

Unfulfilled?



Evidence Review on Work, Labour and Employment in Amazon's Fulfilment Centres

Dominic Holland and Tom Vickers



Nottingham Trent
University



Work Futures Research Group

Correspondence

Dr Dominic Holland
dominic.holland@ntu.ac.uk

Dr Tom Vickers
tom.vickers@ntu.ac.uk

Work Futures Research Group
Department of Social and Political Sciences
School of Social Sciences
Nottingham Trent University
50 Shakespeare Street
Nottingham NG1 4FQ
bit.ly/NTUWFutures

Acknowledgements

The authors would like to thank everybody who has assisted with the production of this report, including: Vanessa Dodd and Maria Karanika-Murray, for comments on an earlier draft; Rich Pickford, for comments on earlier drafts, advice on dissemination and engagement; Harry O'Shea, for authoring a blog on the implications of the report for trade unions; and the BFAWU and the GMB trade union, for their many helpful insights and additional data.

This report has been supported by the Nottingham Civic Exchange.



Contents

List of Figures	6
List of Tables	6
Executive Summary	7
Issues identified for further investigation	8
1. Introduction	9
1.1. Overview of Amazon's E-Commerce Operations	9
1.2 Aim and Scope	11
1.3 Research Method	12
1.3.1 Literature Review	12
1.3.2 Triangulation	13
1.3.3 Stakeholder Review	13
1.4 Limitations	13
1.5 Definitions	14
1.5.1 Work	14
1.5.2 Working Conditions	14
1.5.3 Labour	15
1.5.4 Employment	15
2. Process of Fulfilment	16
2.1 Line of Production	16
2.1.1 Work Processes	16
2.1.2 Mechanisation	18
2.1.3 Digitisation	26
2.2 Line of Management	28
2.2.1 Process Guide/Production Assistant	29
2.2.2 Area Manager	29
2.2.3 Operations Manager	30
2.2.4 Senior Operations Manager	30
2.2.5 General Manager	31
2.2.6 Other Managers	31
2.3 Ancillary Roles	32
2.3.1 Problem Solver	32
2.3.2 Inventory Controller	32
2.3.3 Amnesty Processor	33

2.3.4	Damage Processor	33
2.3.5	Ambassador	33
2.3.6	Facilities Technician	33
2.3.7	On-Site Medical Representative	33
2.3.8	Water Spider	33
2.4	Conclusion	34
3.	Employment of Workers in Fulfilment Centres	35
3.1	Conditions of Employment	35
3.1.1	Contractual Status	35
3.1.2	Pay	36
3.1.3	Benefits	39
3.1.4	Discipline	42
3.2	Character of Employment	47
3.2.1	Insecurity	47
3.2.2	Division	49
3.2.3	Exploitation	50
3.3	Conclusion	52
4.	Working Conditions in Fulfilment Centres	53
4.1	Physical Demands	53
4.1.1	Frequency	53
4.1.2	Duration	56
4.1.3	Extension	57
4.1.4	Ambient Temperature and Humidity	58
4.2	Impact of Physical Demands	59
4.2.1	Ambulance Call-Outs	59
4.2.2	Physical Pain	61
4.2.3	Work-Related Injuries	64
4.2.4	Trends and Differences in the Risk of Injury	65
4.2.5	Death in Service	66
4.3	Mental Demands	67
4.3.1	Work Control	68
4.3.2	Trust	72
4.3.3	Accommodation of Physiological Needs	83
4.3.4	Feeling Valued	89
4.3.5	Opportunities for Personal Development	90
4.4	Impact of Mental Demands	92
4.4.1	Anxiety	92

4.4.2 Mood	94
4.4.3 Stress	96
4.5 Further Impact of Physical and Mental Demands	97
5. Workers' Responses to Physical and Mental Demands	99
5.1 Collective Resistance	100
5.1.1 Demonstrations	100
5.1.2 Work Stoppages	101
5.1.3 Work Slowdowns	106
5.1.4 Petitions	106
5.1.5 Interest Group Coalitions	108
5.2 Individual Resistance	108
6. Conclusion	110
6.1 Questions raised by this review	110
6.1.1 Work Process	110
6.1.2 Nature of Employment	111
6.1.3 Working Conditions	111
6.1.4 Workers' Responses to Physical and Mental Demands	112
6.2 Considerations for managers, trade unions and governments	113
6.2.1 Amazon's Senior Managers	113
6.2.2 Trade Unions	114
6.2.3 Government	115
7. Bibliography	117
8. Appendices	159
Appendix 1: Location of Amazon's Fulfilment Centres in the UK	159
Appendix 2: Theoretical Framework	160
Work	160
Working Conditions	162
Labour	163
Employment	164
Appendix 3: The Process of Fulfilment	166
Appendix 4: Management Roles	169

List of Figures

Figure 1: Location of Amazon Fulfilment Centres, UK	10
Figure 2: Overview of the Process of Fulfilment	17
Figure 3: The Organisation of the Social System of Employment	165

List of Tables

Table 1: Sources and Types of Literature	12
Table 2: Manual and Robotic Stowing	20
Table 3: Manual and Robotic Picking	21
Table 4: Attendance Violations and Penalties	45
Table 5: Reported Productivity Targets	54
Table 6: Reasons for Ambulance Call-Outs	61
Table 7: Areas of Pain (GMB Survey, UK)	62
Table 8: Areas of Pain (NYCOSH, USA)	63
Table 9: Work Stoppages, USA, 2018-2020	102
Table 10: Work Stoppages, Germany, 2013-2020	103
Table 11: Work Stoppages, Italy, 2017-2020	105
<u>Table 12: Work Stoppages, France, 2014-2020</u>	<u>105</u>
<u>Table 13: Work Stoppages, Spain, 2018-2019</u>	<u>106</u>
<u>Table 14: Location of Amazon Fulfilment Centres, UK</u>	<u>159</u>

Executive Summary

E-commerce logistics is an important area of employment, in the UK and many other countries. Amazon announced, in May 2021, that it was increasing its UK workforce by 10,000, to a total of 55,000, leading change in a sector employing around 188,000 warehouse operatives in 2018. These jobs are undergoing rapid change, including the introduction of many new automated and digitalised systems that work alongside humans. This raises a number of important questions on the future of work in this sector.

Questions have been raised about the quality of these jobs, and the challenges employers face in recruiting and retaining workers. By way of example working conditions in Amazon's warehouses, or 'fulfilment centres', have been the subject of considerable criticism in recent years, by journalists, campaigners, trade unions, and politicians. These conditions have important implications for the future of work in e-commerce and logistics because Amazon is a leading, multinational company in this sector. It is surprising, therefore, that there is a lack of sustained academic research into these work and employment practices. Journalists and campaigners have of course investigated Amazon, but some may dismiss their accounts as partial or anecdotal.

This evidence review gathers what is known about work inside Amazon's fulfilment centres from public sources, totalling more than 500 sources, of which 57 were academic sources and the remainder were published by corporations, government, journalists, NGOs, the labour movement, and individual workers. The main use of journalistic accounts was as a rich source of many workers' accounts of their working lives. This material was subjected to an analysis informed by sociological understandings of waged employment, with particular attention to the wellbeing of workers. All sources were viewed critically and compared for consistency, with the outcome of such comparisons reflected throughout the report. This review forms an initial stage of a larger programme of research, and its purpose was to clarify the most important questions to be addressed in subsequent stages.

The bulk of the review was conducted over a nine-month period in 2020, alongside conversations with trade union officials who have considerable experience of representing Amazon workers in the UK. The researchers also attempted to interview fulfilment centre employees, but this proved unfeasible because of a combination of factors arising from the Covid-19 pandemic and workers' stated apprehension to engage owing to a reported fear of recrimination by their employers. A draft report was shared with Amazon with an invitation to contribute their perspective, to which the company did not respond. The perspective of Amazon management has nevertheless been reflected in this review through the inclusion of 22 sources published directly by Amazon.

This review is organised into four themed topic areas that connect the evidence we have reviewed. This paper will discuss these topics and the questions that they pose for future research inquiry.

These topics are:

- The way the work is done in fulfilment centres
- The employment models and systems used for warehouse operatives
- The conditions of work in warehouses
- How workers responded to physical and mental demands

Issues identified for further investigation

This review sets out a range of important areas for investigation regarding warehouse jobs in the e-commerce and logistics sector, to guide future research in strengthening job quality and sustainability. This review highlights a range of evidence that shows work inside Amazon's fulfilment centres is socially complex, increasingly mechanised, and highly digitised. These features underpin Amazon's highly successful business model. However, the review also identified evidence from multiple sources that indicate work inside fulfilment centres is precarious and dehumanising, although such claims are disputed by sources published by Amazon. The range and volume of evidence on these issues suggests a pressing need for further research and consideration of workforce wellbeing by Amazon senior management, governments, workers and trade unions.

Given the rapid development of automation and digitisation within this sector, the following key questions emerged that should be addressed:

1. How do workers experience the application of digital technologies at work?
2. What inequalities exist in workers' relationship to digital technologies?
(including differences in access to work benefits, other beneficial information and differences in subjection to management control)
3. How do workers and trade unions use digital technologies to try to improve experiences of work?
4. What are the conditions of employment and working conditions, both formally determined and experienced, which emerge from these digitally mediated relationships between employers and workers?
5. How do these conditions of employment and working conditions affect workers' wellbeing, and how do these vary by gender, age, ethnicity, nationality, and disability?
6. How could digital technologies be used by employers, workers, and TUs, to enhance workers' wellbeing more effectively, to improve workforce equality and diversity, and to avoid harm?

The authors of this review would be keen to receive feedback, clarifications or other responses to its contents, from employers, workers, policy makers, trade unions, or others with an interest in the future of e-commerce logistics jobs. Contact

tom.vickers@ntu.ac.uk or dominic.holland@ntu.ac.uk.

Introduction

This report is intended to be a contribution to research concerning the future of work in the e-commerce and logistics sector. It proposes important questions for investigation concerning the understanding of work, labour, and employment, by collating and analysing the available evidence regarding Amazon's fulfilment centres around the world. The literature that was reviewed for this report was published both online and offline, and the largest part of it was non-academic, amounting to more than 500 sources that are detailed in the bibliography of the evidence review that accompanies this working paper. The purpose of the evidence review is to provide a comprehensive analysis and synthesis of the available evidence about work in Amazon's fulfilment centres, in order to inform debates about the future of work, worker organising, and our relationship to online commerce.

1.1. Overview of Amazon's E-Commerce Operations

Amazon is a multinational corporation, based in Seattle, Washington, whose services include the provision of 'e-commerce, cloud computing, digital streaming, and artificial intelligence'.¹ The subject matter of this report is Amazon's e-commerce division – more precisely, the process by which it fulfils orders for products that are made via its retail websites. The physical basis of this process is the network of warehouses in which Amazon stores items of merchandise, which are owned either by Amazon or by independent vendors, which are advertised for sale on its website, and which Amazon prepares for delivery to the customer's address. The orders that Amazon fulfils are not for goods that Amazon has produced; rather, they are for goods which have been produced by other companies. In other words, in this part of its business, Amazon is a retailer, competing against other retailers on the basis of price and speed of delivery.² However, unlike other companies, Amazon provides its retail service entirely electronically and the fulfilment process results in a good that can be purchased swiftly, delivered quickly, and, if necessary, returned easily.

In the past, the organisation of the delivery of the product of Amazon's fulfilment centres – a packaged commodity – was the responsibility of independent delivery companies. However, Amazon has expanded, and is continuing to expand, the scope of its fulfilment process to encompass what is known as 'last-mile delivery' through the launch of Amazon Logistics in 2018 and the associated Delivery Service Partner programme.³

The scale of Amazon's e-commerce operation is vast. According to Amazon's UK corporate website, it 'has more than 175 operating fulfilment centres and more than 150 million square feet of space where employees pick, pack, and ship Amazon customer orders to the tune of millions

1. On Amazon's corporate website, these services are listed under the categories 'Amazon Store', 'Devices & Services', 'Amazon Web Services' and 'Entertainment'; see 'What We Do,' Amazon, <https://www.aboutamazon.com/what-we-do>.

2. In the USA, Amazon's competitors include Walmart, Target and Costco.

3. It is for this reason that Amazon has introduced the 'delivery station' into its network of facilities. It is from delivery stations that Amazon's 'delivery providers' transport packages to the customer's address; see 'Our Facilities,' Amazon, <https://www.aboutamazon.com/workplace/facilities>. See also Aastha Malhotra, 'How Amazon Leverages Last-mile Delivery for its Logistics?' *Jungleworks*, February 22, 2021, <https://jungleworks.com/how-amazon-leverages-last-mile-delivery-for-its-logistics/>, and 'Own your success,' Amazon, <https://logistics.amazon.co.uk/marketing>.

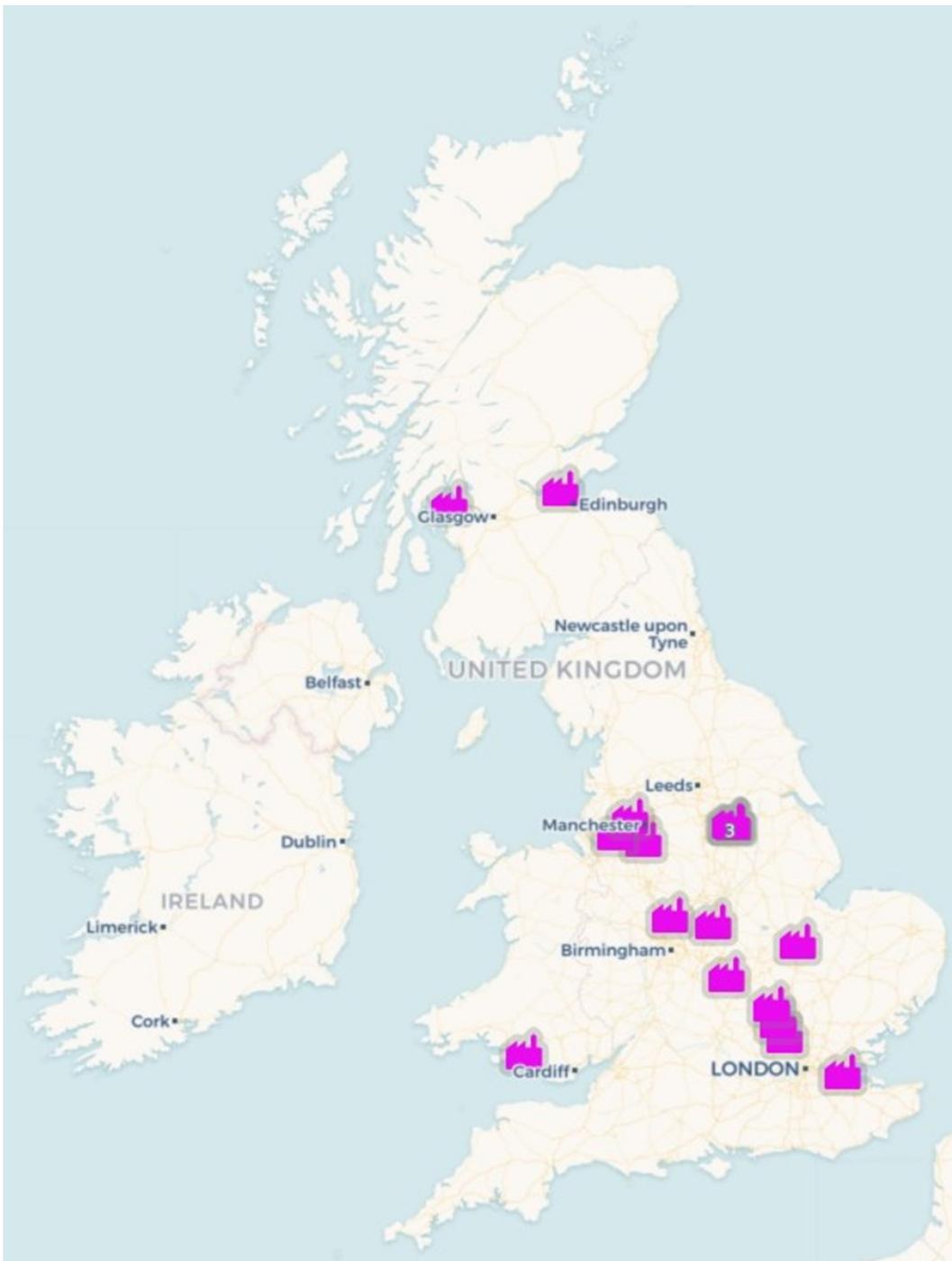


Figure 1: Location of Amazon Fulfilment Centres, UK

of items per year’.⁴ Its fulfilment centres are located in every continent apart from Antarctica.⁵

The scale of Amazon’s e-commerce operations is illustrated by the geographical spread of its fulfilment centres in the UK, as shown in Figure 1 above.⁶

Amazon says that, since 2010, it has invested ‘more than £23bn’ in its UK operations, a figure which ‘includes both capital expenditure’ – for example, expenditure on its ‘fulfilment centres, corporate offices and data centres’ – and ‘operating expenditure’ – for example, its expenditure on the recruitment and retention of workers.

4. ‘Fulfilment in our buildings,’ Amazon, <https://www.aboutamazon.co.uk/amazon-fulfilment/fulfilment-in-our-buildings>.

5. Accounts of the full extent of Amazon’s operations vary but it seems the list on Wikipedia is the most up to date and complete, and indicates that fulfilment centres are located in North America (Canada and the USA), Central America (Mexico), South America (Brazil), Europe (the Czech Republic, France, Germany, Italy, Poland, Slovakia, Spain, and the UK), Asia (China and Japan), and Oceania (Australia); see ‘List of Amazon locations,’ Wikipedia, https://en.wikipedia.org/wiki/List_of_Amazon_locations.

