors are organised (often due to the various mergers into each union over time), workers are still organised along sectoral lines. There is a potential for much greater 'industrial unionism' and cross-sectoral organising within such large, general unions, however this is inhibited by the political vacuum that exists within mainstream trade unionism. The separation between the political and economic, means that Social-Democratic Unions are focused primarily upon pay and conditions within each particular workplace, as opposed to linking up different groups of workers into a broader, more politicised struggle against management and the capitalist class. One example of this, is the failure of the TUC and other major unions to organise the whole labour movement in defence of the National Union of Mineworkers during the 1984-85 Miners' Strike, in what was clearly a politically motivated attack on the whole trade union movement by the Thatcher government (Darlington, 2005).

Although trade unions falling within this category are typically more (small c) conservative and risk-averse than grassroots unions, there is a recognition from many of the participants interviewed that their organisations need to be more radical and willing to take risks in order to strengthen their position, particularly with regard to workplaces and demographics in which there is low density of union membership. There has been attempts by Social Democratic trade unions to organise within areas of low density, notably with the recognition deals that GMB struck with Uber and Deliveroo. However, these deals are fraught with issues that are symptomatic of some of the key issues with Social Democratic Trade Unionism. Some of the criticism that has been directed at GMB has been critical of the limited nature of the deals, and the constraints they put on organisation and resistance within the workforce (Awaad, 2021; IWGB, 2022a). However, GMB's position that such concessions are worthwhile

in order to get a foot in the door, is consistent with the approach of Social Democratic trade unions.

The organisational structures of Social-Democratic trade unions are largely reflective of 20th century trade unionism. Workers tend to be organised into workplace branches and organised upon sectoral lines. Even where different groups of workers within a particular workplace are organised, there is often little attempt at co-ordinated organisation and in many cases, different groups of workers are represented by different trade unions. Engagement with the union usually revolves around branch meetings, which traditionally take place in-person, although the effects of the Covid-19 pandemic have led to a hybrid approach in many places¹⁴⁷. Still, the mechanisms are largely not reflective of the way in which many types of workers wish to communicate, particularly younger workers, who are a particularly problematic demographic for unions to attract and retain. There was an understanding from many participants representative of Social-Democratic unions, that methods of organising do need to be adapted in order to be fit for purpose in the 21st century and to appeal more to workers from demographics with low density¹⁴⁸¹⁴⁹.

One of the main strengths of Social-Democratic trade unions is the level of resources they have access to and the amount of professional expertise they possess and are able to dedicate to the organisation of workers. Although one of the key gaps that has been identified is the use of cross-sectoral organising and ‘industrial unionism’, there are democratic structures built into Social-Democratic Trade Unionism that could enable and sustain this. For example, through candidates for General Secretary or other executive positions including this within their campaign manifesto, or through individual union or TUC conference resolutions. Although such a campaign would need to overcome the bureaucratic obstacles and management-style ideology at the top of many Social-Democratic trade unions, the possibility to achieve this with the right level of organisation and strategic and tactical plan is there.

¹⁴⁷ Interview with Participant B

¹⁴⁸ Interview with Participant I

¹⁴⁹ Interview with Participant A

Social Partnership Trade Unionism

This strategy is associated with more professionally focused trade unions, such as Community and Prospect. A key part of the strategy of such unions is the idea of ‘social partnership’ between trade unions, government and business¹⁵⁰. Although there is a recognition of ‘bad employers’ who refuse access to trade unions and refuse to work with them, they argue that fundamentally, the interests of workers and management are aligned, and that the interests of workers would be best served through their representatives engaging in such a ‘social partnership’ with business and government. Social Partnership Trade Unionism can be differentiated from Social-Democratic Trade Unionism, through the way in which it views the interests of workers and management. Although Social-Democratic trade unions tend to focus on cultivating good relations and recognition agreements with management, there is still a clear distinction between the interests of workers and management. Although Social-Democratic trade unions play an important role in tying the labour movement to the framework of the capitalist state, it nevertheless represents the interests of workers against management within this framework. By contrast, as outlined above, Social Partnership Trade Unionism views the interests of workers and management as primarily aligned. In this sense, it views the conflictual relationship between workers and management as misguided, and not reflective of the best interests of either.

21st Century New Unionism

This strategy is associated with non-TUC affiliated ‘grassroots’ unions such as the IWGB. One of the core concepts of New Unionism in the 19th century, was that it aimed to provide organisation for workers outside of trades and the labour aristocracy of the time, particularly unskilled labourers. Grassroots unions such as the IWGB, also tend to recruit and organise within workforces that more established trade unions have not managed to reach into and organise. This is in terms of particular workforces (such as platform workers), but also in terms of certain demographics, particularly young workers and migrant workers (Woodcock, 2021). A parallel exists between the New Unionism of the 19th century, and that of the 21st, in the fact that they both moved

¹⁵⁰ Interview with Participant M

outside of the conventional wisdom and organising practices of trade unions of the time. In addition, as pointed out by Joyce et al. (2022), both New Unionisms also rely on harnessing the associational power of workers, rather than the structural power that the mainstream trade unionism of both periods was focused upon.

One of the factors that differentiates grassroots unions from unions in the other two categories, is their use of innovative tactics outside of the mainstream and accepted tactics used by mainstream trade unions. For example, the IWGB formulated a strategy to turn the ‘independent worker’ status forced upon workers back against companies, recognising that this designation meant that the workers they represented were not covered by trade union laws restricting the actions that workers are able to take. This meant that they were able to use tactics such as flying pickets and were not subject to restrictions around balloting for action or the amount of workers that could take part¹⁵¹. Although many of these actions would not be open to use by most groups of workers represented by Social-Democratic unions (although it could be an option for some), there is a more general lack of innovation with the tactics of Social-Democratic Unions, which tend to be focused around discontinuous rolling strikes, with limited picketing. Although the scope is restricted by trade union laws, there seems to be limited engagement with trying to come up with new forms of resistance not covered by these laws, that can provide more of an issue for management. There are however, some representatives of Social-Democratic Trade Unionism who are more aware and open of the need to engage in this way¹⁵².

There is also the fact that grassroots unions tend to be more overtly political than TUC-affiliated unions. For the latter, political strategy is usually expressed through affiliation to the Labour Party, with a clear separation between the political - represented by the Labour Party - and the industrial - represented by the unions (Darlington, 2008). This overt politicism is one of the key characteristics of 21st Century New Unionism, with unions within this category much more likely to challenge the nature of control and managerial authority in and of itself¹⁵³. This helps to raise the general political

¹⁵¹ Interview with Participant E

¹⁵² Interview with Participant A

¹⁵³ Interview with Participant B

consciousness of organised workers, and also helps to broaden out the scope of what they organise against and resist. As one example of this, the unions representative of 21st Century New Unionism tend to be more diverse and operating in industries that contain a high proportion of migrant workers. Taking this into account, the increased politicism of such unions, leads to a situation in which they are more likely to be drawn into action outside of the typical 'industrial' sphere, including direct action against immigration raids and deportations (IWGB, 2022b).

This differentiates them from Social Democratic unions, who, whilst generally supportive of the rights of migrant workers, would be unlikely to engage in direct action in the same way. This ties into the characterisation of 21st New Unionism as being inherently more political than other forms of trade unionism, with the scope of their activities being wider. This can act as both a potential strength and a weakness – it is a potential strength in terms of building political consciousness, resistance and opposition to the managerial imperative to control, but also a potential weakness in that it may put off apolitical workers, or those not aligned with the political left, which could restrict the scale of organisation able to be achieved. This highlights one of the inherent tensions and contradictions within trade unionism more generally, but particularly within 21st Century New Unionism, around organising as many workers as possible, whilst staying true to the core political objectives of what they are trying to achieve.

The strategy of grassroots unions can also be differentiated from unions within the other categories, by the conflictual approach they take to dealing with companies, as opposed to being focused more upon co-operation. A key factor in this is undoubtedly the material reality of the situations they are organising in – a conflictual approach is much more likely with platform companies whose anti-unionism and hostility to worker organisation is a core part of their business strategy, as opposed to a union such as Unite or GMB dealing with a major manufacturer who provides recognition and aims to foster good relations. Yet, this is not the whole story. There is a clear ideological differentiation that can be made between the viewpoint of grassroots unions (representative of 21st Century New Unionism) and Social-Democratic unions with regard to this (and even more so with Social Partnership trade unions), as represented by the differences in political outlook, as outlined in the previous paragraphs.

There is a recognition from organisers within grassroots unions that electronic communication cannot act as a full substitute for in-person networks and meetings and the importance of informal interactions and trust that is built up around these¹⁵⁴. They have nevertheless been able to incorporate electronic communications as part of their organising strategy much more effectively than mainstream unions. Forms of communication such as WhatsApp group have commonly been used, enabling the organisation of workers who may not be able to attend in person meetings, and also allowing for a much more dynamic, flexible and quick paced response to situations. Once again, there is a certain degree to which this is reflective of the material conditions in which many of the workers organised by grassroots unions are organising in, particularly platform work – a transient workforce, with no defined central workspace or co-ordinated labour process. Yet, it allows for forms of organisation that may be suited to younger workers in particular, can be more inclusive and also allow unions to act much more quickly and be able to outflank management and act with the element of surprise.