6. Further details are provided in Appendix 1.

It also says that, at the end of 2019, it 'directly employed more than 30,000 people in the UK', including at its 'R&D operations in Cambridge, Edinburgh and London, corporate office in Manchester, AWS data centres in London and at more than 20 state-of-the-art fulfilment and distribution centres across the country', to be followed by 'a further 10,000 permanent roles across the UK in 2020', bringing its 'total permanent workforce to more than 40,000'.⁷ In a press statement, which it published on September 3, 2020, Amazon reported that 3,000 of the 10,000 new roles had already been allocated to 'its UK network of fulfilment centres, sort centres and delivery stations – including at a new hi-tech fulfilment centre in the North East of England which opened in May.' It says that some of the remaining 7,000 permanent roles will be allocated to 'two new fulfilment centres launching in the autumn in the North East and in the Midlands', located in Durham and Sutton-in-Ashfield.⁸ This brought the total number of fulfilment centres in the UK to 26.⁹ In short, Amazon's rapid expansion of its fulfilment centre operations in the UK points to its growing significance within the UK economy and indicates that it is one of the leading players in e-commerce.

1.2 Aim and Scope

This report is intended as a contribution to the understanding of work, labour, and employment in Amazon's fulfilment centres around the world. The research that led to it is part of a wider programme of research on the nature of work and employment that is being undertaken by members of the Work Futures Research Group at Nottingham Trent University.¹⁰

The focus of this report is that part of the process of fulfilment that takes place inside Amazon's 'sortable' and 'non-sortable' fulfilment centres.¹¹ This is the stage that has attracted the most attention and controversy in the media, and in consequence, there is a significant amount of published evidence that can be used to understand

- how Amazon produces a deliverable commodity (the process of work);
- the demands on workers and the risks to their wellbeing arising from this process (the working conditions);
- the rights and obligations of workers in this process (the nature of their employment).

However, where relevant, reference has also been made to Amazon's sortation centres, receive centres, and delivery stations, which are other types of warehouse within its network of fulfilment facilities.¹²

7. '2019: Amazon's Economic Impact in the UK,' Blog, Amazon, <https://blog.aboutamazon.co.uk/jobs-and-investment/2019-amazons-economic-impact-in-the-uk>.

8. 'Amazon to Create 10,000 New Permanent Jobs Across the UK in 2020', Press Release, Amazon, <https://amazonuk.gcs-web.com/news-releases/news-release-details/amazon-create-10000-new-permanent-jobs-across-uk-2020>.

9. This figure does not include receive centres, delivery stations or sortation centres.

10. 'Work Futures Research Group,' Nottingham Trent University, <https://www.ntu.ac.uk/research/groups-and-centres/groups/work-futures-research-group>.

11. A 'sortable' fulfilment centre is differentiated from a 'non-sortable' fulfilment centre according to the size of the commodities that it processes; see 'Our Facilities', Amazon, <https://www.aboutamazon.com/workplace/facilities>.

12. The existence of what Amazon calls its 'fulfilment network' implies that the process of fulfilment depends on the operations of different types of facility - not just the sortable and non-sortable fulfilment centres. It is for this reason, we suggest, that Amazon sometimes uses the term 'fulfilment centre' to refer to any type of facility within its network. From this broader perspective, therefore, it would be more logical to refer to the sortable and non-sortable fulfilment centres as preparation centres, given that customer orders are prepared in these types of facility for transportation to the sortation centres and delivery stations. However, because 'sortable fulfilment centre' and 'non-sortable fulfilment centre' have become the generally accepted terminology for these facilities, we use this terminology throughout this report. See 'Our Facilities', Amazon, <https://www.aboutamazon.com/workplace/facilities>.

1.3 Research Method

1.3.1 Evidence Review

Given the aim of the research, which was to develop an understanding of work, labour, and employment in Amazon’s fulfilment centres, and given the lack of academic research on Amazon’s fulfilment centres, the researchers adapted the traditional method of literature review into an expanded evidence review; that is, instead of only reviewing academic knowledge about work, labour, and employment in Amazon’s warehouses, the researchers looked for all publicly available sources that could add to our understanding about the nature of work, labour, and employment in Amazon’s fulfilment centres and thus help to direct further enquiry to inform the future of work in the e-commerce and logistics sector.

The vast majority of the evidence that was reviewed for this report was non-academic and published online. Relevant items were identified through entering appropriate search terms – for example, ‘Amazon and fulfilment’, ‘Amazon and work’, ‘Amazon and working conditions’, ‘Amazon and robots’, etc. – and through following embedded links in online items.

The research team was particularly interested in sources containing workers’ accounts because it recognised that fulfilment centre workers are best placed to describe the demands of the process of fulfilment and its impact on their wellbeing.¹³

In all, over 500 items of literature were consulted. These can be categorised according to the type of organisation that produced them, as shown in Table 1 below. In addition, the research team consulted various news videos about Amazon, personal videos in which current and former Amazon warehouse workers communicate their experience of working in an Amazon warehouse, and information published by one of Amazon’s employment agencies (Integrity Staffing Solutions). 21 of these sources were published by Amazon, and a further Amazon source published in 2021 was later added because it represented an important statement on the health of Amazon workers. This material was analysed through a sociological lens to contextualise the various features of these particular working conditions within the social relations of waged labour.

	Mainstream media	Academia	NGO	Government	Corporations	Labour movement
Journal						1
Book	3	19				
Book chapter		1				
Article	265	35		1	8	95
Working paper		1				
Research report			3			11
Survey		1				
Blog post	12				4	10
Press release			2		2	6
Letter				4	2	1
Job advertisement					4	
Social media post/ page						5
Petition						6
Website				2		3
Submission to government						1
Wikipedia entry	4					

Table 1: Sources and Literature Types

13. Woodcock J. (2021) Workers Inquiry and the Experience of Work: Using Ethnographic Accounts of the Gig Economy Jamie Woodcock, in J. Aroles, F-X. de Vaujany, and K. Dale (eds) *Experiencing the New World of Work*, Cambridge: Cambridge University Press.

1.3.2 Triangulation

The researchers attempted to ensure the validity of the evidence that they used, and to take into account the variable reliability of sources, through triangulation of different sources; in other words, the researchers compared different workers' accounts and other available evidence to identify any consistencies and inconsistencies between them.

The researchers found a remarkably high degree of consistency in workers' accounts of their working conditions and conditions of employment and in the existing analyses of the process of fulfilment; and these accounts and analyses were also consistent with the information that was obtained through interviews with trade union officials who have represented Amazon fulfilment centre workers in employment disputes. Where inconsistencies were found, these are noted and discussed in the report.

1.3.3 Stakeholder Review

The researchers attempted to ensure the validity of the conclusions that they drew by initiating a process of review of the research findings by inviting academics with relevant expertise, Amazon via their publicly available contact details, as well as non-academic researchers in journalism and the trade unions, to provide feedback on draft results of the research. In addition, the researchers asked the GMB trade union to circulate the research findings to their members who work in Amazon's fulfilment centres and invite them to comment. It was also circulated for comment to other Amazon workers accessed through the Class Composition Project organised through the journal *Notes from Below*. Comments on the research findings that the researchers received informed the final revision of the full and summary reports.

1.4 Limitations

The findings that are presented in this report are subject to at least two limitations.

The first limitation is that the information that has been used is largely limited to what is already in the public domain. Much valuable information about the design and operation of Amazon's fulfilment centres is commercially sensitive and therefore held confidentially by the managers of Amazon. It is only because current and former Amazon workers have disclosed details about the operation of Amazon's fulfilment centres, including details about their conditions of employment and the physical and mental demands that are imposed on them, to media organisations, trade unions, government agencies, and issue advocacy groups, that information about work processes, working conditions, and the nature of their employment is in the public domain. However, the reliability of that information will be limited by the extent to which workers can recall and communicate, accurately, their experiences. Even information that has been obtained under freedom-of-information laws (for example, data on warehouse injuries or ambulance call-outs) is limited by the quality and the quantity of the record keeping of those responding to the request. This limitation has been addressed as far as possible by triangulating

between all available sources, including Amazon's own publications, website, and videos, and making clear in the report any apparent discrepancies.

The second limitation is that the report has been limited to source materials published in English; hence, the understanding of work, labour, and employment that is presented in this report is based largely on the experiences of workers in the United States of America and the United Kingdom of Great Britain and Northern Ireland. Given that Amazon operates fulfilment centres in many other countries, there may be information about work, labour, and employment in Amazon's warehouses that has been published in languages other than English. While it seems reasonable to assume that the process of fulfilment, and associated demands on workers, are similar across countries (and this is borne out by the report's findings from the USA and the UK), it is important to remember that there are variations in employment law, inspection, and enforcement across countries. Explicit consideration of these variations does not fall within the scope of this report, but where accounts of employment in other countries are available in English, these have been included.

1.5 Definitions

In this sub-section, concepts are defined, drawing on sociological theory, which are then applied in the remainder of the report to make sense of the concrete forms of work within Amazon's fulfilment centres.

1.5.1 Work

In this report, we define work as a particular process of acting, whose outcome is the production of a material or other kind of object. As a concrete process whose outcome is something that satisfies a particular human need, work depends on the exercise of labour power in conjunction with the use of raw materials and instruments of production.¹⁴

The type of work that we analyse in this report is the fulfilment of customer orders, the product of that process being a fulfilled customer order.

1.5.2 Working Conditions

In this report, working conditions are defined as the physical and mental demands, and consequential risks to their wellbeing, that people experience in a context in which their work is organised through employment.

The physical demands of employment are the demands on the human body that arise from the employee's engagement in the process of work, whereas the mental demands of employment are the demands on the human mind that arise from the employee's engagement in working relationships.

The risks to workers' wellbeing are the risks to their physical and mental health that are the consequence of the physical and mental demands of employment.¹⁵

14. The concept of work is discussed further in Appendix 2.

15. The concept of working conditions is discussed further in Appendix 2.

1.5.3 Labour

Whereas the concept of work refers to a concrete process, the concept of labour, which is defined as the exercise of labour power, refers to a more abstract process.

Applying sociological theories we can say that when labour power is in exercise, it generates exchange value, and the length of its exercise is a certain quantity of labour; hence, labour time is the measure of exchange value. The efficiency of production may vary, but the exchange value of a commodity is always equal to the socially necessary labour time, on average, that is realised within it.¹⁶

1.5.4 Employment

We define employment as a way of organising work that involves wage labour – that is, the remuneration of work according to the value of the employee's labour power, or capacity to work.

Within sociology, employment is considered a distinguishing feature of the capitalist mode of production. It is not the only way in which work can be organised, but because it is essential to capitalism, a capitalist society is a society that is dominated by employment relations.^{17, 18}

As an emergent social entity, employment is constituted by the dialectical relation of employer to employee, and the distinctive properties (the rights and obligations) that pertain to these two roles, whether provided for by law or by mutual agreement between the parties. These rights and obligations are the conditions of employment.

General conditions of employment are usually implicitly understood. For example, it is usually implicitly understood that

- the employee is required to work under the control of the employer, while the employer is entitled to control the work of the employee;
- the employer is required to pay a wage to the employee, while, in return, the employee is required to work for the employer;
- the product of the work of the employee is the property of the employer, and not of the employee.

By contrast, specific conditions of employment are usually explicitly stated because they vary between jobs. These conditions include

- the length of the employment;
- the type, place, pattern, and hours of work;
- the line of responsibility;
- the period of notice of termination;
- the level of remuneration.

16. The concept of labour is discussed further in Appendix 2.

Process of Fulfilment

The process of producing a deliverable commodity, in fulfilment of a customer order, has two aspects: the construction of packages that are to be delivered to customers and the management of the construction of those packages. The goods that Amazon sells to the public must be sourced, selected, packaged, and transported; these are processes which must be managed because they involve the use of significant amounts of material resources – that is, labour power, tools, and raw materials. Indeed, how quickly Amazon fulfils the millions of customer orders that it receives depends on how efficiently it combines labour power, tools, and raw materials.¹⁹

Note that the work performed within a fulfilment centre represents one crucial stage in the process of distribution and, at the same time, represents a part of the process of production because commodities can only be used, once they have been received by the customer.

2.1 Line of Production

2.1.1 Work Processes

Estimates of the number of processes and roles into which the process of fulfilment as a whole is divided vary.²⁰ For example, based on his experience of working at the Rugeley fulfilment centre John Holland describes tasks as being organised into five roles; by contrast, Mary-Patton Davis identifies seven roles, while Christoph Roser refers to eight (with four additional stages).²¹

Our review of the evidence indicates that there are 12 processes constituting the process of work as a whole inside an Amazon fulfilment centre. These processes constitute inbound and outbound operations, as shown in Figure 2 below.²² (Each of these processes is defined in Appendix 3). Of these, 'stowers' and 'pickers' have received the most attention in published accounts, and consequently feature prominently in this report. Further research is needed concerning other roles in the fulfilment process, and how all of these roles interact with each other, with managers, and with digital systems and robots.

19. It is reported that, in 2019, Amazon sold over 175 million items during the 'Prime Day' sales event; see Sarah Perez, 'Amazon sells over 175M items during Prime Day 2019, more than Black Friday & Cyber Monday combined,' *TechCrunch*, July 17, 2019, <https://techcrunch.com/2019/07/17/amazon-sells-over-175m-items-during-prime-day-2019-more-than-black-friday-cyber-monday-combined/>.

20. We cannot know the exact number because of business confidentiality.

21. John Holland, 'Amazon Inquiry,' *Notes From Below*, October 7, 2020, <https://notesfrombelow.org/article/amazon-inquiry>; Mary-Patton S. Davis, 'Behind Amazon's Well-Oiled Machine: How the 'Everything Store' Ships Everything,' *MP is for Mary-Patton*, October 27, 2014, <http://mpisformarypatton.com/2014/10/behind-amazons-well-oiled-machine-how-the-everything-store-ships-everything/>; Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 2,' *All About Lean*, October 29, 2019, <https://www.allaboutlean.com/amazon-fulfillment-2/>; Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 3,' *All About Lean*, November 5, 2019, <https://www.allaboutlean.com/amazon-fulfillment-3/>; Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 4,' *All About Lean*, November 12, 2019, <https://www.allaboutlean.com/amazon-fulfillment-4/>.

22. Note that this is a model of the work process that we think resembles, most closely, the work process in the sortable fulfilment centres, although we expect the work process within the non-sortable fulfilment centres to be similar to it. Given the different functions of sortation centres, receive centres, and delivery stations within Amazon's network of facilities, we expect the process of work inside each of these facilities to be more different. In a sortation centre, for example, workers organise packages according to delivery station, and in a delivery station they organise the packages that they receive from the sortation centres by post code, in preparation for delivery to the customer. The question of variation in the process of work across Amazon's facilities is outside the scope of this report; but, for an idea of the different tasks that constitute the work process within a delivery station, see NFZ Productions, 'Interview with an Amazon warehouse L3 Process Assistant,' September 10, 2020, <https://www.youtube.com/watch?v=vxbrVarDo8g>, NFZ Productions, 'All Possible Amazon Warehouse Jobs Inside a Delivery Station,' December 26, 2020, <https://www.youtube.com/watch?v=FozqVa1YaZU>, and M1 Werx, 'Amazon: A Day in the Life of Sortation,' August 23, 2019, <https://www.youtube.com/watch?v=2r2LcklFpfo>.

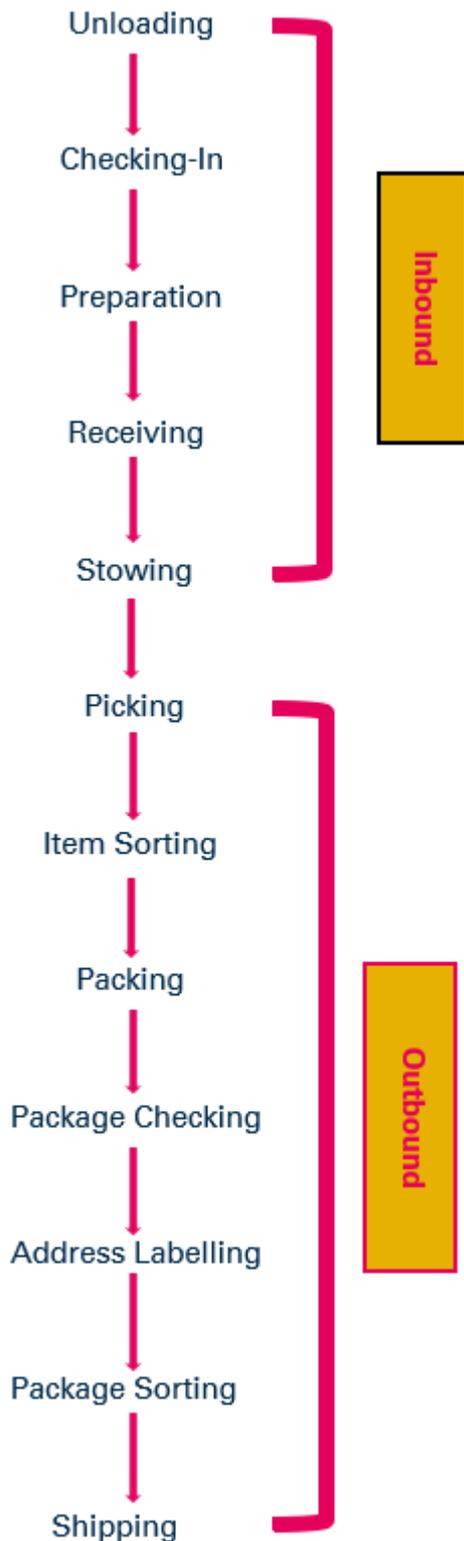


Figure 2: Overview of the Process of Fulfilment

According to John Holland, each task in the process of fulfilment is distinct and is performed by a group of workers. He writes: 'These groups have almost zero contact with each other. In fact, the way work is organised means you can quite easily go all day without ever having a conversation with a coworker'.²³

However, although work roles are distinct, they are at the same time connected to each other. The connection of distinct work processes in the line of production and thus the dependency of workers

23. John Holland, 'Amazon Inquiry,' *Notes From Below*, October 7, 2020, <https://notesfrombelow.org/article/amazon-inquiry>.

on each other, and of workers on machines, is well described by a packer in the United States:²⁴

“The problem with packing is that, if other people fuck up (the pickers or the people who are supposed to restock your cardboard boxes) you get way behind and get bitched at. Even the equipment fucked up nonstop. The tape machines jammed and the button that gives you tape for an A3 box would give me one for B2.”