It is, however, important to note that unions representative of '21st Century New Unionism' organise within an extremely limited section of the workforce, and in terms of membership numbers are way below even the Social Partnership trade unions, let alone large, general Social Democratic unions such as Unite and GMB. The deals between GMB and Uber / Deliveroo also outline one of the main difficulties facing 21st Century New Unionism, the ability of large, established Social Democratic unions to muscle in and use their expertise to attract workers and reach recognition deals with companies (IWGB, 2022a). Companies that are hostile to worker organisation such as Uber and Deliveroo, may view deals with Social Democratic unions as worthwhile in order to restrict the more radical and confrontation forms of organising taking place within grassroots unions, representative of 21st Century New Unionism. Building effective communication networks and cross-sectoral and cross-union organising will be critical in uniting the labour movement as much as possible and preventing management using such strategies to drive a wedge between different unions and groups of workers.

¹⁵⁴ Interview with Participant B

7.7 - Answering RQ2

RQ2, asked '*how can workers be empowered to effectively organise and resist the managerial imperative to control?*'. As mentioned in earlier sections, there clearly needs to be some sort of synthesis between the different types of trade unions and different strategies that have been identified and outlined in the previous section. The findings of this research reject the concept of Social Partnership Trade Unionism, as not reflective of the material conditions within the platform economy and Amazon in particular. Such companies have consistently demonstrated an anti-trade union and anti-collective worker approach, and as such, it would not be an effective or reasonable strategy for the trade union movement to take. Therefore, this subsection will consider ways of synthesising the approaches of Social Democratic and 21st Century New Unionism.

One of the key weaknesses of grassroots unions, is their lack of access to the sources of funding needed to grow their organisation and sustain it to a level capable of expanding density and organisation across the workforce. The research has also found that the organisational model of grassroots unions is not particularly suitable to organising within workplaces such as Amazon fulfilment centres. The findings of the research clearly suggest that grassroots unions do not have sufficient capacity to be able to scale up the organisation of workers in either platform work or more broadly, to the necessary levels, in order to provide effective organisation and the mobilisation of the collective worker. Therefore, it is clear that any solution must require the inclusion of the TUC and its large social-democratic unions such as Unite and GMB, in order to provide the organisational capacity and expertise needed to achieve this.

Yet, it is also clear that the existing approach of the TUC and its large social-democratic unions is clearly insufficient, and particularly ill-suited to the demands of the platform economy. It is also clear that their approach is not succeeding in terms of attracting members of the demographics dominant within the platform economy, and at least to some extent Amazon – younger workers, migrant workers and lower-skilled workers. It is within these groups that grassroots unions have achieved their relative success

(Woodcock, 2021), and this suggests that there are clearly lessons that Social-Democratic trade unions can learn from the organisational strategy and tactics of 21st Century New Unionist grassroots unions, such as the IWGB. It is encouraging in this regard, that representatives of Social-Democratic trade unions who participated in the research, did acknowledge that there were things that the TUC and Social-Democratic trade unions could learn from grassroots unions (and by extension, 21st Century New Unionism)¹⁵⁵¹⁵⁶.

The optimal meeting point between Social-Democratic Trade Unionism and 21st Century New Unionism, would be the use of the organisational capacity of Social-Democratic Trade Unions, with some of the strategy and tactics of grassroots unions. This would utilise the strengths of both approaches, whilst addressing the weaknesses of both. It would get around the lack of organisational capacity of grassroots unions, whilst bringing fresh ideas, personnel, strategy and tactics into Social-Democratic trade unions. The organisational models of Social-Democratic unions are largely still the same as in the last century - there is a lot that large Social-Democratic unions can learn from 21st Century New Unionism and being able to incorporate this within their own strategy, can help them to adapt and strengthen in the face of the material reality of work in the 21st century. This would help Social-Democratic unions to ensure they remain relevant to new groups of workers and provide sustainability and growth moving forward. It would also prevent 21st Century New Unionism fizzling out due to the lack of organisational capacity and resources.

In addition to this, Social Democratic Unions could benefit from a further shift in organisational models, moving from more rigid sectoral and workplace organisation, to a more fluid and flexible approach that links workers in “separate phases of a process” that are “isolated by the social division of labour” (Marx, 1976: 505). Some examples of this are the co-ordinated organising of Amazon fulfilment centre workers and couriers, or the co-ordinated organisation of workers on food delivery platforms with workers preparing the food in hospitality venues (e.g. those represented by Unite hospitality). This would foster a greater sense of collectivism of the whole workforce

¹⁵⁵ Interview with Participant A

¹⁵⁶ Interview with Participant I

operating at different phases of the process, as well as tackling the fragmentation of labour that is a key part of the strategy of management to prevent the effective organisation and development of the collective worker.

In providing an answer to RQ2, the research has made a further central contribution, which is outlined below. This contribution will also be outlined in greater detail in Chapter 8:

Contribution 2 (C2) – The research provides a theorisation of the organisation and resistance of workers within the context of contemporary forms of work and the way in which technology and labour process restructuring are applied. It has addressed the gap in Braverman’s work, and much subsequent research on the labour process and the workplace by centring the working class and their effective organisation into the collective worker. The identification of, and development of, strategies and tactics to achieve this, can be used in a concrete sense, by trade unions and groups of workers, in order to help guide and develop the effective organisation and resistance of workers.

7.8 - Conclusion

This chapter re-assessed the 3 soft-hypotheses that emerged at the end of Chapter 3, in order to reconstruct and refine them, in light of the research and analysis that had taken place in the subsequent chapters. The reconstructed and refined theories were then used to provide answers to the 2 research questions that emerged at the end of Chapter 2. The re-assessment of SH1 and SH2 in light of the primary research and subsequent analysis, outlined in Chapters 5 and 6, allowed for the research focus to shift from the soft-hypotheses back to the research question that they were formulated from – ‘How is new technology and labour process reorganisation affecting the nature of control in contemporary workplaces?’ (RQ1). The research and analysis demonstrated that, in line with SH2, that there are key differences in the way that technology and labour process reorganisation are being used to extend managerial control within the industries researched. Platform and Amazon workers are, for a variety of reasons, more vulnerable to the use of technology, alongside labour process

reorganisation, to extend managerial control over their work and reduce the level of control and ownership they are able to feel over it, both individually and as a collective. The research and analysis extends knowledge of the effects of technology and labour process reorganisation on the workplace to these emerging forms of work, whilst also situating them within the wider historical context and not overemphasising their novelty compared to previous periods of technological change and labour process reorganisation.

The research also examined the potential for increased and improved worker organisation within the industries considered. The differences in worker organisation for platform and Amazon workers compared to workers in automotive and aerospace manufacturing are stark. In addressing SH3, the views of participants were used to identify strategies and tactics that can be of use in developing much stronger and more effective worker organisation for these groups of workers. In doing so, three distinct trade union strategies were identified, which, when unpicked, can further aid the development of more effective strategies for organisation tailored to particular groups of workers, as well as how this ties into a more effective strategy for the general organisation of workers at the macro level. This was based around assessing the best way of synthesising the approaches of Social-Democratic and 21st Century New Unionism was assessed, with the outcome being the combination of the organisational capacity of Social-Democratic Unions with the strategies and tactics of grassroots unions (providing an answer to RQ2). Additionally, the incorporation of new organising strategies such as the co-ordinated organisation of workers at different phases of the process, separated by the division of labour, could also help to address the fragmentation of workers and provide a more developed sense of the collective worker. The research makes a clear contribution here, in moving beyond Braverman's theory to outline a new 'post-Braverman' theorisation - by addressing a clear and important gap in his work, namely accounting for class struggle and the emancipatory potential of the working class as a class *for itself*, if it can be empowered to effectively organise.

The following Chapter, Chapter 8, will conclude the research by outlining the contributions that the research has made. The research began with the initial two proto theories that were used to develop the research questions. Initial answers to the research questions were developed in the form of soft-hypotheses, which was used to

guide the research design. Following the primary research stage, the soft-hypotheses were revisited and reassessed, with this leading to the answers to the research questions. The answers to the research questions then provided the two main contributions of the research. The contributions are made through providing a post-Braverman theorisation of both control within the workplace and worker organisation and resistance, which is grounded in the theoretical development of the research and the data and analysis in Chapters 5, 6 and 7. These contributions will be explained and justified in greater detail in Chapter 8.

Chapter 8 - Conclusion

8.1 - Introduction

This chapter provides the conclusion to the research. It begins by outlining the two main contributions of the research. It then builds upon these contributions (particularly C2), in order to outline 'what is to be done' in section 8.4. This section provides an analysis of how – based upon the research findings and analysis – worker resistance and organisation can be developed through the formation of a more effective strategy and a synthesis between different elements of Social Democratic Trade Unionism and 21st Century New Unionism. The chapter then outlines the limitations of the research and provides a postscript to the research around the wave of organising and strike action that has taken place in Amazon fulfilment centres in the UK following the conclusion of the research and analysis stages. It concludes by outlining possibilities for further research, that can emerge from and build upon the research and analysis that has taken place. The stage of the research is outlined below in Figure 8.1:

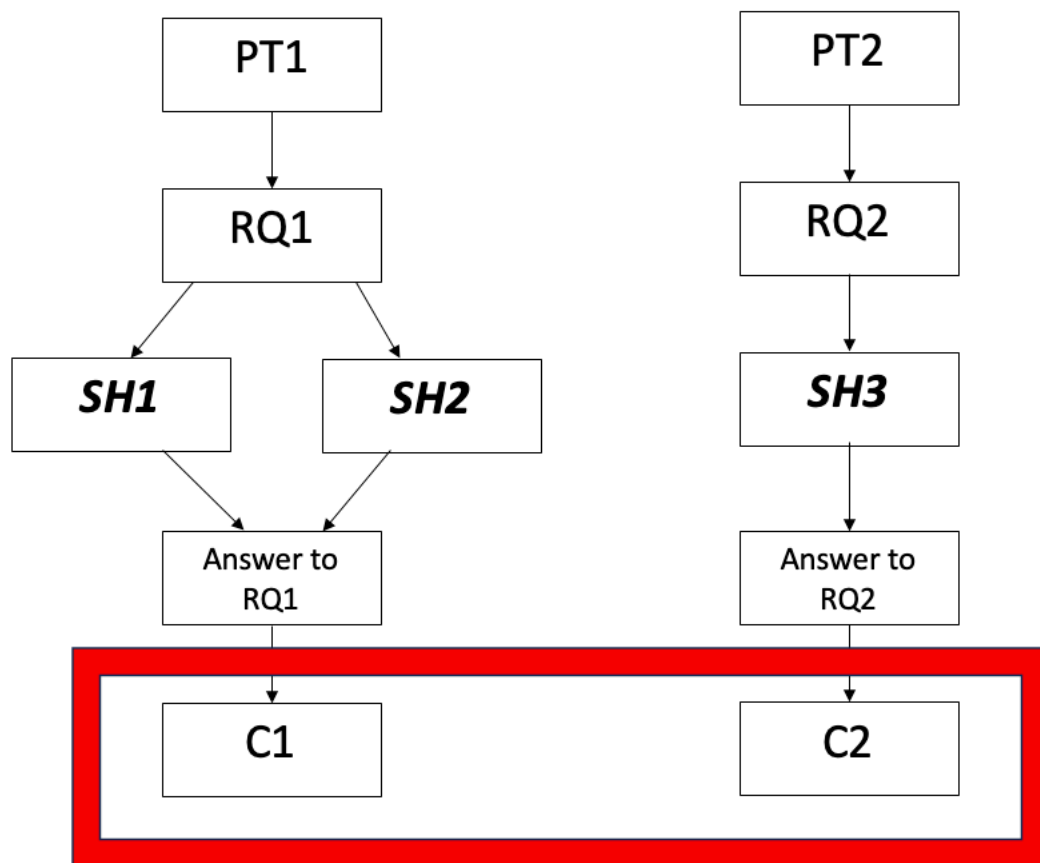


Figure 8.1 – Stage of research

8.2 - Contribution 1 (C1)

The main contributions of the research are outlined in Chapter 7. This section outlines the first of these (C1), which is outlined again below for clarity:

Contribution 1 (C1) – The research contributes a post-Braverman perspective on how technology and labour process reorganisation are affecting the nature of control within contemporary workplaces, particularly in emerging areas of work such as platforms and Amazon.

The theoretical contribution of the research in this regard, is to enable a more developed understanding of the way that technology and labour process reorganisation are affecting the nature of control within these workplaces. Although a lot of research focusing on platforms and Amazon does consider the extent to which such companies are able to exert control, a key novel contribution of the research is

to consider this within the specific context of the interdependent relationship between technology and the labour process and within its wider historical context. Additionally, the argument is also put forward that the narrative of 'technological innovation' surrounding platforms in particular, is misguided, with their innovative effects lying rather in the way they have reconstituted the labour process to intensify work and make more 'efficient' use of existing technology that has been developed elsewhere. As such, platforms are reliant on this work intensification and increased exploitation of workers for any apparent productivity gains. A further novel contribution of the research is to link this into previous periods of change within capitalism where the same dynamics were at play – notably the 'early development of manufacture within the workshop' and the introduction of the moving assembly line at Ford, as outlined in Chapter 2.

As outlined above, the research outlines the importance of technological surveillance to the way the labour process is restructured to significantly increase the intensity of work. This allows management to simultaneously monitor workers both intensively and extensively, particularly through the use of data analysis and wearable / trackable devices. This is crucial in enabling them to exert control over the workforce, particularly as this data is not available to workers. As outlined in Chapter 7, the technology in and of itself does not have to be used in this manner, this is a conscious choice made by the companies. The technology itself is not developed by the companies, rather they make use of technology developed elsewhere, with the 'innovation' lying in the way that it is used to structure the labour process and extend managerial control. The narrative of technological innovation that is pushed by the companies, is an attempt to obscure the true nature of their business models and management structures.

Although the research does show how the underlying mechanisms of technological implementation and labour process reorganisation share many similarities with those of earlier periods (as described above and in Chapter 3), it outlines the difference in scale from these earlier examples. The greater technological sophistication at this higher stage of the capitalist cycle, enables the extent to which management are able to control both each stage of the labour process and its whole, to be achieved to a much greater degree. It also enables management to obscure the nature of the way in which the technology is used, hiding the political choices underlying this within the

'black box' of the technology. Yet, as outlined in Chapter 7, this is not intended to be a fatalistic or determinate conclusion. Effective worker organisation could lead to workers being able to resist and push back against technology being used to structure the labour process and extend managerial control in this way.

The research has addressed one of the key gaps identified in Braverman's work as outlined in Chapter 2, namely the failure to account sufficiently for the subjective perceptions of individuals, but has done so from a critical realist perspective and using a critical grounded theory method, with these interpretations being treated as the subjective perceptions of an external, objective reality. This means that the core objectivism and materialist ontological foundations of both Braverman and Marx's work have been retained. Nevertheless, the fact that the research has addressed the gaps in Braverman's theories, leads to the research offering a 'post-Braverman' perspective. This is particularly due to the way in which the extension of managerial control is presented in a much less determinate manner, with *collective* worker agency having a central role in the theory that has emerged from the research.

The research differs from subjectivist and post-modernist critiques of Braverman, in that it views worker agency as being necessary collective rather than individual, which is again, consistent with the ontological positioning of both Marx and Braverman. This reflects a further contribution in regard to C1, in demonstrating the need for the effects of technology and labour process reorganisation on the nature of managerial control to be researched at the collective rather than individual level, as it is at this level that its effects can be most fully understood, and – as outlined below in Section 8.3 – at which effective forms of resistance and organisation can be developed. Subjectivist and individualist attempts to ascribe agency to individual workers, are reflective of a defeatism that cannot provide effective resistance to the managerial imperative to control. As Martinez Lucio and Stewart (1997: 53) point out - outlined in greater detail in Chapter 2 - the fact that the effects of managerial control are often felt at the individual level is somewhat misleading given the fact that value is determined collectively and the co-operation necessary to produce it. Only resistance and organisation at the collective level can be effective in adequately challenging managerial control, as it is at this collective level that the labour process is determined.

8.3 - Contribution 2 (C2)

This contribution is outlined below:

Contribution 2 (C2) – The research provides a theorisation of the organisation and resistance of workers within the context of contemporary forms of work and the way in which technology and labour process restructuring are applied. It has addressed the gap in Braverman’s work, and much subsequent research on the labour process and the workplace by centring the working class and their effective organisation into the collective worker. The identification of, and development of, strategies and tactics to achieve this, can be used in a concrete sense, by trade unions and groups of workers, in order to help guide and develop the effective organisation and resistance of workers.

This contribution addressed one of the key gaps in Braverman’s theories that was identified in Chapter 2, namely accounting for class struggle and the ability of workers to organise in order to effectively resist the managerial imperative to control. This is a problematic element of his work, as it can appear to be deterministic and fatalistic as to the effect of technology and labour process reorganisation on workers. Although it does not seem likely that this was Braverman’s intention given his politics and history of organising, it nevertheless represents a key gap that needs to be addressed. The research has made a contribution in this regard, in moving beyond an analysis of the effect of technology and labour process reorganisation on control, to researching how workers can resist and organise to fight against this. In addition, this contribution adds to knowledge about contemporary trade union organising, in both the abstract and concrete senses – the abstract through the conceptualisation of different forms of trade unionism and the concrete through providing practical suggestions that can be used to better organise workers, particularly in areas of low density and high insecurity such as the platform economy and Amazon fulfilment centres. Taking all of this into account, C2 makes both a theoretical and empirical contribution.

As outlined above, the research made a novel contribution in outlining a typology of 3 distinct trade union strategies that were identified during the course of the research and analysis – Social Partnership Trade Unionism, Social Democratic Trade Unionism

and 21st Century New Unionism. The idea of Social Partnership Trade Unionism was disregarded as inconsistent with the Marxist perspective of the research, which views the interests of management and workers as fundamentally in opposition. The research then outlined the need for some degree of synthesis between Social Democratic Trade Unionism and 21st Century New Unionism in order to provide the most effective forms of resistance and organisation against the effects of technology and labour process reorganisation on the managerial imperative to control. This was outlined in Chapter 7 and will be further outlined in section 8.4.