When explaining in his blog about working at the Jeffersonville fulfilment centre, what determines whether or not a worker meets the expected rate of production, John Burgett also reveals that workers are dependent on each other:²⁵

“Often, making rate [complying with productivity targets] is based on factors beyond an employee’s control. A packer relies on a fast and accurate re-binner, who in turn relies on a fast and accurate sorter. All rely on an adequate amount of work being generated from the pick department.”

2.1.2 Mechanisation

The construction of a deliverable commodity in Amazon’s fulfilment centres depends not only on the use of labour power and raw materials (such as cardboard, plastic, and paper) but also on the use of tools. Hence, the efficiency of production will depend, in part, on the level of mechanisation of the work process.

The level of mechanisation is determined by the extent to which labour power has been replaced by mechanical power (for example, water, wind, and electricity) and by the extent to which human control has been replaced by mechanical control (for example, a thermostat).

The range of equipment that has been used in successive versions of Amazon’s fulfilment centres includes, at the lowest level of mechanisation, the use of simple hand tools, such as a trolley, a tote, or a pallet; at the highest level of mechanisation, the use of fully automatic machine tools such as conveyors and robots; and, between the highest and the lowest levels, the use of semi-automatic machine tools, such as a forklift truck.²⁶

Amazon’s use of automatic machine tools warrants further discussion because the introduction of robots into the fulfilment process has been associated with significant changes in the organisation of work in its fulfilment centres – in particular, to changes in work processes and work roles.

Robotic Drive Units

Amazon introduced robotic drive units into its fulfilment centres in 2014, following its acquisition of Kiva Systems in 2012 (which was renamed Amazon Robotics in 2015). Since it introduced robots into its fulfilment centres in 2014, Amazon has deployed over 200,000

24. Hamilton Nolan, ‘True Stories of Life as an Amazon Worker,’ *Gawker*, February, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

25. John Burgett, ‘AFE (Amazon Fulfillment Engine),’ *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/afe-amazon-fulfillment-engine>.

26. A forklift truck may be classified as a semi-automatic machine tool because, although its engine runs automatically, the operation of the truck and the lifting mechanism is always under human control.

robotic drive units in locations across the world.²⁷ The function of these robots is to transport objects from one area of the fulfilment centre to another, thereby eliminating the need for transportation either by labour power or by conveyor.²⁸ The movement of these robots is fully automatic; that is, it is controlled by a computer programme, by sensors on the body of the robot, and by QR codes on the floor of the fulfilment centre. Indeed, such is the level of sophistication of the technology employed that hundreds of robots can be in operation simultaneously and without collision.²⁹ They are also capable of detecting when their battery is running out of charge, of self-docking at a charging point, and of determining when their motor should be replaced.³⁰

The introduction of the robotic drive units into Amazon's fulfilment centres led to set of related changes to work processes and means of production that represent a new *system of work* – that is, a new relationship between workers and their means of production. This system comprises, in addition to the worker, five essential pieces of equipment:

- mobile shelving units called 'pods';
- a grid of QR codes, known as 'fiducials', on the floor of the robotic field;³¹
- a work station fitted with scales, lasers, sensors, cameras, touch screens, etc.;
- robotic drive units that can lift the pods and carry them to the work station;³²
- a software programme that directs and coordinates the movements of the robots and the workers.

The reported impacts of robotics on the procedures of stowing and picking – that is, the series of actions that workers must perform to complete the tasks of stowing and picking successfully – is shown in Tables 2 and 3 below, where manual stowing and picking are compared with robotic stowing and picking.

27. Brian Heater, 'Amazon says it has deployed more than 200,000 robotic drives globally,' *TechCrunch*, June 5, 2019, <https://techcrunch.com/2019/06/05/amazon-says-it-has-deployed-more-than-200000-robotic-drives-globally/>.

28. Robotic drive units also eliminate the need for walkways between shelves in the inventory because the drive units can move underneath a unit of shelving, lift it up, and carry it away. In this way, Amazon can increase the size of its inventory, without having to build a larger fulfilment centre; and with a larger inventory, it is more able to fulfil customer orders on time and/or increase the range of its stock. See 'What robots do (and don't do) at Amazon fulfilment centers,' Amazon, <https://www.aboutamazon.com/amazon-fulfillment/our-innovation/what-robots-do-and-dont-do-at-amazon-fulfillment-centers/>, and Nick Wingfield, 'As Amazon Pushes Forward With Robots, Workers Find New Roles,' *The New York Times*, September 10, 2017, <https://www.nytimes.com/2017/09/10/technology/amazon-robots-workers.html>. According to Christoph Roser, the introduction of the robotic drive units has enabled Amazon to increase the size of the inventory by 50% and to reduce the cost of fulfilment by approximately 40%; see Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 1,' *All About Lean*, October 22, 2019, <https://www.allaboutlean.com/amazon-fulfillment-1/>.

29. The original robotic drive unit is often referred to as just a Kiva robot, after the name of the company (Kiva Systems) that developed this type of machine. Subsequent types of robotic drive unit that have been developed by Amazon Robotics have different names (for example, Hercules, Pegasus, and Xanthus); see Christoph Roser, 'The Amazon Robotics Family: Kiva, Pegasus, Xanthus, and more...,' *All About Lean*, March 31, 2020, <https://www.allaboutlean.com/amazon-robotics-family/>.

30. Michael Kenward, 'Inside Amazon's technology test-bed,' *The Engineer*, February 18, 2019, <https://www.theengineer.co.uk/inside-amazons-technology-test-bed/>.

31. A QR code is a Quick Response code – that is, a code that can be read by a machine and that contains information about what it is attached to (in this case, a location in the fulfilment centre). A fiducial is something that is used as a standard of reference for measurement or calculation. A QR code is therefore a type of fiducial because the robotic drive units use the information that is contained within the QR codes to determine their location in the fulfilment centre.

32. Each robotic drive unit is equipped with an array of sensors, that are used to avoid collisions, and with cameras, that are used to read the information on the QR codes and on the bottom of each pod; see Ben Einstein, 'Meet the Drone That Already Delivers Your Packages,' *Bolt*, January 14, 2016, <https://blog.bolt.io/meet-kiva/#.xw9y1auug>.

Manual stowing ³³	Robotic stowing ³⁴
The stower:	The stower:
logs in to Amazon's computer system using a handheld scan gun and identification badge	logs in to Amazon's computer system using an identification badge, touch screen, and scanner ³⁵
selects 'inbound' and 'stow' and scans a drop zone card, which the stower carries in person and which indicates to the computer system in which zone of the fulfilment centre the stowing will occur	sets up the stowing process using the buttons on the touch screen
scans the bar code on the container of items to be stowed	looks at the shelving location that is displayed on the touch screen for the first stow and waits for the first robotic drive unit to bring a pod to the work station
selects 'continue' and is assigned, randomly, by the computer system, a shelving location within the drop zone ³⁶	removes an item of merchandise from a tote which has been conveyed to the work station mechanically ^{37, 38}
pushes the container of items on a trolley to the assigned shelving location	scans the item's barcode and checks that the item that has been scanned is the item that is displayed on the touch screen
looks for a suitable place on the shelving for the item that is to be stowed ^{39, 40}	selects an appropriate bin into which to put the item of merchandise ⁴¹
removes the item of merchandise from the tote ⁴²	moves the item into the bin ⁴³
scans the bar code of the selected shelving bin	selects 'confirm' on the touch screen
scans the bar code of the item to be stowed and puts the scanned item in the selected shelving bin. ⁴⁴	is assigned a different shelf on either the same or a different pod.

Table 2: Manual and Robotic Stowing

33. On stowing without robotics, see Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 2,' *All About Lean*, October 29, 2019, <https://www.allaboutlean.com/amazon-fulfillment-2/>, and Marcus Wohlsen, 'A Rare Peek Inside Amazon's Massive Wish-Fulfilling Machine,' *Wired*, June 16, 2014, <https://www.wired.com/2014/06/inside-amazon-warehouse/>.

34. On stowing with robotics see Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 2,' *All About Lean*, October 29, 2019, <https://www.allaboutlean.com/amazon-fulfillment-2/>; Michael Kenward, 'Inside Amazon's technology test-bed,' *The Engineer*, February 18, 2019, <https://www.theengineer.co.uk/inside-amazons-technology-test-bed/>; Andrew Little and Pedro Palandrani, 'Theme Lab: A Look Inside An Amazon Fulfillment Center,' *Global X*, March 4, 2020, <https://www.globalxetfs.com/theme-lab-a-look-inside-an-amazon-fulfillment-center/>; and CNBC, 'How Amazon Delivers on One-Day Shipping,' Video, July 15, 2019, <https://www.youtube.com/watch?v=Yiafb0-gqF4>.

35. The computer touch screen and scanner are built into a work station that is adjacent to a fenced-off robotic field. The number of minutes that a picker has been signed in is displayed at the top of the touch screen.

36. Items of merchandise are stowed randomly because this increases the efficiency of the picking process and reduces the amount of storage space that is required; see Sarah Kessler, 'Random stow,' *Quartz*, March 19, 2018, <https://qz.com/emails/quartz-obsession/1232247/>.

37. If the item is damaged or unscannable, the stower puts it into an amnesty bin as a problem to be resolved later by an Amazon problem solver.

38. It is likely that the bar code of the tote is scanned either automatically or by the stower before the first item is stowed; otherwise the movement of items through the fulfilment centre cannot be tracked.

40. The stower is expected to follow general rules, when choosing a storage location. For example, heavier items should not be placed on the bottom shelves, while similar items should not be stored in close proximity, to reduce the risk of errors occurring during picking; see Sarah Kessler, 'Random stow,' *Quartz*, March 19, 2018, <https://qz.com/emails/quartz-obsession/1232247/>, and Mary-Patton S. Davis, 'Behind Amazon's Well-Oiled Machine: How the 'Everything Store' Ships Everything,' *MP is for Mary-Patton*, October 27, 2014, <http://mpisformarypatton.com/2014/10/behind-amazons-well-oiled-machine-how-the-everything-store-ships-everything/>.

41. If there is a lack of space at the assigned shelving location, the stower can request a new shelving location via the computer system.

42. If there is a lack of space on the assigned shelf, the stower can request either a new location or a new pod using the buttons on the touch screen. Problem solvers will then try to understand why the storage space prediction failed.

23. If the item is damaged or unscannable, the stower puts the item into an amnesty bin as a problem to be solved later by an Amazon problem solver.

43. As the stower moves the item into the bin, cameras and sensors track the movement of the stower's hands. Amazon's computer system uses this information to predict into which bin the stower has placed the item.

44. According to Christoph Roser, items which are oversized, hazardous or have specific storage needs are stowed in different areas of the fulfilment centre, on suitable shelves or racks; see Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 2,' *All About Lean*, October 29, 2019, <https://www.allaboutlean.com/amazon-fulfillment-2/>.

From this comparison, it can be seen that robotic stowing brings with it changes in (a) the means of production and (b) the human actions that must be performed to complete the process of stowing. For example,

- with regards to (a), manual stowing involves use of a handheld scan gun, a trolley holding totes that are full of merchandise and fixed-position shelves, whereas robotic stowing is carried out at a work station with built-in lasers, sensors, cameras and touch screen, and with the assistance of robotic drive units transporting shelving units;
- with regards to (b), manual stowing involves pushing a trolley holding totes that are full of merchandise up and down aisles of shelving and scanning the bar codes of both shelving bins and items of merchandise that are stowed, whereas robotic stowing involves remaining at a work station and scanning the bar codes only of items that are stowed.

Manual picking ⁴⁵	Robotic picking ⁴⁶
The picker:	The picker:
logs in to Amazon's computer system using a handheld scan gun and their identification badge	logs in to Amazon's computer system using an identification badge, touch screen and scanner ⁴⁷
selects 'outbound' and 'pick' and scans a drop zone card which the picker carries in person and which indicates to the computer system in which zone of the fulfilment centre the picking will occur	sets up the picking process by pressing the appropriate buttons on the touch screen
selects 'continue' and is given details of an item of merchandise to retrieve, along with its shelving location	looks at the description of the first item that is displayed on the touch screen, including the quantity to be picked and the location on the pod, while waiting for the robotic drive unit to bring a shelving pod to the work station ⁴⁸
pushes the trolley to the shelving location	looks for the item and removes it ⁴⁹
looks for the item of merchandise at the assigned location ⁵⁰	checks that it matches the image of the item that is displayed on the touch screen

Table 3: Manual and Robotic Picking

45. On picking without robotics, see Jeff Toister, 'An Inside Look at Amazon's Fulfillment Center Operations,' Blog, April 18, 2017, <https://www.toistersolutions.com/blog/2017/4/10/an-inside-look-at-amazons-fulfillment-center-operations>, and Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 3,' *All About Lean*, November 5, 2019, <https://www.allaboutlean.com/amazon-fulfillment-3/>.

46. On picking with robotics, see Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 3,' *All About Lean*, November 5, 2019, <https://www.allaboutlean.com/amazon-fulfillment-3/>; Alan Selby, 'Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,' *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>; and Andrew Little and Pedro Palandrani, 'Theme Lab: A Look Inside An Amazon Fulfillment Center,' *Global X*, March 4, 2020, <https://www.globalxetfs.com/theme-lab-a-look-inside-an-amazon-fulfillment-center/>.

47. The computer touch screen and scanner are built into a work station that is adjacent to a fenced-off robotic field. The number of minutes that a picker has been signed in is displayed at the top of the touch screen.

48. The description of the item also includes information about the manufacturer and its category of classification, and the bar code number.

49. Again, if the item is missing, the picker presses the button 'Missing item' and is given a new item for picking. If the item is damaged, if the item's bar code is unscannable, or if it is in a larger box or case of items and therefore does not have an individual bar code, the picker presses 'Damaged item' or 'Unscannable item', as required, and puts the item into an amnesty bin as a problem to be solved later. Note that, as the picker removes the item from the bin, the cameras and sensors of the work station track the movement of the picker's hands. This information is then used by the computer system to determine whether or not the item was removed from the expected location in the pod. If there is a difference between the expected location and the actual location of the pick, a problem is recorded for subsequent resolution by an Amazon problem solver.

50. If the picker cannot find the item of merchandise, they can press a button on the scan gun to request a new item for picking. A problem solver will then examine the shelf to work out what has gone wrong.

Manual picking (continued)	Robotic picking (continued)
checks that it matches the image of the item that is displayed on the screen of the scan gun	scans the item's bar code ⁵¹
scans the bar code of the tote into which the item is to be transported, once it has been removed from the shelf	puts the item into one of a series of totes as directed by the computer system via a flashing button ^{52, 53}
scans the bar code of the shelving location	presses the flashing button
scans the bar code of the item that has been picked and puts the item in the tote. ^{54, 55}	is given the details of a new item for picking, in either the same or a different pod. ⁵⁶

Table 3: Manual and Robotic Picking (continued)

From this comparison, we can see that robotic picking, like robotic stowing, brings with it changes in (a) the means of production and (b) the human actions that must be performed to complete the process of picking. For example,

- with regards to (a), manual picking involves the use of a handheld scan gun, a trolley containing totes and fixed-position shelves, whereas robotic picking is carried out at a work station with built-in lasers, sensors, cameras and touchscreen, and with the assistance of robotic drive units transporting shelving units;
- with regards to (b), manual picking involves pushing empty totes in a trolley, up and down aisles of shelving, and scanning the bar codes of the tote, shelf and item of merchandise that is picked, whereas robotic picking involves remaining at a work station and scanning the bar code only of the item that is picked.

Pegasus

Another type of robotic drive unit that Amazon has introduced, this time in its sortation centres, is the Pegasus robotic drive unit. For example, at the sortation centre in Denver, Colorado, Amazon introduced 800 Pegasus robots in October 2018, to increase the

51. The computer system directs the picker to scan the item by showing the command 'Scan item' on the touch screen. At the bottom of the screen are the buttons

- 'View Tote Contents'
- 'Missing item'
- 'Unscannable item'
- 'Damaged item'
- 'Problem menu'
- 'Pause station'.

On the left of the touch screen, an image of the pod is shown, and the location of the bin from which the item is to be retrieved (for example, 3G) is highlighted. At the bottom of this image are the words 'Replace Full Tote'.

52. When the tote is full, the computer system directs the picker to replace the tote with an empty tote via the touch screen. The picker pushes the full tote onto the conveyor system, and it is replaced by an empty tote automatically. It is possible that the bar code of the replacement tote is scanned automatically as it goes into position; if it were not scanned, it would not be possible to track the movement of the picked items through the fulfilment centre. However, this detail requires confirmation: either the picker scans the bar code of the tote or it is scanned automatically.

53. Note that picked items are not necessarily ordered items because Amazon moves items between fulfilment centres according to predicted customer demand; see Andrew Little and Pedro Palandrani, 'Theme Lab: A Look Inside An Amazon Fulfillment Center,' *Global X*, March 4, 2020, <https://www.globalxetfs.com/theme-lab-a-look-inside-an-amazon-fulfillment-center/>.

54. If the picker scans the wrong item, the scan gun emits a beeping sound as a signal that the wrong item has been scanned.

55. If the item is missing, the picker presses the button 'Missing item' and is given a new item for picking. If the item is damaged, if the item's bar code is unscannable, or if it is in a larger box or case of items and therefore does not have an individual bar code, the picker presses 'Damaged item' or 'Unscannable item', as required, and puts the item into an amnesty bin as a problem to be solved later.