One finding that has emerged from the research, is that there is a variety of opinions within the labour movement about the best strategy and tactics to organise workers. The TUC and its affiliated, larger unions (representative of 'social democratic' and 'social partnership' trade unionism), tend by their very nature to be more conservative and risk-averse. There is a greater desire to work in partnership with companies, particularly where the company management is receptive to this. In many cases, long standing relationships between the unions and companies have led to relatively collegiate relationships. By contrast, grassroots unions (representative of 21st century New Unionism) have a much more militant approach to organisation. Their narrative is framed around class conflict to a much greater degree, and there is a lack of established relationships and official recognition, with relations with companies being more frayed. It is undeniably the case that a major factor in this is the material conditions of the workplaces that grassroots organisation tends to be focused on, workplaces with precarious employment models, with employers that are hostile to worker organisation. The next section will move beyond this contribution, in order to consider the ways in which Social Democratic Trade Unionism and 21st Century New Unionism can be most effectively synthesised.

8.4 - What is to be done?

The organisation that has so taken place within platform companies, led by grassroots unions (representative of 21st Century New Unionism), has shown innovation in the kind of action taken and has proven that the organisation of supposedly 'unorganisable' workers is possible. A key reason for this, is that such unions have

much flatter structures, in which organisers tend to be fellow workers. However, it has been limited in scale, and there are difficulties in being able to effectively unionise such large, transient workforces, particularly without access to the kind of resources available to large unions. On the flip side, although large unions (reflective of 'Social Democratic Trade Unionism') do have access to large resources, and are able to employ full time organisers, their structures are targeted towards more 'traditional' forms of employment, based on 20th century organisational models. As a result of this, larger unions generally don't have the same level of understanding of platform work as grassroots unions and are unable to reach into existing networks of workers in the same way as activist organisers embedded within the workforce, as is the case within grassroots unions (Cant, 2019; Woodcock, 2021).

There is a clear need for some sort of synthesis between these two approaches. Grassroots unions are likely to find it difficult to organise to a sufficient level without much greater resources, particularly in terms of being able to employ full-time organisers across the country with the remit to recruit and organise as many members as possible and managing campaign networks. Although large, established unions do have the necessary resources for this, there is a problem with recruiting and organising members, with the nature of platform work making it more difficult to organise workers in the way larger unions are used to. Greater co-operation with grassroots unionism, may help them to expand their base into new areas, and bring committed activists, with good organisational skills into the mould. However, the history of the organised labour movement is scarred by divisions and infighting that have only served to undermine the collective interests of workers, and this is an ever present threat, as evidenced by the way in which GMB's controversial recognition agreements with Deliveroo and Uber have cut out the IWGB and ADCU, who view it as undermining the existing organisation of workers through grassroots unions, to which the majority of organised workers are affiliated. This is one area in which the labour movement is divided, between the gradualist, reformist approach of Social-Democratic Trade Unionism unions, and the more radical and militant tactics of 21st Century New Unionism. The question of how worker organisation will proceed within the platform economy is one of the most pressing questions facing platform workers, and this could provide an interesting avenue for future research, as outlined in Section 8.7.

Although attempts to re-organise the structure of worker organisation can often be focused on a top-down approach, the development of a strategy in which effective worker organisation can be built to resist the impulses of capital must be built from the workplace upwards. Although it has never been able to fully develop and crystallise, the points at which worker consciousness and their ability to effectively challenge the control of capital were most advanced, have been based upon strong organisation within the workforce itself. This can be demonstrated by the examples of factory occupations in the 'Biennio Rosso' period of 1919-20 in Italy (Gramsci et al., 1971: 224fn) and again in the Fiat workers struggles of the 1960s / early 1970s (Tronti, 2019: 337), the Shop Steward Movement in Great Britain during the First World War and again during the late 1960s / early 1970s (Beynon, 1975). This also relates back to the point made by Participant A in Chapter 5, about the need to focus upon activism rather than passive membership within the workforce. Some unions have large memberships, but the lack of activism and class consciousness within the workforce limits the possibilities for effective organisation and action. By developing activism, this can lead to the emergence of organic workplace leaders, and the development of consciousness that enables activism to flourish within the workforce and developing the strategy and organisation to effectively assert the power of workers.

There are also challenges related to working across sectoral and occupational boundaries, particularly in jurisdictions such as the UK, where laws prohibit secondary action by trade unions in support of other groups of workers and lengthy balloting and consultation periods for industrial action. However, this does not offer an insurmountable barrier, and unions could, where possible, co-ordinate strikes that have achieved their own individual mandates across different unions and sectors in order to maximise the economic impact of industrial action. This may particularly be the case in some of the sectors focused on for this research – as one example, a simultaneous strike between Amazon fulfilment centre workers and couriers would have a greater impact on the company than separate actions, as well as achieving increased publicity. The ability to work across boundaries and fight on multiple fronts, is imperative for labour to be able to effectively resist capital's attempts to increase its control through the way that it deploys technology.

Another way in which the power of companies such as Amazon could be more effectively fought by reducing occupational and sectional boundaries, is through a restructuring of union organisation along industrial rather than sectional lines. By focusing more on such 'industrial unionism', the organisation of workers across sectional lines could be used to more effectively counter capital. As one example, bringing Amazon fulfilment centre workers together with couriers, would help to coordinate organisation and action (as outlined in the previous paragraph), as well as fostering a greater sense of a collective workforce against the company. In many cases, mergers between unions have brought different groups of workers within an industry together in the same union, however in most cases organisation has still operated along sectoral lines. Even within existing unions, restructuring of the way in which workers are organised, could foster a much greater sense of industrial unionism and collectivism, and enable different groups of workers within a single company or industry to work together more effectively, increasing the collective power of labour and helping to wrest back at least some control away from capital. This is likely to require major trade unions associated with Social-Democratic Trade Unionism to incorporate elements of 21st Century New Unionism and to incorporate new methods of organising, geared towards the challenges of the 21st century workplace rather than the 20th.

In terms of successfully reaching out into the workforce within Amazon fulfilment centres, unions will (at least initially) be reliant upon activists within the workforce. Amazon does not allow union officials onto its sites, and as outlined in Chapter 3, the company has even resorted to physically threatening and chasing off union representatives trying to organise. Taking this into account, the unions will have to develop new strategies to combat this and to get around the hostility of the company to their officials. Activists within the workforce will be required to work somewhat clandestinely in order to recruit fellow workers, and the unions may be forced to hold meetings away from the fulfilment centres and outside of work time, away from Amazon's prying eyes. In this way, they can build and foster the organisation of workers, until a point at which sufficient strength is reached in order to bring the struggle into open conflict. There are challenges posed by this, particularly around the high turnover of staff, and the potential for Amazon to respond by using company spies

to attend meetings and gather information, however this offers the most likely route to being able to sufficiently organise the workforce in order to challenge Amazon.

The kind of tactics employed by grassroots unions, as outlined in Chapters 3 and 5, could also be integrated into the strategy of large Social-Democratic unions, adapting this to the specific needs of the workplaces. For example, platform workers have used tactics such as gathering together and accepting orders and then withdrawing from them, creating bottlenecks of orders that cause problems for the platforms and lead to restaurant and customer dissatisfaction. This targets a specific weak point of the way in which the technology operates and the labour process is structured, representing the technological equivalent of throwing a spanner in the works. However, such action has been extremely small scale and limited given the resources available to grassroots unions. The resources available to large Social-Democratic unions would open up huge potential for the scaling up of such tactics and this illustrates the mutual benefit of synthesising the tactics of grassroots 21st century New Unionism with the resources of Social-Democratic trade unions.

This is also evidenced by the fact that grassroots unions tend to organise within areas of the workforce that are typically problematic for Social-Democratic unions, particularly amongst young and migrant workers. One of the major challenges for the trade union movement, and particularly the large Social-Democratic unions, is convincing workers from demographics of low-density that they are relevant to their needs. Incorporating elements of 21st Century New Unionism will help them to achieve this goal and build organisation and resistance amongst these sections of the workforce, that are often those that need them most, being at the sharp end of capitalism. This will be critical in securing the strength and viability of the trade union movement going forward. The organisational structure, organising strategies and tactics of Social-Democratic trade unions are still largely based around the reality of the 20th century workplace. An effective synthesis with 21st Century New Unionism would help to adapt these elements to the material reality of 21st century workplaces.

In terms of the situation within manufacturing, the high level of organisation of the workforce, high-density of union membership and established relationships between management and union officials have all contributed to the impact of technology being

much less severe on these workers than their contemporaries in the platform economy and Amazon fulfilment centres. However, it is critical that this level of organisation of the workforce can not only be sustained, but increased, as technology continues to deskill many jobs and increase the control that capital is able to wield over labour within the production process. There is a need for unions in this sector to focus upon transforming passive members into union activists, to increase levels of consciousness across the workforce and restrict the extent to which management is able to use technology and threats of offshoring to drive down the terms and conditions of workers. Crucially, this may also provide a way in which workers can assert their collective strength in order to secure greater control over the factory floor and the labour process, protecting their collective knowledge and increasing the balance of power within the workplace in their favour.

In summary, 'what is to be done', will consist in the first instance of a sober focus on increasing consciousness and organisation within the working class. This is particularly important within sectors at the forefront of capital's attempts to reshape the world of work, such as in platforms and Amazon fulfilment centres, which are also the points at which organisation is weakest. For a force going into battle, the most immediate priority would be to shore up its weakest and most vulnerable flanks in order to strengthen the force as a whole, and the same principle applies here. By strengthening the flanks at their most vulnerable point, it protects not only those workers, but all other workers too. Failure to achieve this, would leave these workers exposed, and by extension would leave other groups of workers vulnerable, as once capital has solidified exploitation in one sector, it will come for the rest. Effective organisation in this sense, cannot consist of simply recruiting members and engaging in collegiate economic relations with companies, on behalf of a passive membership. Militant workplace organisation is essential, in order to develop the class consciousness of the workforce as a whole. Further attempts by capital to use technology to extend its control over the labour process, can only be effectively resisted by a class-conscious workforce that is well organised and clear about how it can use its own latent power within the workplace to wrest back control from capital.