56. According to Christoph Roser, the introduction of the robotic drive units has reduced the retrieval time for an item of merchandise from between 60 and 75 minutes to approximately 15 minutes; see Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 1,' *All About Lean*, October 22, 2019, <https://www.allaboutlean.com/amazon-fulfillment-1/>.

speed and accuracy of sorting packages by post code.⁵⁷ As with the introduction of the Kiva robots in Amazon's sortable fulfilment centres, the introduction of the Pegasus robots is part of a new system of work, involving a new relationship between workers and their means of production. Given the lack of published information about the work process inside a sortation centre, all that can be said with any degree of confidence is that, following the introduction of the Pegasus robots, the process of sorting packages by post code in sortation centres, like the processes of stowing and picking merchandise in sortable fulfilment centres, is a co-ordinated sequence of human and mechanical actions:

- a robot arrives at a work station;
- a worker (on the other side of a barrier) scans a package that has been transported to the work station by mechanical conveyor and places the package on the top of the robot;
- the robot transports the package to an eject station and moves it into a chute by means of a small conveyor attachment on the top of the robot;
- once in the chute, the package is moved by force of gravity to the shipping area;
- the robot returns to the work station to collect another package.⁵⁸

Because the process of sorting packages using robots in a sortation centre is a different kind of system of work from the processes of stowing and picking merchandise using robots in a sortable fulfilment centre, Amazon introduced a new work role – that of flow control specialist – as another part of that system. For example, at the Denver sortation centre there are five flow control specialists, each of whom is responsible for monitoring the operation of the robots, including traffic patterns, and looking out for major congestion spots and for any robot that is not functioning as expected. In addition, the flow control specialists can adjust the inbound and outbound package volume, in line with fluctuations in customer demand.⁵⁹

Although lack of information about the operation of sortation centres prevents comparison of the work processes within them before and after the introduction of the Pegasus system, it is possible to compare the process of sorting packages using the Pegasus system with the process of sorting packages in sortable fulfilment centres using mechanical conveyors. For example, in the sortable fulfilment centre at Staten Island, New York City, packages are sorted for delivery, not by a robot but by a special type of mechanical conveyor that is called a cross-belt sorter.⁶⁰ As a package is being

57. The operation of the Pegasus robotic drive unit at the sortation centre in Denver, Colorado, can be seen in an Amazon news video; see Amazon, 'Amazon's newest robots mean new jobs,' Video, June 5, 2019, <https://www.youtube.com/watch?v=4MH7LSLK8Dk>. The Pegasus and Xanthus robotic drive units are also mentioned in various media reports: see, for example, Kyle Wiggers, 'Amazon's Pegasus fulfilment center robot improves sorting accuracy by 50%,' *VentureBeat*, June 5, 2019, <https://venturebeat.com/2019/06/05/amazon-says-its-new-pegasus-fulfillment-center-robot-improves-throughput-by-50/>, and Brian Heater, 'Amazon debuts a pair of new warehouse robots,' *TechCrunch*, June 5, 2019, <https://techcrunch.com/2019/06/05/amazon-debuts-a-pair-of-new-warehouse-robots/>.
58. Meg Coyle, 'New robots, new jobs,' News, Amazon, June 5, 2019, <https://www.aboutamazon.com/news/operations/new-robots-new-jobs>.

59. Amazon, 'Amazon's newest robots mean new jobs,' Video, June 5, 2019, <https://www.youtube.com/watch?v=4MH7LSLK8Dk>; Meg Coyle, 'New robots, new jobs,' News, Amazon, June 5, 2019, <https://www.aboutamazon.com/news/operations/new-robots-new-jobs>.

60. A cross-belt sorter is defined by Wikipedia as a 'type of conveyor-based sortation system. ... it consists of a chain of independently operated short conveyor belts mounted transversely along the main track.' See 'Cross belt sorter,' Wikipedia, last edited February 7, 2018, https://en.wikipedia.org/wiki/Cross_belt_sorter. The operation of the cross-belt sorter at the fulfilment centre in Staten Island can be seen in the video that is embedded in an article by Brian Heater; see Brian Heater, 'These are the robots that help you get your Amazon packages on time,' *TechCrunch*, March 17, 2019, <https://techcrunch.com/2019/03/17/these-are-the-robots-that-help-you-get-your-amazon-packages-on-time/>.

conveyed past a series of chutes that lead to the despatch area, a cross-conveyor belt pushes the package off the main conveyor belt and into the correct chute.⁶¹ The problem with this way of sorting packages, though, and the reason Amazon has increased the degree of mechanisation of the process of sorting in its sortation centres by developing the Pegasus system, is that packages can fall off the cross-belt sorter and be lost from the flow of work, until they are recovered by an Amazon worker, or they can be sorted to the wrong destination, or the machine malfunctions too often.⁶²

Robotic Palletiser

A second type of robot that Amazon uses for handling heavy items is the robotic palletiser. This is a robotic arm that can carry loads of up to 165 kilograms by means of mechanical grippers. According to Amazon, 30 of these robots are in operation at various locations across the world; and their function is to lift totes from the end of a conveyor belt and stack them as a column on a wooden pallet that is then removed by hand. Little has been written about the operation of the robotic palletiser. However, according to various media reports, eight robotic palletisers were installed in a receive centre in Florence, New Jersey, in 2016, each one being configured to pick up a tote of a standard size and each one being controlled automatically via a laser sensor, two-dimensional imaging, and computer software.^{63, 64}

Once again, what is significant about the introduction of the robotic palletiser into Amazon's receive centres is that it has generated the need for a new work role – that of robot operator. Little is known about this role, other than that it involves troubleshooting the robot and ensuring that it has enough totes to load onto a pallet, and little has been written about the human actions that it has replaced.⁶⁵

Robo-Stow

A third type of robot that Amazon uses, and that is also a type of robotic arm, is the robo-stow. Little is known about this machine and how exactly its introduction led to changes in the work process, apart from the fact that it is made by the German company Thiele, that it is 6 tonnes in weight, that it can lift pallets weighing up to 6,000 pounds, and that it works automatically. As such, it is useful in the inbound stages of the fulfilment process, when it is necessary to move new stock from one level of the fulfilment centre to another, higher level. According to Amazon, six are in operation in

61. Because so little information about the process of sorting packages in sortable fulfilment centres has been published, it is not known how exactly Amazon workers engage with the cross-belt sorter. It is reasonable to assume that they scan the post code of each package, before placing it on the cross-belt sorter, so that the machine has the information that it needs to determine into which despatch chute to push the package. However, without further evidence, it is impossible to confirm or reject this assumption.

62. SCDigest Editorial Staff, 'Supply Chain News: Amazon is Adding to Its FC Robot Portfolio,' *Supply Chain Digest*, June 10, 2019, <http://www.scdigest.com/ontarget/19-06-10-2.php?cid=15559>.

63. Nick Wingfield, 'As Amazon Pushes Forward With Robots, Workers Find New Roles,' *The New York Times*, September 10, 2017, <https://www.nytimes.com/2017/09/10/technology/amazon-robots-workers.html>; Jean Yves Chainon and Kaitlyn Mullin, 'Robots and Humans Team Up at Amazon,' *The New York Times*, September 10, 2017, <https://www.nytimes.com/video/technology/100000005396963/robots-humans-team-up-amazon-warehouses.html>.

64. A robotic palletiser is configured to pick up totes of a standard size because robotics technology has not yet reached the stage at which a robot can be used to pick up an item of any size, securely (that is, without dropping or breaking it). This is the problem that is preventing Amazon from automating, completely, the stowing and picking processes; see Jeffrey Dastin, 'Exclusive: Amazon rolls out machines that pack orders and replace jobs,' *Reuters*, May 13, 2019, <https://uk.reuters.com/article/us-amazon-com-automation-exclusive/exclusive-amazon-rolls-out-machines-that-pack-orders-and-replace-jobs-idUKKCN1SJ0X1>.

65. Nick Wingfield, 'As Amazon Pushes Forward With Robots, Workers Find New Roles,' *The New York Times*, September 10, 2017, <https://www.nytimes.com/2017/09/10/technology/amazon-robots-workers.html>; Jean Yves Chainon and Kaitlyn Mullin, 'Robots and Humans Team Up at Amazon,' *The New York Times*, September 10, 2017, <https://www.nytimes.com/video/technology/100000005396963/robots-humans-team-up-amazon-warehouses.html>. It is fair to assume that, before the introduction of the palletiser, totes were stacked on wooden pallets by hand. However, once again, this remains an assumption.

Its fulfilment centres.⁶⁶

CartonWrap

Another type of automatic machine tool that Amazon is introducing into its fulfilment centres is the automatic packing machine – the CartonWrap. This type of machine represents a lower level of mechanisation than the robots that Amazon has developed; however, it has still led to changes to the means of production and to the sequence of human actions. Once again, it is possible to understand what these changes are, by comparing the process of packing before and after the change in the level of mechanisation.

Before the introduction of the automatic packing machine, it was necessary for a worker to:

- scan the item's bar code;
- select the correct size of box, as directed by the computer system;⁶⁷
- build the lower half of the box by putting tape on the bottom of the box;
- put the item inside the box, along with plastic wrapping and any paper documents;
- build the upper half of the box by putting tape along the top of the box;
- fix a bar-coded label to the top of the box;
- scan the bar-coded label;
- put the box onto a conveyor belt for transportation to the SLAM machine.^{68, 69}

By contrast, when the process of packing is automated, by means of the CartonWrap, labour power is no longer required to build the box, seal it, and label it.⁷⁰ This machine builds the box around an item, sealing it with glue (instead of tape) and labelling it as well, and it can do this at a rate of between 600 and 700 boxes per hour, four to five times faster than a worker can. However, labour power is still required to load items to be packed, to ensure that the machine has enough cardboard and glue, and to fix the machine, if it becomes jammed. In short, the introduction of the CartonWrap has completely changed the set of human actions that constitute the process of packing

66. 'What robots do (and don't do) at Amazon fulfilment centers,' Amazon, <https://www.aboutamazon.co.uk/amazon-fulfilment/what-robots-do-and-dont-do-at-amazon-fulfilment-centres>; 'Bots by the numbers: Facts and figures about robotics at Amazon,' News, Amazon, December 1, 2018, <https://blog.aboutamazon.co.uk/bots-by-the-numbers-facts-and-figures-about-robotics-at-amazon>. The robo-stow is shown in operation at the fulfilment centre in Patterson, California, in a video embedded in an article by Phillip Tracy, 'Case Study: Amazon embraces shipping automation, robotics,' *RCR Wireless News*, July 8, 2016, <https://www.rcrwireless.com/20160708/internet-of-things/amazon-automation-tag31-tag99>. It is also shown in operation at the fulfilment centre in Lakeland; see Fox 13 Tampa Bay, 'Behind the scenes of an Amazon warehouse,' Video, November 26, 2015, https://www.youtube.com/watch?v=Y-IBvI6u_hw.

67. The computer system determines the type and size of packaging based on measurements of the dimensions of the item of merchandise which are produced by a specialised scanning machine; see Ben Stevens, 'Behind the scenes at Amazon's robotic fulfilment centre,' *Charged*, October 18, 2019, <https://www.chargedretail.co.uk/2019/10/18/behind-the-scenes-at-amazons-robotic-fulfilment-centre/>.

68. The process of packing orders manually, in the Seattle fulfilment centre, is shown in a video; see CNBC, 'How Amazon Delivers On One-Day Shipping,' Video, July 15, 2019, <https://www.youtube.com/watch?v=Yiafb0-gqF4>. Note that, in addition to working out the correct type of box to use, the computer system also works out the correct length of tape and the correct type of packaging to use. The correct length of tape and any documentation (for example, gift receipts) are produced automatically by machine. See also Christoph Roser, 'The Inner Workings of Amazon Fulfilment Centers – Part 4,' *All About Lean*, November 12, 2019, <https://www.allaboutlean.com/amazon-fulfillment-4/>; Andrew Little and Pedro Palandrani, 'Theme Lab: A Look Inside An Amazon Fulfilment Center,' *Global X*, March 4, 2020, <https://www.globalxetfs.com/theme-lab-a-look-inside-an-amazon-fulfillment-center/>; Jeff Toister, 'An Inside Look at Amazon's Fulfilment Center Operations,' Blog, April 18, 2017, <https://www.toistersolutions.com/blog/2017/4/10/an-inside-look-at-amazons-fulfillment-center-operations>.

69. Note that in fulfilment centres which handle larger items, the packing process is slightly different, according to the size of the item that has been ordered. For example, a temporary worker at a warehouse in the Phoenix area described working on the 'oversize box line':

I operated the custom box machine. So, when someone would order something huge or weirdly shaped, it would come down a special line where it was scanned with lasers, [and] the size info was sent to my machine, which spat out a custom-sized piece of cardboard. My job was to tear off the excess cardboard, throw it away, fold the box over, glue the flap down, slap a barcode on it, and put it on the drying rack for the packers. I did this probably 1000 times a night.

See Hamilton Nolan, 'True Stories of Life as an Amazon Worker,' *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

70. The CartonWrap is made by the Italian company CMC SRL; see 'CMC CARTONWRAP,' *CMC Machinery*, <https://www.cmc machinery.com/?portfolio=e-commerce1-cmc-cartonwrap>.

customer orders.^{71, 72} However, because the level of technology that is employed does not involve artificial intelligence, mechanisation of packing through the CartonWrap is at a lower level than mechanisation of stowing and picking by means of robotics.

SLAM

Another type of automatic machine tool that Amazon uses for the checking and address labelling of packages is the SLAM.⁷³ When a package arrives by conveyor, the SLAM machine reads the bar code on the package so that, when the package is weighed, the expected weight of the contents and the packaging can be compared with the actual weight of the contents and packaging. If the weight is as it is expected to be, the machine prints an adhesive address label and fixes it to the package using air pressure. If there is a difference between the expected weight of the package and its actual weight, the package is automatically pushed off the conveyor into a quality control station so that its content can be inspected manually – that is, using labour.^{74, 75, 76}

Conclusion

Therefore, examination and comparison of the range of automatic machine tools that Amazon is using in its fulfilment centres indicates that it has achieved the highest level of mechanisation of the work process, to date, through the introduction of the robotic drive units, such as the Kiva and Pegasus, and the robotic arms, such as the palletiser and the robo-stow. As it continues to improve the technology of fulfilment, it seems likely that Amazon will continue to increase the level of mechanisation, and thus to continue to replace labour power with mechanical power and human control with automatic control. However, as we have seen, each new technology calls for new forms of labour, so that the process of mechanisation may well run up against limits arising from the relative cost of machines and labour or other factors.⁷⁷ Further research is needed on how this is playing out in different local contexts.

2.1.3 Digitisation

Mechanisation and automation of the process of fulfilment has gone hand in hand with

71. Jeffrey Dastin, 'Exclusive: Amazon rolls out machines that pack orders and replace jobs,' *Reuters*, May 13, 2019, <https://uk.reuters.com/article/us-amazon-com-automation-exclusive/exclusive-amazon-rolls-out-machines-that-pack-orders-and-replace-jobs-idUKKCN1SJ0X1>. The operation of the CartonWrap at the Seattle fulfilment centre can be seen in a CNBC video; see CNBC, 'How Amazon Delivers On One-Day Shipping,' Video, July 15, 2019, <https://www.youtube.com/watch?v=Yiafb0-gqF4>.

72. It is also reported that Amazon is using a machine that puts items into plastic packaging. Little is known about this machine, other than that it is made by the German company SmartPac: 'Complete packaging lines,' SmartPac, <https://www.smartpac-dresden.com/en/packaging-machines/packaging-lines.html>. The machine is mentioned, briefly, in the report by Jeffrey Dastin, 'Exclusive: Amazon rolls out machines that pack orders and replace jobs,' *Reuters*, May 13, 2019, <https://uk.reuters.com/article/us-amazon-com-automation-exclusive/exclusive-amazon-rolls-out-machines-that-pack-orders-and-replace-jobs-idUKKCN1SJ0X1>.

73. SLAM stands for Scan, Label, Apply, Manifest.

74. For details about the operation of the SLAM, see Jeff Toister, 'An Inside Look at Amazon's Fulfillment Center Operations,' *Inside Customer Service Blog*, April 18, 2017, <https://www.toistersolutions.com/blog/2017/4/10/an-inside-look-at-amazons-fulfillment-center-operations>, and Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 4,' *All About Lean*, November 12, 2019, <https://www.allaboutlean.com/amazon-fulfillment-4/>.

75. The position of SLAM operator is discussed in a blog post that is based on interviews with two Amazon workers at the Brieselang fulfilment centre in Berlin. The SLAM operator monitors the work process using a SCADA-screen. (SCADA stands for Supervisory Control and Data Acquisition.) See Angry Workers of the World, 'Welcome to the Jungle – Working and Struggling in Amazon Warehouses,' *International*, December 20, 2015, <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>.

76. Other problems that SLAM operators deal with, in addition to packages being overweight or underweight, are bar codes that cannot be read by the SLAM machine or bar codes that have been assigned to the wrong package. It is presumed that the SLAM machine rejects a package that has a problematic bar code, in the same way that it rejects a package that is overweight or underweight.

77. The limitations of the current level of robotics technology are discussed in an article by Nick Statt, 'Amazon says fully automated shipping warehouses are at least a decade away,' *The Verge*, May 1, 2019, <https://www.theverge.com/2019/5/1/18526092/amazon-warehouse-robotics-automation-ai-10-years-away>.

digitisation, which is the process of converting information into a digital (i.e. computer-readable) format through organising it into bits. Digitisation plays an important role in the speed with which Amazon fulfils the millions of orders that it receives every day,⁷⁹ and also affects the required speed of the labour process.

Digitisation of information is highly advantageous to Amazon. When an object's bar code is scanned and the information within it is converted into digital format by computer,

- workers can track the movement of the object as it enters and leaves the warehouse and is transported within it;
- suppliers can monitor the progress of their shipments of merchandise to the fulfilment centre;
- customers can see which items of merchandise are in stock, when using Amazon's retail website;
- customers can track the progress of their order, after they have placed it.

Hence, digitisation plays an essential role in managing the movement of thousands of commodities.

However, the information that is contained in a bar code is not the only type of information that is digitised in an Amazon fulfilment centre; for example,

- if the processes of checking-in and order checking have been automated, the weight of an object can be measured by a sensor and converted into digital format;
- if the processes of checking-in and packing have been automated, the dimensions of an object can be measured by lasers and converted into digital format;
- if the processes of stowing and picking have been automated, images of the workers' hands can be taken by cameras and converted into digital format.

By recording information about the weight and dimensions of objects as they enter the fulfilment centre and converting this information into digital format, Amazon can:

- determine where objects should be stored securely, thereby reducing the risk of damage to items of merchandise;
- check that the correct items are inside a package, before it leaves the fulfilment centre, thereby reducing the risk of processing error;
- ensure that the minimum of packaging is used during the packing process, thereby reducing waste of raw materials.

79. According to Christoph Roser, Amazon processes about 37 million orders every day; see Christoph Roser, 'The Inner Workings of Amazon Fulfilment Centers – Part 5,' *All About Lean*, November 19, 2019, <https://www.allaboutlean.com/amazon-fulfillment-5/>.

Moreover, by tracking the movement of workers' hands during robotic stowing and picking and converting this information into digital format, Amazon can calculate, via software algorithms, the location of items of merchandise in the inventory, thereby ensuring that a shelving location that is assigned to a stower has enough storage space on it and one that is assigned to a picker contains the item that has been ordered. If the computer system knows what it is in the inventory and where, it can determine the shortest possible route for a worker to take during manual stowing and picking and the shortest possible route for a robotic drive unit to move along during robotic stowing and picking.

Looked at from a theoretical perspective, then, digitisation is a way of eliminating the labour power that would be needed, if the same volume of information were processed manually and, in consequence, of increasing the speed of the process of fulfilment. However, because the process of fulfilment still depends on the exercise of labour power, the speed at which Amazon demands that orders be processed has implications for working conditions – in particular, the imposition of a certain pace of work, with limited or no discretion for workers to take rests when they assess their bodies require it, seems likely to have implications for the level of physical strain that is imposed on workers and the risk of injury to which they are exposed as a result. Furthermore, when Amazon records information about the exercise of labour power, it is digitised so that a computer can determine how well workers are performing in their roles: for example, how quickly they are stowing, picking, and packing, how many errors they are making, how long they have been inactive, etc. In other words, digitisation is a condition for the enhanced monitoring of the activities that are part of the process of fulfilment and, as we will see later, this information is used in the exercise of worker discipline. Further research is needed concerning how these automated and digitised systems can best be deployed in a way that fosters the wellbeing of human workers.

2.2 Line of Management

Much less has been written about the positions that constitute the line of management inside a typical Amazon fulfilment centre than about the positions that constitute the line of production. However, some workers have referred to particular management roles, when talking about their experiences of working in Amazon's fulfilment centres, and it is possible to form a provisional picture from these reports how the management of at least some fulfilment centres is organised.⁸⁰ The lowest position in the management hierarchy appears to be that of 'process guide' or 'production assistant' and the highest position appears to be that of 'general manager', with the positions of 'area manager', 'operations manager', 'senior operations manager', and 'assistant general manager', in the middle. We review what is known below. Further research is needed to test and elaborate this understanding of management structure.

80. The sortable and non-sortable fulfilment centres, in particular.

2.2.1 Process Guide/Production Assistant

The line of management appears to start with the role of ‘process guide’, which, according to James Bloodworth, ‘is essentially an assistant manager’. The occupant of this role is required ‘to monitor fellow workers and to pick up any production quality issues that might occur during the course of a shift.’⁸¹

According to John Burgett, in his blog about working in Amazon’s Jeffersonville fulfilment centre, occupants of this role are called ‘PAs (Production Assistants)’, and they communicate expected rates of production, safety guidance, and policy changes, amongst other matters, to workers in ‘mandatory stand-up meetings’, at the start of each shift and immediately after lunch.⁸² According to Burgett, production assistants ‘are Tier Three hourly employees ... [who] act as managers, make a couple dollars more per hour than Tier One workers, and are underpaid.’⁸³

2.2.2 Area Manager

John Burgett distinguishes between ‘PAs (Production Assistants)’ and ‘AMs (Area Managers)’. Like the production assistants, area managers are responsible for monitoring the work of a team of employees in a particular department of the fulfilment centre, such as picking, sorting or packing; and, like the production assistants, area managers communicate information about performance expectations, safety, and company policy in team meetings. According to Burgett, an area manager is a type of warehouse floor manager, is usually a man, and is a salaried employee.⁸⁴

Further information about the role of area manager comes from an interview that *Vox* carried out with the former manager of the packing department of a warehouse in California. The manager, who is anonymous, describes having responsibility for the work of ‘about 55 associates’ and that the responsibilities included monitoring ‘how long someone hadn’t packed ... something.’ The manager explained further:

“If we saw that five minutes went by without any activity from an associate, we were supposed to go over and talk to that person. Everything is tracked inside Amazon because all the packages are being scanned and have time stamps. I would watch the internal system on my laptop and monitor all the packers to make sure there were no dead spots in packing rates that might be due to a system problem.”

The manager confirmed that it is possible for warehouse area managers to override the system’s calculation of work activity and inactivity by changing time off task ‘to actual task’ but that managers were permitted to do this only for emergencies, when workers

81. James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 22-23.

82. John Burgett, ‘AFE (Amazon Fulfilment Engine),’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/afe-amazon-fulfilment-engine>, and John Burgett, ‘Internal Marketing Campaign, Tag Lines,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/internal-marketing-campaign-tag-lines>.

83. John Burgett, ‘Young Men Managers,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/young-men-managers>.

84. John Burgett, ‘AFE (Amazon Fulfilment Engine),’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/afe-amazon-fulfilment-engine>, and John Burgett, ‘Young Men Managers,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/young-men-managers>.

had to leave the work area; they were not permitted to do this for bathroom breaks. The manager also confirmed that area managers were responsible for

- disciplining and dismissing workers who had taken too much time off task;
- giving motivational talks to their team during team meetings.

However, the former manager said that Amazon did not teach them either how to communicate with workers effectively or how to understand their difficulties on the job.⁸⁵

2.2.3 Operations Manager

In his blog about working at Amazon's Jeffersonville fulfilment centre, John Burgett makes passing reference to the role of operations manager: 'I only have minimal contact with one woman AM (Area Manager), and she has been with the company less than one year. All Operations Managers (superior to AMs) are men, as far as I know.'⁸⁶

Further information about this role, from media reports about working in Amazon's fulfilment centres, is scarce; however, it is possible to understand the main responsibilities of this role by examining public advertisements for vacancies for the role of Operations Manager. For example, Amazon's UK operation has recently advertised a vacancy for the role of operations manager, in Chesterfield, on Amazon's jobs website. According to the job description for this role, the Operations Manager will be responsible for monitoring the work of 'a team of Area Managers' in either the inbound or outbound section of the fulfilment centre and will report to the 'Senior Operations Manager'. In addition, the Operations Manager will be required to take the lead 'on numerous process improvement projects, with the aim of streamlining all activities, both for yourself and the team members you manage.'⁸⁷

2.2.4 Senior Operations Manager

John Burgett refers frequently to the role of Senior Operations Manager. When reporting on organisational changes in the Jeffersonville fulfilment centre, he refers to the Senior Operations Manager for the inbound and outbound sections of the warehouse. He tells us they often lead 'All hands meetings' and respond to questions that workers write on the 'VOA board' (the Voice of Associate board).⁸⁸

Once again, it is possible to understand the nature of the responsibilities of this role by examining public advertisements for job vacancies for the role of Senior Operations Manager. For example, on September 16, 2020, Amazon posted an advertisement for the role of Senior Operations Manager in the UK. According to the job description, the person in this role will report to the General Manager of the fulfilment centre and will lead 'a team of Operations and Area Managers', a responsibility that includes providing

85. Chavie Lieber, 'The human costs of Black Friday, explained by a former Amazon warehouse manager,' *Vox*, November 20, 2018, <https://www.vox.com/the-goods/2018/11/20/18103516/black-friday-cyber-monday-amazon-fulfillment-center>.

86. John Burgett, 'Young Men Managers,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/young-men-managers>.

87. The job description for this role is reproduced in Appendix 4.

88. John Burgett, 'February 2016 All hands,' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/february-2016-all-hands-meeting>, and John Burgett, 'Internal Marketing Campaign, Tag Lines,' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/internal-marketing-campaign-tag-lines>.

'coaching and mentoring ... to ensure that they, and the teams they manage, are able to meet performance objectives.'⁸⁹

2.2.5 General Manager

John Burgett also refers to the General Manager of the Jeffersonville fulfilment centre, and the Assistant General Manager. From what Burgett says, it seems that these two roles are the most senior roles in a fulfilment centre, with Regional Managers constituting the next stage in the management hierarchy.⁹⁰

A public advertisement for the role of general manager in the UK ('Director Plant Operations'), indicates that a general manager reports to 'the Regional Director Operations' and is responsible, amongst other things, for delivering 'all targeted business plan metrics across productivity, quality, cost, safety and people', as well as for generating 'operational plans', driving 'a mind-set and culture of continuous improvement through Kaizen and Lean initiatives' and sustaining 'a culture of learning and development.'⁹¹

2.2.6 Other Managers

In his blog about working in Amazon's Jeffersonville fulfilment centre, John Burgett refers to other managerial positions, such as 'HR manager' and 'Senior Change Manager'; but, as these are passing references, it is not clear how they fit into the management structure of a fulfilment centre.⁹² Moreover, there are likely to be other such roles; for example, the advertisement for the role of Director Plant Operations, which is reproduced in Appendix 4, refers to a working relationship with members of staff in various supporting roles: 'HR, Financial Manager, Safety & Loss Prevention Manager, IT Manager and Engineering'.

The role of safety manager is also mentioned in articles scrutinising the operation of Amazon's on-site emergency medical clinics. For example, in an article that was published by *The Intercept*, a Warehouse Safety Manager describes being 'pressured' by his superiors 'to participate in a system in which managers reviewed each other's injury reports to justify classifying some incidents in a way that wouldn't require official documentation'; according to an 'on-site medical representative' who knew about this system and who was interviewed for the same article, Amazon's safety managers at the regional level 'would then have to approve the decision not to record an injury.'⁹³ Therefore, this account suggests that safety managers must report, not to the general manager of the fulfilment centre, but to a regional safety manager.⁹³

89. The job description for this role is reproduced in Appendix 4.

90. John Burgett, 'Internal Marketing Campaign, Tag Lines,' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/internal-marketing-campaign-tag-lines>; John Burgett, 'Bathroom Breaks,' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/bathroom-breaks>; and John Burgett, 'April 2015 All Hands, "Letter to Matt",' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/matt-letter-to-matt>.

91. The job description for this role is reproduced in Appendix 4.

92. John Burgett, 'Internal Marketing Campaign, Tag Lines,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/internal-marketing-campaign-tag-lines>, and John Burgett, 'February 2016 All hands,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/february-2016-all-hands-meeting>.

93. H. Claire Brown, 'How Amazon's On-Site Emergency Care Endangers the Warehouse Workers It's Supposed to Protect,' *The Intercept*, December 2, 2019, <https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>.

The experiences and perspectives of Amazon managers could be a valuable area for future research because of the unique perspective afforded by their role in the fulfilment process, including their position as a sometime intermediary between business targets and human workers.

2.3 Ancillary Roles

It is apparent, from reports of experiences of working in Amazon's warehouses, that the process of fulfilment depends on the work of people who occupy a number of ancillary roles, including those of problem solver, inventory controller, amnesty processor, ambassador, facilities technician, and on-site medical representative. These roles are discussed, briefly, below; there are likely to be other such roles (whether provided through external contractors or not), such as caterer, cleaner, and security guard. There will also need to be workers in human resources to assist with worker recruitment, discipline, and termination of contracts.

2.3.1 Problem Solver

A temporary worker who was employed by SMX Staffing in the United States described working as a runner in the problem-solving department of an Amazon warehouse:⁹⁴

"Basically, when pickers don't pick the right item or forget to pick it, runners are sent later to grab the item so it can be packed and shipped with everything else on time. You go to a magical place they call "Problem Solving", you stand beside the people on the computers and when they hand you an item a picker missed, you are to walk/jog as fast as you can to get the item ... Then, when you are done, you wait beside the computer until they send you to run again, which could be from 5min to 15min later."

Sarah O'Connor, in her article for *The Financial Times*, about Amazon's Rugeley fulfilment centre, also refers to the role of problem solver:⁹⁵

"Some people also patrol the warehouse pushing tall little desks on wheels with laptops on them – they are 'mobile problem solvers' looking for any hitches that could be slowing down the operation."

2.3.2 Inventory Controller

A worker at an Amazon warehouse near Allentown, Pennsylvania, describes working in the Inventory Control, Quality Assurance (ICQA) department, which encompasses 'processes designed to verify and/or fix the inventory in the building.'⁹⁶

94. Hamilton Nolan, 'True Stories of Life as an Amazon Worker,' *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

95. Sarah O'Connor, 'Amazon unpacked,' *The Financial Times*, February 8, 2013, <https://www.ft.com/content/ed6a985c-70bd-11e2-85d0-00144feab49a>.

96. Hamilton Nolan, 'A Few More True Stories from Amazon Workers,' *Gawker*, August 6, 2013, <https://gawker.com/a-few-more-true-stories-from-amazon-workers-1043216113>.

John Burgett also refers to a colleague who ‘had transferred to ICOA’. He tells us that workers in this role ‘count items [that are] in a bin, to verify inventory data.’⁹⁷

2.3.3 Amnesty Processor

A worker at an Amazon warehouse near Allentown, Pennsylvania, describes being trained as an “‘Amnesty Processor’”, a role which involves working out the correct location of an item that has been stowed in an incorrect location.⁹⁸

2.3.4 Damage Processor

A worker at an Amazon warehouse near Allentown, Pennsylvania, describes running ‘the section [of the warehouse] known as Damageland, where we process all the damages in the building and stage them while they wait to be returned to vendors, or graded and sold as a discount through “Warehouse Deals”’.⁹⁹

2.3.5 Ambassador

An Amazon ‘Ambassador’ is an experienced Amazon employee who has been given the responsibility of training new workers in the execution of work tasks. For example, a worker at Amazon’s Florence warehouse in New Jersey described being given the additional responsibility of ‘training new hires’.¹⁰⁰

However, the title of ‘Ambassador’ also applies to workers whom Amazon employs, on a full-time basis, to communicate information about working conditions inside Amazon’s fulfilment centre and about the conditions of employment of fulfilment centre workers, on social media such as Twitter. These workers are known as ‘FC Ambassadors’.¹⁰¹

2.3.6 Facilities Technician

John Burgett refers to a group of workers known as facilities technicians, ‘who maintain the building, conveyors, and industrial systems’ and who carry out ‘more mundane tasks such as repairing push carts and building shelves.’¹⁰²

2.3.7 On-Site Medical Representative

Amcare workers are Amazon employees who are trained as Emergency Medical Technicians and who provide first aid to injured warehouse workers. They work in warehouse clinics and are ‘supervised by safety managers’ – not by more qualified medical professionals such as nurses or physicians. They are supposed ‘to administer very basic care, like providing ice packs and Advil, and refer workers with more serious

97. John Burgett, ‘Physical Environment, Size,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/physical-environment-size>.

98. Hamilton Nolan, ‘A Few More True Stories from Amazon Workers,’ *Gawker*, August 6, 2013, <https://gawker.com/a-few-more-true-stories-from-amazon-workers-1043216113>.

99. *Ibid.*

100. Lindsay Rittenhouse, ‘Amazon Warehouse Employees’ Message to Jeff Bezos – We Are Not Robots,’ *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

101. Dan Tynan, ‘Amazon’s ‘ambassador’ workers assure Twitter: we can go to the toilet any time,’ *The Guardian*, August 23, 2018, <https://www.theguardian.com/technology/2018/aug/23/amazon-fc-ambassadors-twitter-working-conditions>.

102. John Burgett, ‘Union Fight,’ *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/union-fight>.

injuries to doctors and hospitals.’¹⁰³

2.3.8 Water Spider

Another ancillary role that is rarely mentioned in media reports but that is essential to the operation of the line of production is that of water spider. In an article in *The Street*, a former Amazon employee describes working in this role in the Carteret fulfilment centre in New Jersey. According to this report, it seems that it is the responsibility of the water spider to ensure that the packers are kept supplied with cardboard, tape, labels, and other materials that they need.¹⁰⁴

However, in an article about Amazon’s Staten Island fulfilment centre that was published in *The New York Times*, it is reported that the water spider transports received items of merchandise to the stowers. This article suggests, therefore, that the role of water spider is the more general one of supplying raw materials to workers in a line of production. In the case of Amazon’s fulfilment process, the raw materials will include the goods that have been checked and prepared for sale and the materials that constitute the packaging for those goods.¹⁰⁵

2.4 Conclusion

Our examination of the process of fulfilment, which is limited by the information that is publicly available, reveals that it has three, crucial features.

1. It is *socially complex* – that is, it comprises a line of production that is organised into a set of distinct, yet connected, work roles carrying the same level of authority and status intersecting with a line of management that is organised into a set of distinct, yet connected, work roles carrying successively higher levels of authority and status.
2. It is *increasingly mechanised* – that is, with each iteration of the fulfilment centre model to date, the level of mechanisation of the work process (the replacement of labour power by mechanical power and human control by mechanical control) has increased.
3. It is *highly digitised* – that is, the process of fulfilment, including the actions of workers, is closely monitored, recorded, and directed by computer.

103. H. Claire Brown, ‘How Amazon’s On-Site Emergency Care Endangers the Warehouse Workers It’s Supposed to Protect,’ *The Intercept*, December 2, 2019, <https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>.