8.5 - Limitations

The main limitation of the research was the inability to access certain participants who would have been able to provide interesting and useful perspectives. Repeated attempts were made to find and / or contact these people, however it was in many cases not possible to establish contact with them. In many cases, this is reflective of the anti-union attitudes of many employers (notably Amazon), and the anxiety for workers that identifying themselves may lead to problems with their employer. Additionally, there were some other participants who were approached who were not able to take part due to time considerations or other commitments, who would have been able to provide useful perspectives on the topic, particularly during the periods of lockdowns, where trade union officials were overwhelmed and faced with unprecedented risk to members livelihoods. Nevertheless, it was still possible to engage in dialogue with a broad number of participants, who were able to give wide ranging and important perspectives.

In addition to this, the research was limited in the number of areas that it could consider. By the very nature of research, it is difficult to intensively investigate and analyse a large number of different workplaces, and choices had to be made about selecting a useful and representative sample. Nevertheless, this leads to the exclusion of areas that are being significantly affected by the use of technology and labour process reorganisation and at the forefront of attempts to organise precariously employed workers - one notable example that has emerged is hospitality. As will be outlined in section 8.7, this is a limitation that could be addressed by future research, for which some of the initial conceptualisation has already been developed in earlier chapters of this research.

8.6 - Postscript on Amazon

One finding from the research with relation to Amazon, noted in both the literature and the interviews with participants, was the difficulties in organising Amazon workers. However, as the final thesis was being finalised, a wave of 'wildcat' strike actions and sit ins broke out at a number of Amazon's UK sites, in protest at derisory pay offers in

the face of high inflation and the soaring cost of living (Middleton and Butler, 2022). This led to the first official strike at an Amazon facility in the UK, at its Coventry site, with an estimated 300 workers - members of the GMB union – taking part (Stewart, 2023). Although this action remains limited compared to action being taken by other groups of workers, it nevertheless represents something of a breakthrough, with workers at Amazon coming together to attempt to assert their collective strength in opposition to the company. This demonstrates that there is the potential for workers at Amazon fulfilment centres to become more organised, and that many workers are willing to face up to the company in order to try to improve their position.

It is important to note that this development of worker resistance was not based on any campaign or strategy by trade unions, but was rather a spontaneous worker response to what they perceived as an unacceptable pay offer from management. There is likely to be much for trade unions to learn about how this spontaneous action from workers broke out, and how they can utilise this in order to break through at Amazon, attracting more members and organising workers more effectively. It may also help with the emergence of leaders within the workforce, who can provide a bridge between external organisers and the workers themselves. A further question raised, is why spontaneous action from workers has broken out in relation to pay, but not in response to the general working conditions experienced by workers or the levels of control and exploitation they are subjected to? In addition to this, it also raises the questions of whether, now that workers have made an initial stand against insufficient pay increases, it may also lead them to become more confident and willing to challenge the levels of control and exploitation that they are subjected to. At this point, it is difficult to assess these questions, but these may provide a further avenue for future research to consider, in addition to that described in the next section.

8.7 - Future research

This research has centred on three main areas – platforms, Amazon and manufacturing. These particular sectors were chosen as they are at the forefront of the application of technology, provide an interesting convergence point between old and new forms of work and offer a fairly broad and representative sample of different parts of the economy. However, future research could look to analyse other sectors in

order to investigate the effect that the technology and labour process reorganisation is having on them, in order to expand the sample beyond the three main areas that have been chosen as part of this research. For example, hospitality has been identified as an area in which platformisation, technology and labour process reorganisation are already encroaching upon, and this provides an example of where future research could be centred on.

One of the key findings is the identification of the historical relationship and cycle between technology and the labour process. This could be further explored in order to provide a more detailed description and a greater analysis of each of the different stages that has been identified. This would provide a different strand and type of research to the other potential future research streams, given that it would be based on an analysis of secondary, historical material, as opposed to an active, primary gathering of data and analysis of the present-day situation. Nevertheless, such research would provide a more developed understanding of the historical cycle and the relationship between technology and the labour process, that could be used to further develop the historical cycle between technology and the labour process, in order for it to be used to act as a guide and a theoretical basis for future research investigating contemporary issues.

One of the most pressing questions that has been identified, is in relation to the type of worker organisation that will emerge in the industries considered, particularly in the platform economy where there is friction between radical, grassroots unions that have traditionally organised in that space, and major, established unions that are now moving in. Future research on this question, could build upon this research, to provide a more detailed theorisation on a potential synthesis between Social-Democratic Trade Unionism and 21st Century New Unionism. It could also follow on from some of the suggestions made above, in the previous section, about the restructuring of worker organisation in order to move beyond sectional / occupational organisation, in order to move towards greater industrial unionism. As outlined in the previous section, Amazon may offer an interesting case study for this, investigating ways in which fulfilment centre workers and couriers could be organised together, in order to increase the collective strength of the workforce.

Additionally, one trend that has become increasingly apparent, is the 'platformisation' of work outside of the recognised 'platform economy'. The scope of the research has been limited to the areas studied, however this could provide another future avenue for future research. Jobs in areas such as hospitality have been subjected to increasing platformisation through the application of technology and the reorganisation of the labour process, and it is easy to see how this may spread further to other sectors, including academia. Future research could examine the way in which platformisation is spreading to other sectors of the economy, with the historical cycle between technology and the labour process providing the theoretical base in which this can be anchored. It could also integrate hospitality (for example) into the wider theorisation of the synthesis of Social-Democratic Trade Unionism and 21st Century New Unionism, as well as providing a further example to study the potential for industrial unionism (e.g. between hospitality workers and food delivery workers).

References

- ADCU. 2021. *ADCU's Aslam and Farrar respond to reports of recognition agreement between Uber and GMB union* [Online]. Available: <https://www.adcu.org.uk/news-posts/uber-gmb-union> [Accessed 3rd August 2021].
- ADLER, P. S. 2007. The future of critical management studies: A paleo-Marxist critique of labour process theory. *Organization Studies*, 28, 1313-1345.
- AMAZON 2021. United States Securities and Exchange Commission: Form 10-K.
- ARNTZ, M., GREGORY, T. & ZIERAHN, U. 2016. *The Risk of Automation for Jobs in OECD Countries : A Comparative Analysis*. Éditions OCDE / OECD Publishing.
- ASHER-SCHAPIRO, A. 2021. *For this Amazon van driver, AI surveillance was the final straw* [Online]. Thomson Reuters Foundation. Available: <https://news.trust.org/item/20210319120214-n93hk/> [Accessed 30th March 2021].
- AWAAD, N. 2021. *As drivers, we know Uber's British union 'deal' is not all it seems* [Online]. The Guardian. Available: <https://www.theguardian.com/commentisfree/2021/jun/04/drivers-uber-british-union-deal-not-all-it-seems-collective-bargaining-on-pay-removal> [Accessed 3rd August 2021].
- BEAMISH, R. 1992. *Marx, Method and the Division of Labour*, Urbana and Chicago, University of Illinois Press.
- BEHLING, F. & HARVEY, M. 2015. The evolution of false self-employment in the British construction industry: a neo-Polanyian account of labour market formation. *Work, employment and society*, 29, 969-988.
- BELFRAGE, C. & HAUF, F. 2017. The gentle art of retrodution: Critical realism, cultural political economy and critical grounded theory. *Organization Studies*, 38, 251-271.
- BELFRAGE, C. A. & HAUF, F. 2015. Operationalizing cultural political economy: towards critical grounded theory. *Journal of Organizational Ethnography*, 4, 324-340.
- BELLAMY FOSTER, J. 1998. Introduction. In: *Braverman, H. Labour and Monopoly Capital: The Degradation of Work in the Twentieth Century. 25th Anniversary Edition*. New York: Monthly Review Press.

- BEYNON, H. 1975. *Working for Ford*, East Ardsley, EP Publishing.
- BHASKAR, R. 2008. *A Realist Theory of Science*, Oxon and New York, Routledge.
- BHASKAR, R. & CALLINICOS, A. 2003. Marxism and critical realism: a debate. *Journal of Critical Realism*, 1, 89-114.
- BIRKS, M. & MILLS, J. 2011. *Grounded Theory: A Practical Guide*, London, SAGE.
- BLANCHFLOWER, D. G. 2000. Self-employment in OECD countries. *Labour economics*, 7, 471-505.
- BLOODWORTH, J. 2018. *Hired: Six Months Undercover in Low-Wage Britain*, London, Atlantic Books.
- BÖGENHOLD, D. & STABER, U. 1991. The decline and rise of self-employment. *Work, Employment and Society*, 5, 223-239.
- BORIA, S. n.d. *Developing Smart Tools for the Airbus Factory of the Future* [Online]. Available: <https://www.ni.com/en-gb/innovations/case-studies/19/developing-smart-tools-for-the-airbus-factory-of-the-future.html> [Accessed 24th March 2021].
- BRAVERMAN, H. 1974. *Labor and monopoly capital: the degradation of work in the twentieth century*, New York.
- BRAVERMAN, H. 1998. *Labor and monopoly capital: 25th year anniversary edition*. New York: Monthly Review Press.
- BRYMAN, A. & BELL, E. 2015. *Business Research Methods : Fourth Edition*, Oxford, Oxford University Press.
- BURAWOY, M. 1996. A classic of its time. JSTOR.
- BYGSTAD, B., MUNKVOLD, B. E. & VOLKOFF, O. 2016. Identifying generative mechanisms through affordances: a framework for critical realist data analysis. *Journal of Information Technology*, 31, 83-96.
- CANT, C. 2019. *Riding for Deliveroo: Resistance in the New Economy*, Cambridge, Polity Press.
- CARTER, B. & CHOONARA, J. 2022. The Continuing Value of Harry Braverman's Labor and Monopoly Capital. *Historical Studies in Industrial Relations*, 43, 171-208.
- COLE, M., RADICE, H. & UMNEY, C. 2020. The political economy of datafication and work: A new digital Taylorism? *Socialist Register*, 57, 78-99.

- COLLIER, A. 1998. Stratified explanation and Marx's conception of history. *In:* ARCHER, M., BHASKAR, R., COLLIER, A., LAWSON, T. & NORRIE, A. (eds.) *Critical Realism: Essential Readings*. Oxon and New York: Routledge.
- COMMITTEE, C. A. 2017. *TRADE UNION AND LABOUR RELATIONS (CONSOLIDATION) ACT 1992 SCHEDULE A1 - COLLECTIVE BARGAINING: RECOGNITION DECISION ON WHETHER TO ACCEPT THE APPLICATION* [Online]. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/663126/Acceptance_Decision.pdf [Accessed 20th May 2021].
- CRIDDLE, C. 2023. UK Supreme Court rules Deliveroo riders are not workers in an employment relationship. *Financial times*, 21st November 2023.
- CROTTY, M. 1998. *The foundations of social research : meaning and perspective in the research process*, London, Sage Publications.
- DARLINGTON, R. 2005. There is no alternative: Exploring the options in the 1984-5 miners' strike. *Capital & Class*, 29, 71-95.
- DARLINGTON, R. 2008. *Syndicalism and the Transition to Communism: An International Comparative Analysis*, Aldershot, Ashgate.
- DELBRIDGE, R. 1998. *Life on the Line in Contemporary Manufacturing: The workplace experience of lean production and the 'Japanese' model*, Oxford, Oxford University Press.
- DELIVEROO. 2022. *GMB and Deliveroo sign historic union deal* [Online]. Available: <https://corporate.deliveroo.co.uk/media/gmb-and-deliveroo-sign-historic-union-deal/> [Accessed 24th May 2022].
- DEPARTMENT FOR BUSINESS, E. I. S. 2017. *Made Smarter Review* [Online]. Available: <https://www.gov.uk/government/publications/made-smarter-review> [Accessed 29th March 2021].
- DORAY, B. 1988. *From Taylorism to Fordism: A Rational Madness*, London, Free Association Books.
- DRAHOKOUPIL, J. & JEPSEN, M. 2017. The digital economy and its implications for labour. 1. The platform economy. SAGE Publications Sage UK: London, England.
- DYNAMICS, B. n.d. *Atlas* [Online]. Available: <https://www.bostondynamics.com/atlas> [Accessed 3rd June 2022].

- ELGER, T. 1979. Valorisation and 'deskilling': a critique of Braverman. *Capital & Class*, 3, 58-99.
- EVANS, W. 2019. *Ruthless Quotas at Amazon Are Maiming Employees* [Online]. The Atlantic. Available: <https://www.theatlantic.com/technology/archive/2019/11/amazon-warehouse-reports-show-worker-injuries/602530/> [Accessed 30th March 2021].
- FLEMING, P. 2017. The human capital hoax: Work, debt and insecurity in the era of Uberization. *Organization Studies*, 38, 691-709.
- FRIEDMAN, G. 2014. Workers without employers: shadow corporations and the rise of the gig economy. *Review of Keynesian Economics*, 2, 171-188.
- GMB. 2021. *Uber and GMB strike historic union deal for 70,000 UK drivers* [Online]. Available: <https://www.gmb.org.uk/news/uber-and-gmb-strike-historic-union-deal-70000-uk-drivers> [Accessed 3rd August 2021].
- GRAMSCI, A., HOARE, Q. & NOWELL-SMITH, G. 1971. *Selections from the prison notebooks of Antonio Gramsci*, London, Lawrence & Wishart.
- GREENHOUSE, S. 2021. We deserve more' an Amazon warehouse's high-stakes union drive. *The Guardian*, 23rd February 2021.
- HILDEBRANDT, E. 1988. Work, Participation and Co-Determination in Computer-Based Manufacturing. In: KNIGHTS, D. & WILLMOTT, H. (eds.) *New Technology and the Labour Process*. Basingstoke: Macmillan.
- HODDY, E. T. 2019. Critical realism in empirical research: employing techniques from grounded theory methodology. *International Journal of Social Research Methodology*, 22, 111-124.
- HSIEH, H.-F. & SHANNON, S. E. 2005. Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277-1288.
- HUGHES, C. & SOUTHERN, A. 2019. The world of work and the crisis of capitalism: Marx and the Fourth Industrial Revolution. *Journal of Classical Sociology*, 19, 59-71.
- HYMAN, R. 1987. Strategy or structure? Capital, labour and control. *Work, employment and society*, 1, 25-55.
- IWGB. 2022a. *Deliveroo's partnership agreement with GMB* [Online]. Available: <https://iwgb.org.uk/en/post/deliveroo-gmb/> [Accessed 12th May 2022].
- IWGB 2022b. Statement on the recent police raids targeted at couriers in Dalston.
- JOSEPH, J. 1998. In defence of critical realism. *Capital & Class*, 22, 73-106.

- JOYCE, S. & STUART, M. 2021. Digitalised management, control and resistance in platform work: a labour process analysis. *Work and labour relations in global platform capitalism*, 158-184.
- JOYCE, S., STUART, M. & FORDE, C. 2022. Theorising labour unrest and trade unionism in the platform economy. *New Technology, Work and Employment*.
- KANTOR, J., WEISE, K. & ASHFORD, G. 2021. *The Amazon that Customers Don't See* [Online]. New York Times. Available: <https://www.nytimes.com/interactive/2021/06/15/us/amazon-workers.html> [Accessed 17th August 2021].
- KINGDOM, T. S. C. O. T. U. 2021. *Judgement: Uber BV and others (Appellants) v Aslam and others (Respondents)* [Online]. Available: <https://www.supremecourt.uk/cases/docs/uksc-2019-0029-judgment.pdf> [Accessed 29th April 2021].
- KNIGHTS, D. 1990. Subjectivity, power and the labour process. *Labour process theory*. Springer.
- KNIGHTS, D. & WILLMOTT, H. 1989. Power and subjectivity at work: From degradation to subjugation in social relations. *Sociology*, 23, 535-558.
- LINCOLN, Y. S. & GUBA, E. G. 1985. *Naturalistic Inquiry*, Beverly Hills, CA, SAGE.
- LITTLER, C. R. & SALAMAN, G. 1982. Bravermania and beyond: recent theories of the labour process. *Sociology*, 16, 251-269.
- LYNN, M. 2022. Amazon is leading the fight against resurgent militant unions. *The Telegraph*, 12th August 2022.
- MARREN, B. 2016. *We shall not be moved: How Liverpool's working class fought redundancies, closures and cuts in the age of Thatcher*, Manchester, Manchester University Press.
- MARTINEZ LUCIO, M. & STEWART, P. 1997. The paradox of contemporary labour process theory: The rediscovery of labour and the disappearance of collectivism. *Capital & Class*, 21, 49-77.
- MARX, K. 1973. *Grundrisse : foundations of the critique of political economy (rough draft)*, Harmondsworth, Penguin Books.
- MARX, K. 1976. *Capital: a critique of political economy. Volume I*, Harmondsworth, Penguin Books.
- MARX, K. 2001. *The 18th Brumaire of Louis Bonaparte*, London, Electronic Book Company.