104. Lindsay Rittenhouse, ‘Amazon Warehouse Employees’ Message to Jeff Bezos – We Are Not Robots,’ *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

105. Noam Scheiber, ‘Inside an Amazon Warehouse, Robots’ Ways Rub Off on Humans,’ *The New York Times*, July 3, 2019, <https://www.nytimes.com/2019/07/03/business/economy/amazon-warehouse-labor-robots.html>. The role of water spider, in relation to the theory of lean manufacturing, is explained in an article by a Shmula Contributor, ‘What is the Role of the Water Spider in Lean Manufacturing?’ *Shmula*, last updated March 25, 2017, <https://www.shmula.com/what-is-the-role-of-the-waterspider-in-lean-manufacturing/22565/>.

Employment of Workers in Fulfilment Centres

In this section, some of the conditions of employment of workers in Amazon's fulfilment centres (that is, the rights and obligations pertaining to the roles of employer and employee) and indications from the evidence as to the implications for the quality or character of their employment are discussed and analysed within a sociological perspective on waged labour.

3.1 Conditions of Employment

3.1.1 Contractual Status

Fulfilment centre workers on open-ended contracts of employment are hired directly by Amazon, whereas fulfilment centre workers on fixed-term contracts are hired indirectly via employment agencies, under contract with Amazon.

Journalists who have either worked undercover in Amazon's fulfilment centres or who have carried out investigations of their operations have described how Amazon recruits temporary workers through employment agencies, on contracts of varying lengths:

- Jamie Woodcock, in an article for *The Independent* in 2019, reports that the employment agencies Adecco and PMP recruit workers for Amazon's Tilbury fulfilment centre;¹⁰⁶
- James Bloodworth, who worked as a picker in Amazon's fulfilment centre in Rugeley in 2016, reports that temporary workers were recruited through the employment agencies PMP Recruitment and Transline and that their contracts were 9 months in length;¹⁰⁷
- Sarah O'Connor, in her article about Amazon's fulfilment centre in Rugeley for *The Financial Times* in 2013, states that, before the fulfilment centre opened, Amazon recruited workers through a 'global employment agency called Randstad';¹⁰⁸
- the Institute for Local Self-Reliance (ILSR), in their report on Amazon, found that, in the USA, the company 'has ... outsourced a large portion of staffing needs to two temporary staffing firms, Integrity Staffing Solutions and Staff Management, known as SMX'.^{109, 110}

We should note that Amazon's practice of employing workers through agencies appears

106. Jamie Woodcock, 'I've been inside Amazon's new hi-tech warehouses – and I've seen how robots will change how we work,' *The Independent*, July 27, 2019, <https://www.independent.co.uk/voices/amazon-fulfilment-centre-warehouse-worker-jeff-bezos-a9023516.html>. Mary O'Connor also reports that she obtained work as a picker through PMP Recruitment; see Mary O'Connor, 'Sick Amazon "elves" face sack,' *The Times*, December 11, 2016, <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>.

107. James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 19. See also James Bloodworth, 'I worked in an Amazon warehouse. Bernie Sanders is right to target them,' *The Guardian*, September 17, 2018, <https://www.theguardian.com/commentisfree/2018/sep/17/amazon-warehouse-bernie-sanders>.

108. Sarah O'Connor, 'Amazon unpacked,' *The Financial Times*, February 8, 2013, <https://www.ft.com/content/ed6a985c-70bd-11e2-85d0-00144feab49a>.

109. The report's authors write: 'The largest temporary staffing firm that Amazon uses ... is Integrity Staffing Solutions, which has contracts with Amazon to staff its fulfilment centers in at least 4 locations.' See Olivia LaVecchia and Stacy Mitchell, *Amazon's Stranglehold: How the Company's Tightening Grip Is Stifling Competition, Eroding Jobs, and Threatening Communities* (Washington: Institute for Local Self Reliance, 2016), 43.

110. One former worker at a warehouse in Hebron, Kentucky, described SMX as

the worst staffing agency in the nation ... You are treated like a child, a dumb child at that. ... They do not care, if you keel over on the line ... all they care about is rate and getting those stations filled. To do this, they cut corners and hire people who cannot do the work. They also over book all their shifts the first day. There are usually 15 spots and they send 20 people, so if you are later than the last person, you are sent away and have to do scheduling again. They are a morally defunct company that must have come from the pits of hell, you know the place where the devil and Judas reside.

See Hamilton Nolan, 'Amazon Warehouse Workers Are "Treated Like a Child, a Dumb Child",' *Gawker*, October 27, 2014, <https://gawker.com/amazon-warehouse-workers-are-treated-like-a-child-a-d-1651376061>.

to be international. For example, the trade union OZZ Inicjatywa Pracownicza in Amazon reports that, in Poland, 'Amazon employs thousands of people through temporary employment agencies on contracts lasting one month',¹¹¹ while in Spain, sección sindical CGT Amazon MAD4 reports that 'a high proportion of workers are hired through temporary employment agencies' and 'are given weekly contracts'.¹¹²

We should also note that, while Amazon recruits workers through employment agencies throughout the year, it recruits the highest number of temporary workers during the peak season (Christmas). For example, in a blog post by the workers' inquiry organisation Angry Workers of the World, it is stated that

- for the peak seasons in 2014 and 2015, Amazon recruited temporary workers in the UK through employment agencies;
- in Germany, in 2015, across all fulfilment centres, between 9,000 and 10,000 workers were employed on permanent contracts, whereas 10,000 were employed on temporary contracts;
- Amazon employed between 2,000 and 3,000 workers directly, when the fulfilment centre at Poznan in Poland opened, in the Autumn of 2014; it employed 3,000 temporary workers before the Christmas of 2014 and 2,000 temporary workers after the Christmas of 2014; and it planned to employ 2,000 workers on a permanent basis, and 4,000 workers on a temporary basis, for the Christmas season of 2015.¹¹³

Hence, across the year we often see surges in the total number of workers employed in Amazon's fulfilment centres, as managers respond to expected changes in customer demand.

3.1.2 Pay

On 1 November 2018, Amazon increased the minimum wage for its workers in the USA and the UK, whether those workers were employed on a full-time or part-time basis, and on permanent or temporary contracts. In the USA, Amazon increased the minimum wage to \$15 per hour; in the UK, it increased it from £8.20 per hour to £10.50 per hour for workers inside London (above the level of £10.20 per hour recommended by the Living Wage Foundation) and from £8 per hour to £9.50 per hour for workers outside London (above the level of £8.75 per hour recommended by the Living Wage Foundation).^{114, 115}

111. OZZ Inicjatywa Pracownicza in Amazon, 'Warning Signals for Amazon: Struggles in Poland & Beyond,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 20, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

112. Sección sindical CGT Amazon MAD4, 'Fighting Precarity, Overcoming Divisions: Perspective from Madrid,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 33, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

113. Angry Workers of the World, 'Welcome to the Jungle – Working and Struggling in Amazon Warehouses,' International, December 20, 2015, <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>.

114. Reporting of the pay increase for Amazon workers suggests that, at the time of the changes, Amazon was paying a standard minimum wage across the UK, whereas across the USA it was paying a variable minimum wage. For example, Laura Stevens reports that, in the USA, 'starting pay for warehouse and customer service workers can be as low as \$10 an hour and as high as \$14.' See Laura Stevens, 'Amazon to Raise Its Minimum U.S. Wage to \$15 an Hour,' *The Wall Street Journal*, October 2, 2018, https://www.wsj.com/articles/amazon-to-raise-its-minimum-u-s-wage-to-15-an-hour-1538476027?mod=hp_lead_pos1.

115. The average wage for retail sales workers, across the USA, at the time of the pay increase was \$13.20; see Jon Porter, 'Amazon raises minimum wage to £15 for all 350,000 US workers following criticism,' *The Verge*, October 2, 2018, <https://www.theverge.com/2018/10/2/17927478/amazon-minimum-wage-15-dollars-increase-bernie-sanders>.

Amazon said that the change in pay would affect, in the USA, 250,000 workers on permanent contracts and 100,000 workers on temporary contracts and, in the UK, 17,000 workers on permanent contracts and more than 20,000 workers on temporary contracts.¹¹⁶

Amazon presented the changes to its pay structure in the USA and UK as a response to demands for higher pay that politicians and trade unions had been making.¹¹⁷ However, some commentators interpreted the increase in hourly wage rates as being driven primarily by changes in conditions in the labour market since Amazon's competitors, such as Target, Costco, and Walmart in the USA, had also decided to increase hourly rates of pay.^{118, 119}

At the same time as it increased rates of pay, Amazon removed its Variable Compensation Plan (VCP) and Restricted Stock Units (RSU) scheme, for which some of its workers were eligible.¹²⁰ Through the VCP, workers received monthly cash payments of up to 4% of their usual monthly pay, for meeting attendance expectations, and an additional 4% of their usual monthly pay, if their fulfilment centre achieved its productivity targets; during peak season (November and December), these bonuses doubled in value. Through the RSU, workers received one Amazon share for each completed year of service, with the right to exchange these shares for cash after two years. Despite Amazon claiming that the increase in the base rate of pay would more than compensate for the loss of income through VCP and RSU, Amazon workers in the USA and the UK claimed that they would be worse off after the changes, leading some commentators and trade unions to conclude that Amazon was offsetting the increase in unit labour costs that was the consequence of increasing the base rate of pay by removing incentive pay and the stock grants.¹²¹ In response to these criticisms, Amazon said that it would change the planned increase of \$1 per hour for workers already earning \$15 per hour to an increase of \$1.25 per hour, introduce a new cash bonus scheme to reward workers for long-term service, and would introduce a new cash bonus of \$100 for workers who meet attendance requirements during the month of

116. Hannah Boland and Joseph Archer, 'Amazon raises wages for US and UK workers following widespread criticism,' *The Telegraph*, October 2, 2018, <https://www.telegraph.co.uk/technology/2018/10/02/amazon-hikes-pay-us-uk-workers-following-criticism/>. See also Rebecca Marston, 'Amazon raises wages amid criticism,' *The BBC*, October 2, 2018, <https://www.bbc.co.uk/news/business-45717768>, and Alexia Fernández Campbell, 'Amazon is raising its minimum wage to \$15 for US workers,' *Vox*, October 2, 2018, <https://www.vox.com/2018/10/2/17927686/amazon-raises-minimum-wage-workers>.

117. See Bernie Sanders, 'If the economy is "roaring", why are so many Americans still struggling?' *The Guardian*, July 16, 2018, <https://www.theguardian.com/commentisfree/2018/jul/16/bernie-sanders-town-hall-low-wages-amazon-mcdonalds-walmart>, and the campaign by trade unions in the USA for \$15 per hour: 'About Us,' Fight For \$15, <https://fightfor15.org/>. See also Section 2 of 'GMB Response to the Low Pay Commission General Consultation on National Minimum Wage 2014,' GMB Policy Passed at Congress 2014, GMB Union, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/425236/LPC_consultation_response_GMB_2014-15.pdf, and the GMB petition to Christopher North, then Managing Director of Amazon in the UK: 'Amazon.co.uk: Work with GMB to get temp workers a decent job,' Petition, GMB Campaigns, <https://campaign.goingtowork.org.uk/petitions/amazon-co-uk-work-with-gmb-to-give-temp-workers-a-decent-job>.

118. Richard Partington, 'Amazon raises minimum wage for US and UK employees,' *The Guardian*, October 2, 2018, <https://www.theguardian.com/technology/2018/oct/02/amazon-raises-minimum-wage-us-uk-employees>; Dominic Rushe, 'Critics fear Amazon's minimum wage hike will distract from its other issues,' *The Guardian*, October 6, 2018, <https://www.theguardian.com/us-news/2018/oct/06/critics-fear-amazons-minimum-wage-hike-will-distract-from-its-other-issues>; and Laura Stevens, 'Amazon to Raise Its Minimum U.S. Wage to \$15 an Hour,' *The Wall Street Journal*, October 2, 2018, https://www.wsj.com/articles/amazon-to-raise-its-minimum-u-s-wage-to-15-an-hour-1538476027?mod=hp_lead_pos1.

119. In fact, in a meeting with the Scottish Government on 1 November 2018 a senior manager from Amazon confirmed that the two main motivations for the increase in the pay of fulfilment centre workers were the strength of the demand for labour power in the UK and North America and public perceptions of pay. (The authors are grateful to the GMB trade union for providing them with a redacted copy of the notes of this meeting, which it obtained under the provisions of the Freedom of Information [Scotland] Act [2002].)

120. 'Amazon Raises Minimum Wage to \$15 for all U.S. Employees,' News, Amazon, October 2, 2018, <https://www.aboutamazon.com/news/workplace/amazon-raises-minimum-wage-to-15-for-all-u-s-employees>.

121. Karen Weise, 'Why Some Amazon Workers Are Fuming About Their Raise,' *The New York Times*, October 9, 2018, <https://www.nytimes.com/2018/10/09/technology/amazon-workers-pay-raise.html>; Dami Lee, 'Amazon eliminates monthly bonuses and stock grants after minimum wage increase,' *The Verge*, October 3, 2018, <https://www.theverge.com/2018/10/3/17934194/amazon-minimum-wage-raise-stock-options-bonus-warehouse>; and Sarah Butler, 'Amazon offsetting pay rise by removing bonuses, union says,' *The Guardian*, October 3, 2018, <https://www.theguardian.com/technology/2018/oct/03/amazon-offsetting-pay-rise-by-removing-bonuses-union-says>.

At the start of the coronavirus pandemic, in March 2020, Amazon increased wages for its workers by \$2 per hour and doubled overtime pay; at the end of May 2020, Amazon withdrew this policy, a decision that attracted complaints from some workers. For example, one worker, who spoke to *Business Insider* anonymously, called the decision “disgraceful” and said:

“Staff put themselves at risk every day. Also with the harsh regime and difficult targets the workers more than deserve the pay rise permanently. It just shows how very little regard Amazon has for its overworked employees.”

Another worker was quoted by *Business Insider* as saying that the decision to terminate the enhanced pay policy was a “slap in the face”.¹²³ In the UK, Amazon workers involved with Organise launched a petition calling on Amazon not to reverse the increase in pay that it had introduced in March 2020.¹²⁴ In response to these complaints, Amazon announced that it would give its frontline workers in the USA, including those in its warehouses, a bonus payment of \$500, if they worked full time, and \$250, if they worked part time, throughout the month of June.¹²⁵ According to Organise, Amazon intended to pay an equivalent bonus to its frontline workers in the UK.¹²⁶

Finally, it should be noted that, in the USA, the Supreme Court recently ruled that Integrity Staffing Solutions is not required to pay Amazon warehouse workers for the time that they spend going through Amazon’s security process. Workers had argued that, under the Fair Labor Standards Act, their employer should pay them for the additional 25 minutes that they spend, each shift, undergoing a security screening. But Supreme Court Justice Thomas disagreed, arguing that it was ‘unnecessary for Amazon to execute long security screenings to conduct its business’. The Supreme Court arrived at this judgement, despite considering ‘other cases where workers’ preliminary time was dispensable’ – such as the time that meat packers spend sharpening their knives – and in the face of an ‘alliance of business and government’. It is a judgement that has been regarded as perverse, given the consequences, for Amazon’s business model, of worker theft, and as facilitating ‘increased worker abuses and wage theft.’¹²⁷ This highlights the contested and variable character of wages, indicating it is an important area for future research.

122. Spencer Soper, ‘Amazon Pledges to Compensate Its Warehouse Workers More Following Criticism,’ *Time*, October 10, 2018, <https://time.com/5421061/amazon-warehouse-workers-more-pay/>, and Colin Lecher, ‘Amazon is raising some workers’ pay further after controversy,’ *The Verge*, October 10, 2018, <https://www.theverge.com/2018/10/10/17961794/amazon-worker-raises-bonuses-controversy>. *Business Insider* claimed that, because its operating expenses for the period from October to December 2018 increased at a rate that was similar to, or slower than, the rate of increase for the previous quarters of 2018, Amazon had managed to counteract the effect of the increase in the base rate of pay on unit labour costs. See Isobel Asher Hamilton and Jake Kanter, ‘Amazon’s minimum-wage hike barely made a dent in its operating costs, and it may explain why some workers say they’re actually earning less,’ *Business Insider*, February 1, 2019, <https://www.businessinsider.com/amazon-minimum-wage-hike-barely-made-a-dent-in-its-operating-costs-2019-2?r=US&IR=T>.

123. Isobel Asher Hamilton, ‘Amazon will drop its \$2 pay raise for warehouse staff after May, and workers say it’s too soon,’ *Business Insider*, March 14, 2020, <https://www.businessinsider.com/amazon-dropping-covid-19-hazard-pay-warehouse-workers-may-2020-5?r=US&IR=T>.

124. ‘Jeff Bezos: Don’t cut Amazon workers’ pay during the pandemic,’ Petition, Organise, <https://platform.organise.org.uk/campaigns/amazon-pay-cut-coronavirus>.

125. Annie Palmer, ‘Amazon gives front-line workers a \$500 coronavirus bonus,’ *CNBC*, June 29, 2020, <https://www.cnbc.com/2020/06/29/amazon-gives-front-line-workers-a-500-coronavirus-bonus.html>.

126. ‘Victory: Amazon workers win bonus for working through the pandemic,’ Blog, Organise, June 30, 2020, <https://www.organise.org.uk/blog/2020/6/30/victory-amazon-workers-win-bonus-for-working-through-the-pandemic>.