- MIDDLETON, J. 2023. 'I am not a robot': Why Amazon UK workers are striking on Prime Day. *The Guardian*, 11th July 2023.
- MIDDLETON, J. & BUTLER, S. 2022. Amazon staff protests spread to multiple UK depots over pay dispute. *The Guardian*, 5th August 2022.
- O'DOHERTY, D. & WILLMOTT, H. 2001. Debating labour process theory: The issue of subjectivity and the relevance of poststructuralism. *Sociology*, 35, 457-476.
- OLLMAN, B. 2003. *Dance of the Dialectic: Steps in Marx's Method*, Urbana, Chicago and Springfield, University of Illinois Press.
- PALMER, A. 2021. *Amazon is using AI-equipped cameras in delivery vans and some drivers are concerned about privacy* [Online]. CNBC. Available: <https://www.cnbc.com/2021/02/12/amazon-mentor-app-tracks-and-disciplines-delivery-drivers.html> [Accessed 30th March 2021].
- PALMER, B. 1975. Class, conception and conflict: the thrust for efficiency, managerial views of labor and the working class rebellion, 1903-22. *Review of Radical Political Economics*, 7, 31-49.
- PANITCH, L. 1976. *Social Democracy & Industrial Militancy: The Labour Party, the Trade Unions and Incomes Policy, 1945-1974*, Cambridge, Cambridge University Press.
- PELLING, H. 1976. New Unionism and New Politics, 1880–1900. *A History of British Trade Unionism*. Springer.
- ROBERTS, J. K., PAVLAKIS, A. E. & RICHARDS, M. P. 2021. It's more complicated than it seems: Virtual qualitative research in the COVID-19 era. *International Journal of Qualitative Methods*, 20, 16094069211002959.
- ROBERTS, J. M. 1999. Marxism and critical realism: the same, similar, or just plain different? *Capital & Class*, 23, 21-49.
- ROOFOODS. 2023. *Annual Report and Financial Statements for the year ended 31 December 2021* [Online]. Available: <https://find-and-update.company-information.service.gov.uk/company/08167130/filing-history> [Accessed 28th January 2021].
- ROSENBLAT, A. & STARK, L. 2016. Algorithmic labor and information asymmetries: a case study of Uber's drivers. *International journal of communication (Online)*, 3758.
- RWDSU. 2021. *History - The roots of the RWDSU* [Online]. Available: <https://www.rwdsu.info/history> [Accessed 22nd September 2021].

- SANDLER, R. 2021. *Amazon Is Installing AI-Powered Cameras To Monitor Delivery Drivers* [Online]. Forbes. Available: <https://www.forbes.com/sites/rachelsandler/2021/02/03/in-bid-for-road-safety-amazon-is-rolling-out-ai-powered-cameras-to-monitor-delivery-drivers/?sh=4d07553b5b9c> [Accessed 30th March 2021].
- SAUNDERS, M. N., LEWIS, P. & THORNHILL, A. 2019. *Research Methods for Business Students : Eighth Edition*, Harlow, Pearson.
- SAYER, A. 1992. *Method in Social Science: A Realist Approach (2nd Edition)*, London and New York, Routledge.
- SCHEIN, A. Taylorism and Amazon: Scientific Management at the world's most successful retail company. 10th Annual Conference of the EuroMed Academy of Business, 2017.
- SCHOLZ, T. 2017. *Uberworked and Underpaid : How Workers Are Disrupting The Digital Economy*, Cambridge, Polity Press.
- SHARONGRAHAM.ORG. 2021. *Meet Sharon* [Online]. Available: <https://sharongraham.org/meet-sharon/> [Accessed 22nd September 2021].
- SIEMENS. 2021. *Annual Report 2020* [Online]. Available: <https://assets.new.siemens.com/siemens/assets/api/uuid:45446098-6c39-45ba-a5fc-e5f27ebfa875/siemens-ar2020.pdf> [Accessed 4th June 2021].
- SILVER, B. J. 2003. *Forces of labor: workers' movements and globalization since 1870*, Cambridge University Press.
- SPENCER, D. A. 2000. Braverman and the contribution of labour process analysis to the critique of capitalist production—twenty-five years on. *Work, employment and society*, 14, 223-243.
- SPENCER, D. A. 2018. Fear and hope in an age of mass automation: debating the future of work. *New Technology, Work and Employment*, 33, 1-12.
- SRNICEK, N. 2017. *Platform Capitalism*, Cambridge, UK, Polity.
- STEWART, H. 2023. First industrial action at Amazon UK hopes to strike at firm's union hostility. *The Guardian*, 22nd January 2023.
- STONE, B. 2014. *The Everything Store: Jeff Bezos and the Age of Amazon*, London, Corgi Books.
- TAYLOR, F. W. 1911. *The Principles of Scientific Management*, Cleveland, Duke Classics.
- THOMPSON, E. P. 2013. *The Making of the English Working Class*, London, Penguin.

- THOMPSON, P. & LAASER, K. 2021. Beyond technological determinism: revitalising labour process analyses of technology, capital and labour. *Work in the Global Economy*, 1, 139-159.
- THOMPSON, P. & VINCENT, S. 2010. Labour process theory and critical realism. *Working life: Renewing labour process analysis*, 47-69.
- TRIGG, A. 2010. Chapter 2 - Consumption. In: SIMONETTI, R., ANAND, P., HIMMELWEIT, S., MACKINTOSH, M., SANTOS, C. & STONE, H. (eds.) *Doing Economics: People, Markets and Policy - Book 1*. Milton Keynes: The Open University.
- TRONTI, M. 2019. *Workers and Capital*, London, Verso.
- UBER. 2021. *2020 Annual Report* [Online]. Available: s23.q4cdn.com/407969754/files/doc_financials/2021/ar/FINAL-Typeset-Annual-Report.pdf [Accessed 29th April 2021].
- UMNEY, C. 2018. *Class Matters - Inequality and Exploitation in 21st Century Britain*, Pluto Press (UK).
- VAN DER PIJL, K. 2009. *A survey of global political economy: Version 2.1*, Colchester, University of Sussex.
- VINCENT, S. & O'MAHONEY, J. 2018. Critical Realism and Qualitative Research: An Introductory Overview. *SAGE Handbook of Qualitative Research Methods*, 36-78.
- WATANABE, C., NAVEED, K., NEITTAANMÄKI, P. & FOX, B. 2017. Consolidated challenge to social demand for resilient platforms - Lessons from Uber's global expansion. *Technology in Society*, 48, 33-53.
- WOOD, A. 2019. The Taylor Review: understanding the gig economy, dependency and the complexities of control. *New Technology, Work and Employment*, *Forthcoming*.
- WOODCOCK, J. 2020. The algorithmic panopticon at Deliveroo: Measurement, precarity, and the illusion of control. *ephemera: theory & politics in organization*, 20.
- WOODCOCK, J. 2021. *The Fight Against Platform Capitalism: An Inquiry into the Global Struggles of the Gig Economy*, London, University of Westminster Press.

Appendices

Appendix 1 - List of interviews

Interview	Name	Organisation	Date
1	Paul Nowak	TUC	19/06/2020
2	Kate Dearden	Community	06/08/2020
3	Mick Rix	GMB	01/10/2020
4	Andrew Pakes	Prospect	08/10/2020
5	Nigel Flanagan	UNI Global	25/11/2020
6	Tom Hunt	University of Sheffield	02/12/2020
7	Abby Gilbert	Institute for the Future of Work	04/12/2020
8	Matt Cole	University of Leeds	17/12/2020
9	Jamie Woodcock	IWGB / Open University	05/01/2021
10	Leonardo Impett	University of Durham	18/01/2021
11	Josh Abey	Fabian Society	20/01/2021
12	Callum Cant	IWGB	17/02/2021
13	Mick Duncan	Unite	03/09/2021
14	Jake Thomas	IWGB	04/10/2021
15	Des Quinn	Unite	11/02/2022
16	'Ian'	Major aerospace manufacturer	21/02/2022
17	James McKenna	TUC	21/03/2022
18	Mick Rix	GMB	11/05/2022

Appendix 2 - Example interview schedule

This appendix contains an example interview schedule of the documents that were used for participants during the research process. As mentioned in Chapter 4 of the thesis, there were some questions that were addressed to all participants and others that were tailored towards the more specific knowledge area of the interviewee – for example, a representative of platform workers would be asked specific questions related to platform work, whereas a representative of manufacturing workers would be asked specific questions related to that form of work or a TUC representative may be asked about the wider strategy of the trade union movement. The document provided in this Appendix is not taken from any particular interview, but rather contains extracted questions from a number of different interviews, in order to provide a representative sample of the type of questions asked across the different interviews.



General questions

- General thoughts on effects of tech and labour process reorganisation on control and power within the workplace?
- How are emerging forms of work such as online platforms and the on-demand 'gig economy' affecting the balance of control within the workplace?
- How is the fragmentation of work into smaller tasks that is evident in many areas affecting the balance of control?
- To what extent are markets related to emerging technologies displaying an increased tendency towards centralisation and increasing monopolistic and / or oligopolistic control. How will this affect the balance of control (particularly when considered with the increasing fragmentation of work outlined in the previous question)

- What type of policy interventions (if any) could be considered and what do participants believe the impact of this could be?
- What role can organised labour (i.e. trade unions) play? How has this been affected by restrictive laws placed upon them?
- How can emerging technology be used to benefit workers?
- What is the best strategy to reach workers in workplaces that are difficult to organise in?

Example Targeted questions

- Experience of algorithmic management
- Challenges organising within platform economy.
- Ways in which IWGB has been successful in recruiting and organising workers in the platform economy.
- How can the organisation of platform workers be scaled up and what kind of lessons can this give to the wider movement?
- What is the best strategy for trying to unionise somewhere such as Amazon?
- What threats are there to the union movement if it can't effectively organise / get recognition from companies?
- How do you feel that the impact of technology affects the nature of control within workplace in the automotive sector?
- To what extent does the skilled nature of automotive work give automotive workers increased leverage / control compared to say Amazon or platform workers?

- How do performance metrics such as 'rate' and 'time off task' relate to those used in other settings?