3.1.3 Benefits

Time Off

Both temporary and permanent employees who work in Amazon's fulfilment centres are entitled to take time off work. According to *Gizmodo*, Amazon workers accrue three types of time off:

- paid time off (PTO), subject to prior approval;
- vacation time, subject to prior approval;
- unpaid time off (UPT), allocated as a lump sum of 20 hours each quarter.¹²⁸

According to John Burgett, the allowance of PTO is 48 hours per year, while the allowance of vacation time is 40 hours in the first year of employment.¹²⁹ He also tells us that:

- vacation time will not be approved for peak season or the Prime Day sales event;
- workers who miss part, or the whole, of a mandatory overtime shift 'must cover the absence with PTO ... or UPT';
- an employee 'can accumulate a maximum of 80 hours UPT in her account' but, if the balance 'falls below 0 hours of banked UPT, it is grounds for automatic dismissal.'^{130, 131}

Burgett argues that the way in which his co-workers at Amazon's Jeffersonville fulfilment centre have sometimes used UPT indicates just how 'desperate' they are 'to get out of the facility'. He tells us that in the first week of October, when the allowance of 20 hours of UPT was distributed to workers, 25,000 hours of UPT were used that week. Assuming a total workforce at that time of about 3,000 employees, Burgett calculates that each employee used, in the first week of October, on average, 8.3 hours of UPT or 41.5% of the allocation of UPT for that quarter. However, Burgett argues out that using UPT as an escape route from unbearable working conditions is undermined by Amazon's managers, who he says will often impose overtime, if they think that workers have taken too much time off: 'The employee depletes his UPT to get some much needed time off, only to be scheduled to work on his day off later that week or the next.'¹³²

Amazon's seasonal workers are also entitled to take time off work, but the entitlement appears to be less generous than the entitlement for direct hires. In the USA, for example, Integrity Staffing Solutions gives their employees 40 hours of 'Approved Time Off (ATO)' on 'Day 21' of the assignment; what this means is that the only type of time

127. Moshe Z. Marvit, 'SCOTUS Rules Workers Don't Need To Be Paid for All Their Time Working,' *In These Times*, December 10, 2014, <https://inthesetimes.com/article/supreme-court-amazon>.

128. Bryan Menegus, 'On Amazon's Time,' *Gizmodo*, June 13, 2018, <https://gizmodo.com/on-amazon-s-time-1826570882>.

129. These figures are for full-time, hourly-paid employees (that is, someone who works 40 or more hours per week). For the second year, the vacation time entitlement rises to 80 hours, with further increases for subsequent years. For part-time employees (those working 20-29 hours per week), the vacation time allowance is 20 hours in the first year and 40 hours in the second year, with further increases in subsequent years. The allowance of PTO for part-time employees is 24 hours per year; see 'Paid Time Off for U.S. Amazon Employees,' Amazon Jobs, https://www.amazon.jobs/en/landing_pages/pto-overview-us.

130. John Burgett, 'UPT, VCP,' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/upt-vcp>.

131. It is also reported in *Business Insider* that Amazon's warehouse workers are not permitted to take time off during peak season; see Isobel Asher Hamilton and Aine Cain, 'Amazon warehouse employees speak out about the "brutal" reality of working during the holidays, when 60-hour weeks are mandatory and ambulance calls are common,' *Business Insider*, February 19, 2019, <https://www.businessinsider.com/amazon-employees-describe-peak-2019-2?r=US&IR=T>.

132. John Burgett, 'October 2015 Mass Exodus,' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/october-2015-mass-exodus>.

off that these workers are entitled to take is unpaid time off. Moreover, deductions are automatically made from this entitlement as employees accrue attendance credits, as discussed further below.

On 11 March 2020, Amazon announced that all Amazon employees (that is, direct hires) who had been diagnosed with Covid-19 or placed into quarantine would receive up to two weeks of pay 'to ensure employees have the time they need to return to good health without the worry of lost pay.' At the same time, it announced 'unlimited unpaid time off for all hourly employees through the end of April' – that is, for both direct hires and agency employees.¹³³

When Amazon terminated the policy that allowed workers to take unlimited time off, workers in the USA told *The Guardian* that they were worried the removal of the policy would 'result in sick and vulnerable people showing up for shifts because they can't risk termination.' For example,

- a worker at an Amazon fulfilment centre in Rialto, California, said that he 'stopped going to work out of fear, even though he now risks losing his job and gets no paid time off';
- a worker in San Bernardino, California, who is a mother, said that she was 'terrified' that she might transmit the virus to her two children, who have asthma, but that she needed to pay her bills and, if she did not go to work, she would 'lose her home';
- another worker in San Bernardino said that the temporary introduction of unlimited time off 'was never enough' in the first place – that it "'was a bare minimum so people who could afford to could have the chance to stay home without jeopardizing their job'";
- a worker from Riverside county who has been employed by Amazon for over two years said that he faces a stark choice between either not going to work and dying of starvation or going to work and bringing the virus back home with him, to his baby and parents.¹³⁴

In addition to the time off work that is accrued, workers are sometimes offered what is called 'Voluntary Time Off' (VTO). It is unclear how widespread is the practice of offering VTO, or how it varies between directly-employed and agency workers, because published information about it is relatively scarce. Workers are supposed to be able to decide whether or not to accept VTO, which is unpaid, when they are notified of an opportunity automatically. However, it is reported, in an article in *Gizmodo*, that managers coerce workers into accepting such opportunities by:

- telling workers that there is nothing for them to do;
- giving workers a choice between going home (that is, taking the VTO) or meeting impossible productivity targets;

133. Beth Galetti, 'COVID-19 update: More ways Amazon is supporting employees and contractors,' News, Amazon, March 11, 2020, <https://blog.aboutamazon.com/working-at-amazon/covid-19-update-more-ways-amazon-is-supporting-employees-and-contractors>.

134. Sam Levin, 'Revealed: Amazon told workers paid sick leave law doesn't cover warehouses,' *The Guardian*, May 7, 2020, <https://www.theguardian.com/technology/2020/may/07/amazon-warehouse-workers-coronavirus-time-off-california>.

- moving workers to a job for which they have not been trained and expecting them to meet the productivity target for that job that would be expected of an experienced worker;
- ordering workers, during the course of a shift, to accept the opportunity for VTO;
- telling workers, when they arrive for the start of a shift, to go home because there is an insufficient amount of work for them to do.

Workers were described as having disclosed to the publication *Gizmodo* that, unlike in previous years, managers were asking them to take VTO during the peak season. They suspected that this decision was the consequence of Amazon accepting money, in the form of grants and tax breaks, from the state because one of the conditions of receiving such money is usually the provision of a certain number of jobs, which leads to the intentional overstaffing of fulfilment centres. What this means is that some workers are only notionally employed on a full-time basis and in practice have far greater insecurity of hours than would be apparent from their contract.¹³⁵

Insurance

Another benefit to which full-time Amazon employees are entitled to receive, in the USA, is health insurance (medical, dental, vision, and disability insurance). However, according to Brian Johnson, in the USA Amazon employs workers in its delivery and sortation centres on only a part-time basis, to avoid the legal obligation to provide health insurance.¹³⁶ Johnson writes: 'There are options for taking on extra shifts, but if a worker takes on too many extra shifts to the point where they would be legally required to have health insurance, Amazon management will stop them from taking extra shifts and reduce their workload. Thus, the Delivery and Sortation warehouses keep costs low for Amazon by reducing their benefit expenses.'¹³⁷

In its handbook for Amazon workers, Integrity Staffing Solutions tells its employees that, after they have completed eight hours of their assignment, they will be 'eligible' to apply for health insurance (medical, dental, vision, and disability insurance). Few details are provided but, once again, it seems that the insurance packages that they can apply for are less generous than the packages that direct hires can apply for.¹³⁸

Pension

Some Amazon employees in the USA, who are at least 18 years of age, are also eligible to join Amazon's pension plan, also known as the 401(k) Plan, as soon as they are hired. By contrast, it seems that agency employees who work for Amazon are not entitled to join any form of pension plan.¹³⁹

135. Bryan Menegus, 'On Amazon's Time,' *Gizmodo*, June 13, 2018, <https://gizmodo.com/on-amazon-s-time-1826570882>.

136. The relevant legislative context here is the Patient Protection and Affordable Care Act (2010).

137. Brian Johnson, 'Unpacking the Supply Chain: The Struggle Against Amazon in Portland,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 29, https://www.transnational-strike.info/wp-content/uploads/Strike-the-Giant_TSS-Journal.pdf.

138. Integrity Staffing Solutions, *Integrity Jobs @ AMAZON VOL. 1* (Newark, DE: Integrity Staffing Solutions), 5, <https://corp-www.s3.amazonaws.com/files/834380494665329136-amazon-booklet.pdf>.

139. For the full range of benefits that are available to some Amazon employees in the USA, see 'Benefits Overview for U.S. Amazon Employees excluding CT, IL, IN, MD, NC, PA, UT, & WI,' Amazon Jobs, [https://www.amazon.jobs/en/landing_pages/benefitsoverview-us#:~:text=Amazon%20401\(k\)%20Plan,up%20contributions%20are%20not%20matched](https://www.amazon.jobs/en/landing_pages/benefitsoverview-us#:~:text=Amazon%20401(k)%20Plan,up%20contributions%20are%20not%20matched).

3.1.4 Discipline¹⁴⁰

Predicated on the speed and consistency with which it fulfils customer orders, Amazon's

business model requires workers to move as directed and at pace. The available evidence highlights a range of mechanisms by which Amazon workers are disciplined to fulfil these goals, with a focus on speed and attendance. These could therefore be important areas for further research.

Performance

Numerous workers have disclosed that they have been disciplined for not meeting Amazon's expectations with regards to time off task and productivity. In the case of workers taking time off task, if the computer system detects that a worker has been inactive for longer than their allowance of time off task, a manager is alerted and is expected to talk to the worker to get them back on task as quickly as possible.

The monitoring of time off task by the computer system is confirmed by at least two workers:

- Ilya Geller, who worked as a stower at Staten Island, reported that workers were constantly “tracked by a computer” so that “if there is too much time lapsed between items, the computer will know this, will write you up, and you will get fired”;¹⁴¹
- Hibaq Mohamed, a worker at the Shakopee fulfilment centre in Minnesota, said that she was ‘written up on July 10 for spending too much time away from her workstation’.^{142, 143}

The reported allowance of time off task varies between accounts. For example, Emily Guendelsberger, who worked at a warehouse in Indiana in the summer of 2019, writes that her allowance of time off task was 18 minutes per shift, whereas Nelson Lichtenstein, having completed a tour of a fulfilment centre in San Bernardino, in January 2020, writes that the allowance is 15 minutes per shift.¹⁴⁴ This may reflect variation between fulfilment centres or between categories of employees or individual workers.

The nature of the disciplinary action for time off task – that is, whether workers are given a verbal warning, a written warning or are dismissed – appears to depend on how long the worker has been inactive and the number of previous instances of inactivity, as measured by handheld scanners and work stations. For example,

140. Published information about the disciplinary process that applies to fulfilment centre workers is relatively limited and it is unclear, for example, how the process varies between directly-employed and agency workers.

141. Michael Sainato, “I’m not a robot”: Amazon workers condemn unsafe, grueling conditions at warehouse,’ *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>.

142. Annie Palmer, ‘Amazon warehouse worker says she was written up in July for taking too many breaks from work,’ *CNBC*, 17 July 2020, <https://www.cnbc.com/2020/07/17/amazon-worker-claims-company-wrote-her-up-for-tot-policy-in-july.html>.

143. In the USA, a ‘write-up’ is usually a written record of malpractice at work, whether relating to performance, attendance or conduct, which the employer keeps on file. It constitutes a written warning to the employee; see ‘What To Do if Written-Up at Work – Employment Law,’ Jones Brown, <https://jonesbrownlaw.com/2018/06/what-to-do-if-written-up-at-work/>.

144. Emily Guendelsberger, ‘I Worked at an Amazon Fulfillment Center; They Treat Workers Like Robots,’ *Time*, July 18, 2019, <https://time.com/5629233/amazon-warehouse-employee-treatment-robots/>; Nelson Lichtenstein, ‘Making History at Amazon,’ *Dissent*, February 12, 2020, https://www.dissentmagazine.org/online_articles/making-history-at-amazon.

- a former manager of the packing section at a fulfilment centre in California, between September 2016 and August 2017, revealed that,
 - if a worker were off task “for more than 30 minutes”, managers would be expected to issue a “first writeup”
 - if the worker had already been written up for time off task, managers would be expected to issue a “progressive writeup”
 - if the worker were inactive “for more than an hour”, managers would be expected to dismiss the worker immediately;¹⁴⁵
- Maureen Donnelly, who worked as a stower at Staten Island for one month in 2019, said that, if workers receive six warnings for time off task over a period of 12 months, they will be dismissed automatically.¹⁴⁶

Various workers have also reported that the computer system monitors their productivity or ‘rate’ and that they may be given a written warning, or even dismissed, for not working quickly enough:

- Rina Cummings, a sorter at Staten Island, said that she was given a written warning ‘for missing her rate’ when she had to stop a conveyor belt to clear up liquid that had spilled out of an envelope;¹⁴⁷
- Devon Fischer, who worked as a picker for two years in San Marcos, Texas, said that, in the last three months of his employment, as productivity expectations increased, a computer was deciding whether or not to give him a write-up;¹⁴⁸
- Mark Zweifel, who worked in one of Amazon’s Breinigsville warehouses as a receiver for just over a year before he was dismissed, said that, during team meetings at the start of the shift, managers would threaten to dismiss workers for not meeting productivity expectations;¹⁴⁹
- Stephen Dallal, who worked in one of Amazon’s Breinigsville warehouses for six months and was employed by Integrity Staffing Solutions, said that he was fired ‘for not meeting productivity requirements’;¹⁵⁰
- William Stolz reported that, if workers are written up four times ‘within ninety days for falling below the expected productivity rule’, they will be dismissed.¹⁵¹

145. Chavie Lieber, ‘The human costs of Black Friday, explained by a former Amazon warehouse manager,’ *Vox*, November 20, 2018, <https://www.vox.com/the-goods/2018/11/20/18103516/black-friday-cyber-monday-amazon-fulfillment-center>.

146. Maureen Donnelly, ‘Amazon warehouses are “cult-like” sweatshops run by robots: ex-employee,’ *The New York Post*, November 30, 2019, <https://nypost.com/2019/11/30/amazon-warehouses-are-cult-like-sweatshops-run-by-robots-ex-employee/>.

147. Michael Sainato, “I’m not a robot”: Amazon workers condemn unsafe, grueling conditions at warehouse,’ *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>.

148. Michael Sainato, ‘Revealed: Amazon touts high wages while ignoring issues in its warehouses,’ *The Guardian*, August 6, 2019, <https://www.theguardian.com/technology/2019/aug/06/amazon-workers-minimum-wage-injuries-working-conditions>.

149. Zweifel said that, when he was moved to the stowing section, he was unable to make his rate because there was a lack of storage space and he ‘was written up for not stowing items quickly enough’. See Spencer Soper, ‘Inside Amazon’s Warehouse,’ *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

150. Ibid.

It is unclear how exactly the disciplinary process is changing, but there are indications that, at least for productivity violations, it may be becoming harsher. For example, William Stolz reports that, at the Shakopee fulfilment centre in Minnesota, Amazon has been 'experimenting [with] a new system that looks at us on a curve, depending on our productivity rate, without telling us what our actual rate is. The bottom 5% performers will have to speed up their work if they are below rate.' But, whereas in the old system, managers could decide whether or not to give a worker a 'verbal warning' before proceeding to a written warning and, after an accumulation of written warnings, dismissal, '[i]n the new system, managers will have no discretion; if you're below rate and if you've been working below rate for at least 160 hours, there is an automatic written warning. There is currently a trial period, but it is likely that's the system they're going to adopt.'¹⁵² If Amazon were to implement this disciplinary system as standard practice, this would represent a further shift away from human decision making. It is important to bear in mind that, in such a system, some workers will always be at the bottom of the performance ranking, and that the pressure to avoid being in this position will be felt across the workforce. Gathering further evidence to test these claims about the targeting of the bottom 5% or 10% and, if confirmed, to explore the impact across the workforce, is therefore an important area for further research.

It also appears that workers can be disciplined, not only for taking too much time off task and for not meeting productivity expectations but also for not meeting quality expectations. For example, undercover journalist Mary O'Connor discovered that workers could be the subject of disciplinary action, and ultimately dismissed, if they made more than one task error per week;¹⁵³ *The Verge* revealed that Amazon's software generates warnings and terminations, automatically, for 'quality' violations;¹⁵⁴ and a supervisor at the Amazon warehouse in Sumner, Washington, disclosed that Amazon tracks the number of mistakes that workers make 'and penalizes workers for errors such as not properly scanning merchandise, even if the scanner itself caused the problem.'¹⁵⁵ The interaction of human managers and computerised systems within this disciplinary process should be taken into account for future research.

Attendance

The evidence reviewed suggests that, for absences from work, Amazon disciplines workers by issuing them with a number of points (which are also called 'Credits,' by Integrity Staffing Solutions, or strikes, by some workers). Workers have revealed that they have accrued such points for a variety of reasons. Integrity employees are told that they 'can accrue a maximum of 6 Credits per assignment' and that their contract may be terminated, if they accrue more than this number. Possible attendance violations and associated penalties, as set out in Integrity Staffing Solutions' handbook for Amazon workers, are shown in Table 4 below.

153. Mary O'Connor, 'Sick Amazon "elves" face sack,' *The Times*, December 11, 2016, <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>.

154. However, it is possible for supervisors to override the computer system; see Colin Lecher, 'How Amazon automatically tracks and fires warehouse workers for "productivity",' *The Verge*, April, 25, 2019, <https://www.theverge.com/2019/4/25/18516004/amazon-warehouse-fulfillment-centers-productivity-firing-terminations>.

155. Hal Bernton and Susan Kelleher, 'Amazon warehouse jobs push workers to physical limit,' *The Seattle Times*, April 3, 2012, <https://www.seattletimes.com/business/amazon-warehouse-jobs-push-workers-to-physical-limit/>.

Attendance	
Violation	Penalty
Being late for the start of a shift or late back from lunch, by less than one hour.	0.5 credit accrued
Being late for the start of a shift or late back from lunch, by one hour or more.	1.0 credit accrued
Leaving a shift early, by less than one hour.	0.5 credit accrued
Leaving a shift early, by more than one hour.	1.0 credit accrued
Missing a whole shift.	1.5 credit accrued
Being absent for two consecutive days without giving notice.	Assumed to have resigned; contract terminated.