Appendix 3 - Atlas.ti coding

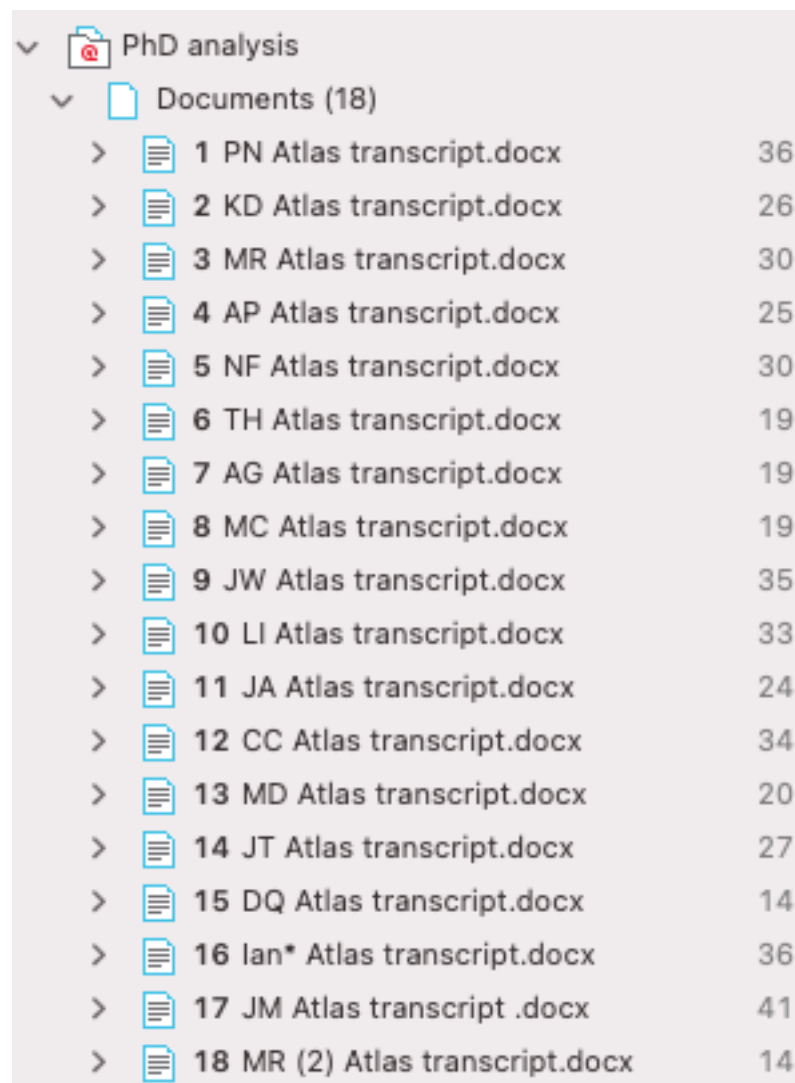
Appendix 3a

Appendix 3a shows the full list of codes that were generated throughout the primary research and analysis stages. Some of these codes were generated as part of the initial pre-concepts outlined at the end of Chapter 3, whereas others were generated from the processes of the interviews and the data that emerged. As outlined in Chapter 4, as new codes emerged, previously coded interviews were re-analysed and recoded in order to apply the new codes to older interviews. As with the questions asked to participants, there were some general codes that were applicable to all interviews, whilst there were also some codes that were more specific to the field of particular participants. For example, codes relating to food delivery or platform work would only be applicable to participants giving a perspective on those forms of work and would not be applicable to a representative of manufacturing workers for example. Therefore, there were some interviews that had more potentially applicable codes than others, however for each interview there was a sufficient number of codes through which to make sense and suitably analyse and code the data that emerged.

▼	📁 PhD analysis	
>	📄 Documents (18)	
▼	📌 Codes (30)	
	📌 AI / Machine learning	9
	📌 Algorithmic Management	13
	📌 Amazon	42
	📌 Automation	64
	📌 Benefit workers	32
	📌 Centralisation	10
	📌 Control	40
	📌 Covid impact	25
	📌 Deliveroo	24
	📌 Deskillling	2
	📌 Fragmentation	8
	📌 Geographical	16
	📌 Gig economy	25
	📌 Hospitality	3
	📌 Just Eat	7
	📌 Laws	50
	📌 Marx	5
	📌 Migrant workers / racialised elements	3
	📌 Old / New forms of exploitation	13
	📌 Outsourcing / agency	4
	📌 Platform capitalism	52
	📌 Power	30
	📌 Production / Manufacuring	10
	📌 Quality of work	19
	📌 Quantity of work	7
	📌 Self-employment	15
	📌 Surveillance / monitoring	16
	📌 Systems of ownership	3
	📌 Uber	31
	📌 Worker organisation	120

Appendix 3b
























This Appendix shows the full list of interviews, as displayed within the Atlas.ti software. For each interview, it also outlines the number of codes that were applied to each document. As outlined in Appendix 3a, this differed from interview to interview. There is no particular trend identified in terms of a particular type of participant being likely to be assigned more codes, with this being more dependent on the nature of the interview and the relationship developed with the participant.



Document Name	Number of Codes
1 PN Atlas transcript.docx	36
2 KD Atlas transcript.docx	26
3 MR Atlas transcript.docx	30
4 AP Atlas transcript.docx	25
5 NF Atlas transcript.docx	30
6 TH Atlas transcript.docx	19
7 AG Atlas transcript.docx	19
8 MC Atlas transcript.docx	19
9 JW Atlas transcript.docx	35
10 LI Atlas transcript.docx	33
11 JA Atlas transcript.docx	24
12 CC Atlas transcript.docx	34
13 MD Atlas transcript.docx	20
14 JT Atlas transcript.docx	27
15 DQ Atlas transcript.docx	14
16 Ian* Atlas transcript.docx	36
17 JM Atlas transcript .docx	41
18 MR (2) Atlas transcript.docx	14

Appendix 3c

This Appendix outlines the division of participants into three representative groups during the analysis. As outlined in Chapter 4, this was done in order to clearly identify the positioning of participants within the wider labour movement. The first category (Academia / Research) outlines participants who mostly have a detachment from the day to day organising of the workplace, but have an interesting macro level perspective on the effect of technology on control within the workplace (and worker organisation), that they are also able to relate to academic theory. These perspectives provide an important bridge between the abstract conceptualisation and theory of the research, and the concrete level experiences of participants more involved in the day-to-day work of trade unions. The second category (grassroots unions) outlines the perspectives of participants involved with organising workers within grassroots (i.e. non-TUC affiliated) unions, organising workers in the platform economy. These unions can be differentiated from the following category by not only their smaller size, but also the radical tactics and strategy they use, as well as a more militant and explicitly political stance. The final category (TUC affiliated trade unions), outlines participants from the TUC and its affiliated unions, who tend to be not only of greater size, but also less militant, less explicitly political and more conservative in terms of the strategy and tactics that they use, compared to grassroots unions.

▼	 Document Groups (3)	
▼	 Academia / Research	6
>	 6 TH Atlas transcript.docx	19
>	 7 AG Atlas transcript.docx	19
>	 8 MC Atlas transcript.docx	19
>	 9 JW Atlas transcript.docx	35
>	 10 LI Atlas transcript.docx	33
>	 11 JA Atlas transcript.docx	24
▼	 Grassroots unions	3
>	 9 JW Atlas transcript.docx	35
>	 12 CC Atlas transcript.docx	34
>	 14 JT Atlas transcript.docx	27
▼	 TUC affiliated trade Unions	10
>	 1 PN Atlas transcript.docx	36
>	 2 KD Atlas transcript.docx	26
>	 3 MR Atlas transcript.docx	30
>	 4 AP Atlas transcript.docx	25
>	 5 NF Atlas transcript.docx	30
>	 13 MD Atlas transcript.docx	20
>	 15 DQ Atlas transcript.docx	14
>	 16 Ian* Atlas transcript.docx	36
>	 17 JM Atlas transcript .docx	41
>	 18 MR (2) Atlas transcript.docx	14

Appendix 3d

This Appendix outlines the further subdivision of the 'TUC affiliated unions' category into three sub-categories, as outlined in Chapter 4. This was done in order to allow for the clear differences between different perspectives in what is a very broad ranging category. The first category, 'large general TUC affiliated unions', covers representatives of Unite and GMB, the second and third largest trade unions in Britain. They are 'general' unions, representing workers across a wide range of industries and different skill levels. By contrast, the unions represented by the participants in the 'Smaller TUC affiliated unions' (Community and Prospect), are more specialised and focused on skilled / professional workers. This affects the outlook of these unions, making them less radical and very different in outlook to unions such as Unite and GMB, particularly around issues such as tech. The final category outlines representatives of the TUC, who necessarily take a much wider and more strategic view than the representatives of different unions, having to carefully balance the complexity and sometimes contradictory priorities of their different member unions.

▼	📁 Document Groups (6)	
>	📁 Academia / Research	6
>	📁 Grassroots unions	3
▼	📁 Large general TUC affiliated unions	6
>	📄 3 MR Atlas transcript.docx	30
>	📄 5 NF Atlas transcript.docx	30
>	📄 13 MD Atlas transcript.docx	20
>	📄 15 DQ Atlas transcript.docx	14
>	📄 16 Ian* Atlas transcript.docx	36
>	📄 18 MR (2) Atlas transcript.docx	14
▼	📁 Smaller TUC affiliated unions	2
>	📄 2 KD Atlas transcript.docx	26
>	📄 4 AP Atlas transcript.docx	25
>	📁 TUC affiliated trade Unions	10
▼	📁 TUC officials	2
>	📄 1 PN Atlas transcript.docx	36
>	📄 17 JM Atlas transcript .docx	41