Table 4: Attendance Violations and Penalties¹⁵⁶

However, Integrity employees are reportedly told that '[e]very 90 days, every Credit you've accrued will be removed from your account.'¹⁵⁷ They are also told that, for each assignment, they will be given

- five 'Late Passes' on their first day, which are automatically applied when they 'arrive late to work less than one hour, take a long lunch (less than one hour), and leave work early (less than one hour)';
- one 'Medical Waiver' to excuse absence from work for up to six calendar days for medical reasons.¹⁵⁸

Similar arrangements have been described for Amazon's European operations, from a number of different sources.¹⁵⁹ For example,

- three workers at the Rugeley fulfilment centre in the UK, who responded to the second wave of the Organise survey of Amazon workers, reported that they had received disciplinary points for being absent through illness, including
 - a worker who was pregnant
 - a worker who 'couldn't eat and sleep properly' and who felt 'dizzy and weakened all the time'
 - a worker who 'had a gastric bug';¹⁶⁰
- two workers at the Peterborough fulfilment centre, who responded to the same survey, said that they had been given disciplinary points for being one or two minutes late back from their break;¹⁶¹
- an Amazon worker in Germany disclosed to *Business Insider* that workers who are caught talking to co-workers too often will be given a disciplinary point, that accruing five such points leads to a meeting with a supervisor and a written report,

156. Integrity Staffing Solutions, *Integrity Jobs @ AMAZON VOL. 1* (Newark, DE: Integrity Staffing Solutions), 4, <https://corp-www.s3.amazonaws.com/files/834380494665329136-amazon-booklet.pdf>.

157. Ibid.

158. Ibid.

159. 'The Truth Behind the Click,' Panorama, *BBC*, November 25, 2013, <https://www.bbc.co.uk/programmes/b03k5kzp>; Mary O'Connor, 'Sick Amazon "elves" face sack,' *The Times*, December 11, 2016, <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>; James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 42.

160. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 7-8, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

- and that receiving three written reports is grounds for dismissal.¹⁶²

However, there are conflicting reports about the exact number of points that workers accrue before they are dismissed;¹⁶³ and there are also conflicting reports about the situations in which disciplinary points are applied.¹⁶⁴ Further research would be beneficial here to explore how such disciplinary mechanisms are applied across the workforce, taking into account reasons for absence or lateness related to caring responsibilities, which may have implications for gender equality.

Conduct

It appears that, for instances of misconduct, workers can be warned, suspended or dismissed. For example,

- Samir Quasir reported that he was given a ‘final written warning’ for violating the social distancing rule in the Chicago delivery station during the coronavirus pandemic (an action that he claims is retaliation by managers, for his participation in work stoppages over lack of protection from the coronavirus);¹⁶⁵
- another worker at the Chicago delivery station disclosed that she was given a written warning for entering the warehouse ‘without a badge when she and other protestors were delivering a petition to Amazon management during one of the walkouts’;¹⁶⁶
- John Hopkins, who works at Amazon’s San Leandro fulfilment centre in California, says that he was suspended in May 2020 for violating a policy about being present on site after the end of his shift (an action that he claims is retaliation, by managers, for his distributing pamphlets about union organising in the break room);¹⁶⁷
- Courtney Bowden, a worker at Amazon’s warehouse in King of Prussia, Pennsylvania, was also suspended and then dismissed, in March 2020, for engaging in a dispute with a colleague (an action that she says is retaliation for her attempts to organise

162. Shona Ghosh, ‘Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories,’ *Business Insider*, May 5, 2018, <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=US&IR=T>.

163. According to Carole Cadwalladr, Sarah O’Connor, and Angry Workers of the World, workers are dismissed when they accrue three disciplinary points; according to James Bloodworth and Integrity Staffing Solutions, that number is six. See Carole Cadwalladr, ‘My week as an Amazon insider,’ *The Observer*, December 1, 2013, <https://www.theguardian.com/technology/2013/dec/01/week-amazon-insider-feature-treatment-employees-work>; Sarah O’Connor, ‘Amazon unpacked,’ *The Financial Times*, February 8, 2013; <https://www.ft.com/content/ed6a985c-70bd-11e2-85d0-00144feab49a>; Angry Workers of the World, ‘Welcome to the Jungle – Working and Struggling in Amazon Warehouses,’ International, December 20, 2015, <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>; James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 39; Integrity Staffing Solutions, *Integrity Jobs @ AMAZON VOL. 1* (Newark, DE: Integrity Staffing Solutions), 4, <https://corp-www.s3.amazonaws.com/files/834380494665329136-amazon-booklet.pdf>. Possible reasons for this discrepancy are that some of the reports are inaccurate, that Amazon changed its disciplinary policy between 2013 and 2016, or that Amazon’s disciplinary policy varies slightly across countries.

164. For example, both Spencer Soper and James Bloodworth write that workers can be issued with disciplinary points for not meeting productivity expectations, as well as for being absent. See Spencer Soper, ‘Inside Amazon’s Warehouse,’ *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>, and James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 39. Again, possible reasons for this discrepancy are inaccurate reporting, a change of disciplinary policy, and cross-country variation in disciplinary policy.

165. Caroline O’Donovan, ‘The NLRB Is Looking Into Claims That Amazon Violated Employees’ Rights During The Coronavirus Pandemic,’ *BuzzFeed News*, April 14, 2020, <https://www.buzzfeednews.com/article/carolineodonovan/federal-labor-regulators-are-looking-into-claims-that>.

166. *Ibid.*

167. Michael Sainato, ‘Amazon is cracking down on protesters and organizing, workers say,’ *The Guardian*, May 5, 2020, <https://www.theguardian.com/technology/2020/may/05/amazon-protests-union-organizing-cracking-down-workers>.

- workers);¹⁶⁸
- Bashir Mohamed was dismissed from the Shakopee fulfilment centre in Minnesota, in April 2020, for ‘inappropriate language, behaviour, and violating social distancing guidelines’ (an action that Mohamed claims is retaliation for his worker organising).¹⁶⁹

3.2 Character of Employment

As part of this evidence review, we present here a provisional summation of some of the characteristics of employment within fulfilment centres. This is a necessary step from simple description into a conceptualisation of patterns in the experience of work, in order to help direct further empirical research. These characteristics need to be understood within the general, implicitly assumed conditions of employment, which are discussed in Section 1.5.4, and discussed with particular attention to Amazon on the basis of the publicly available evidence reviewed for this report, in particular that evidence presented in Section 3.1 and below.

3.2.1 Insecurity

Evidence relating to fulfilment centre workers’ conditions of employment suggests that fulfilment centre workers lack job security.¹⁷⁰ This calls for further investigation, including the relationship between contractual job security, pressure to meet targets and disciplinary processes, and also the relationship to wider social conditions such as state welfare which might impact on workers’ decisions about which job to accept and which to refuse.

It might be assumed that workers on a permanent contract of employment have more job security than those on a temporary contract. However, evidence leads us to question whether both temporary and permanent workers in Amazon’s fulfilment centres are being expected to accept standards of performance, attendance, and conduct that are too demanding for the average worker to maintain over the long term (as discussed further in Section 4, below). The evidence suggests that even if workers are able to meet targets at the start of their employment, it may be that over time they become exhausted and/or injured and/or demoralized to such an extent that they are unable to continue to meet managers’ expectations and, in response, either quit their jobs or are dismissed. In short, the conditions of employment of fulfilment centre workers might be understood as implying that workers are treated as ‘disposable’.

Relatively high turnover of Amazon’s fulfilment centre workers suggests that Amazon (and its agencies) does treat its employees as disposable. For example, the National Employment

168. Ibid.

169. Jason Del Rey, ‘Amazon fired 3 employee activists who criticized its warehouse safety measures,’ *Vox*, April 14, 2020, <https://www.vox.com/recode/2020/4/14/21220899/amazon-fired-activist-employees-warehouse-conditions-emily-cunningham-bashir-mohamed-maren-costa>; Sebastian Herrera, ‘Fired Amazon Warehouse Workers Accuse Company of Retaliation, Which It Denies,’ *The Wall Street Journal*, April 14, 2020, <https://www.wsj.com/articles/fired-amazon-warehouse-workers-accuse-company-of-retaliation-which-it-denies-11586891334?mod=flipboard>.

170. The level of protection that is available to fulfilment centre workers will of course vary according to differences in national employment law, together with other factors such as the degree of unionisation.

Law Project (NELP) in the US examined ‘publicly available Census Bureau data for five California counties where Amazon fulfilment centers have had a significant presence in the warehouse sector between 2012 and 2017’.¹⁷¹ NELP researchers found that, for 2017, ‘the average annual turnover for warehouse workers in counties where Amazon has fulfilment centers exceeded 100%’. They also found that ‘[t]urnover for warehouse workers in these counties ... is ... much higher than the California and national averages for warehouse workers, which were 3% and 68.8%, respectively, in 2017’ and that the turnover of warehouse workers in these counties ‘is ... much higher than overall turnover for California workers in all industries, which was 69.8% in 2017’.¹⁷²

Moreover, NELP researchers found that, in each county of California, turnover increased significantly in the year after Amazon opened a fulfilment centre. For example,

- in San Bernardino, turnover in the warehouse sector doubled from 48.2% to 98.6% between 2012 and 2017;
- in Riverside, turnover increased from 68.4% to 107% between 2014 and 2017;
- in Stanislaus, turnover increased from 38.3% in 2013 to 89.3% in 2017;
- in San Joaquin, turnover increased from 40.3% in 2013 to 104.4% in 2017;
- in Sacramento, turnover jumped from 35.2% in 2016 to 92.8% in 2017.¹⁷³

NELP researchers observed that ‘turnover ... for all industries in California has remained steady during this period, hovering between 60% and slightly above 70% between 2012 and 2017’.¹⁷⁴

NELP researchers also examined turnover of warehouse workers in other states where ‘very few or no other warehouses existed before Amazon built its facilities’. They found that ‘[i]n Guadalupe County, Texas, where Amazon’s is the only warehouse, turnover was 186.4% in 2017’ and ‘[i]n Scott County, Minnesota, where warehouses ... employed about 100 people in 2015 when Amazon arrived, turnover in 2017 was 193.2%’, with employment of warehouse workers increasing ‘to almost 5,000’ – the consequence, they argued, of ‘employment at Amazon facilities’.¹⁷⁵ This is further corroborated by an eight-month investigation by *The New York Times*, published in 2021, which showed the turnover among its US workforce is around 150% per year, almost double the average for the retail and logistics industries.¹⁷⁶

An insecure workforce may offer some benefits for Amazon’s business model – at least for its fulfilment centre operations – because, with disposability, Amazon can easily

171. Irene Tung and Deborah Berkowitz, *Amazon’s Disposable Workers: High Injury and Turnover Rates at Fulfillment Centers in California*, Data Brief, March 2020 (New York, NY: National Employment Law Project, 2020), 2, <https://s27147.pcdn.co/wp-content/uploads/Data-Brief-Amazon-Disposable-Workers-Injury-Turnover-Rates-California-Fulfillment-Centers3-20.pdf>.

172. *Ibid.*, 2.

173. *Ibid.*, 3.

174. *Ibid.*, 3.

175. *Ibid.*, 4.

176. Jodi Kantor, Karen Weise and Grace Ashford, ‘The Amazon that customers don’t see’, *The New York Times*, 15 June 2021, <https://www.nytimes.com/interactive/2021/06/15/us/amazon-workers.html>.

- hire and fire workers, in response to seasonal variations in customer demand (such as the surges in demand during the weeks of Prime Day, Black Friday, and Cyber Monday);
- replace tired workers with fresh workers and thereby maintain a level of intensity in the extraction of surplus labour beyond what the human body can sustain;
- dismiss workers to contain worker organisation and thereby restrict the level of worker resistance, to ensure compliance with managers' demands.

There is also some evidence that Amazon encourages direct hires to quit through financial inducement. There are reports that in some past years, just after the end of peak season, Amazon has offered to pay workers who have served the company for at least one year to leave, on condition that they do not accept an offer of employment at the company ever again. According to John Burgett, this payment 'is \$2000 for one to two years of service (marked by number of peaks worked), \$3000 for three, \$4000 for four, \$5000 for five or more.' Considering the rate of tax that must be paid on such payments, Burgett tells us that the 'net payout' for workers who have served for one or two years 'would amount to about two weeks' pay.'¹⁷⁷

Such insecurity presents challenges both for worker voice and representation and for research. Where workers are frequently moving in and out of jobs, community-based models for organisation and research participation may be required.

3.2.2 Division

The available evidence indicates divisions among Amazon's workforce that require further investigation. Employing some workers on a temporary basis and others on a permanent basis could be seen as one factor contributing to division; and this division may in fact be beneficial to Amazon's e-commerce operations because it can be used to motivate, and thus extract the maximum amount of surplus labour from, workers, whether they are on fixed-term or open-ended contracts (as discussed in Section 4, below).¹⁷⁸ However, it is important to also consider divisions on the basis of differences in individual performance. Those workers whose rate of production falls below what is expected may face disciplinary action; but those workers whose rate is above expectations must sustain this level of performance to stay ahead of other workers and avoid the threat of dismissal for underperformance.¹⁷⁹ In

177. John Burgett, "'The Offer'," *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/the-offer>.

178. According to the Institute for Local Self Reliance (ILSR), this division is signified by workers wearing badges of two different colours: 'The Amazon hires wear blue badges; the temps wear white.' Moreover, when the ILSR reviewed 'about 50 job postings for temporary work at Amazon warehouses', they found that temporary workers were paid 'about \$0.50 to \$1.00 less per hour' than permanent workers. In addition, they point out that Amazon is not obliged to give agency employees the benefits that it gives to direct hires; they write that '[a] primary reason that Amazon and other companies have so completely incorporated temp work into their businesses is that the model allows them to thoroughly distance themselves from the workers, absolving them of responsibility and liability.' See Olivia LaVecchia and Stacy Mitchell, *Amazon's Stranglehold: How the Company's Tightening Grip Is Stifling Competition, Eroding Jobs, and Threatening Communities* (Washington: Institute for Local Self Reliance, 2016), 42-44.

179. The expected rate of production is reported to be 'the minimum pace for individuals based on the average output of 90% of the most productive workers'; see Ralf Ruckus, 'Confronting Amazon,' *Jacobin*, March 31, 2016, <https://www.jacobinmag.com/2016/03/amazon-poland-poznan-strikes-workers>. The way in which Amazon calculates the expected rate of production for individual workers may have changed since Ruckus wrote his article because William Stolz, a worker at the Shakopee fulfilment centre, tells us that Amazon has been 'experimenting [with] a new system' of performance measurement, in which the slowest 5% of workers are targeted by management. See Transnational Social Strike Platform, 'Migrants and Locals Together in the Strike: Interview with William Stolz,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 54, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

this way, workers are effectively asked to compete against each other to maintain employment, as a mechanism to drive productivity and thus meet delivery deadlines.^{180,}

181

3.2.3 Exploitation

Where workers' conditions of employment include insecurity and division, this may leave them vulnerable to exploitation. This can be assessed using the sociological concept of 'surplus value',¹⁸² representing the value generated by workers beyond what is required to pay wages and other production costs, which can be understood as forming the basis of profits. Understood in this way, the greater the quantity of surplus labour that Amazon can extract from its fulfilment centre workers, the greater the quantity of surplus value that it can realise as profit through the sale of merchandise; and the greater the quantity of profit that it can make, the more able it will be to invest in new services and stay ahead of its competitors.

If Amazon can increase the degree of exploitation of fulfilment centre workers by reducing their wages, the fact that it has recently increased the minimum wage that it pays to them (as discussed above) might suggest that the degree of exploitation has fallen. However, an alternative explanation is that, with the frequent imposition of overtime and ever increasing performance expectations, the quantity of surplus value that fulfilment centre workers are producing, and therefore the amount of effort that they are required to make, has increased, with the result that the cost of maintaining the average fulfilment centre worker has increased. Now, if the increase in the quantity of surplus value that each worker produces is greater than the increase in the value of their labour power, the rate of profit, which is the measure of the degree of exploitation, will increase.

The fact that Amazon's profits have continued to grow since it implemented the increase in its minimum wage, suggests that the increase in the quantity of surplus value that its workers have been generating has been greater than the increase in the value of their labour power.¹⁸³

Further evidence that Amazon is paying wages that are equal to or below the cost of the reproduction of labour power comes from an analysis of data relating to the Supplemental Nutrition Assistance Program (SNAP) in the United States. In January 2018, the New Food Economy and *The Intercept* requested information about employers 'with the largest number of workers enrolled in SNAP' from 30 states in which Amazon fulfilment centres are located. The researchers found that, in five out of six states for which they obtained information,

180. According to Colin Lecher, Amazon increases the expected rate of production 'when more than 5% of workers at a facility are meeting goals.' See Colin Lecher, 'How Amazon automatically tracks and fires warehouse workers for "productivity"', *The Verge*, April 25, 2019, <https://www.theverge.com/2019/4/25/18516004/amazon-warehouse-fulfillment-centers-productivity-firing-terminations>.

181. John Burgett also alludes to this inter-worker struggle, when discussing the process of packing: 'For packers, large orders (a bin with a fifteen item order, for instance, vs. a bin with a two item order) can help bring up the packer's hourly rate. For this reason, packers, working side by side on a wall, would often try to select the larger orders to pack. This trend pitted packer against packer as a matter of self-preservation.' See John Burgett, 'AFE (Amazon Fulfillment Engine),' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/afe-amazon-fulfillment-engine>.

182. Tom Vickers, *Borders, Migration and Class in an Age of Crisis*, 2019, Bristol University Press.

183. The growth in profits was not as large as Amazon's shareholders had expected because the cost of investing in one-day delivery was higher than Amazon's managers had expected; see Karen Weise, 'Amazon Earnings: Impatient Shoppers Help Lift Sales 20%', *The New York Times*, July 25, 2019, <https://www.nytimes.com/2019/07/25/technology/amazon-earnings-just-how-impatient-are-shoppers.html>.

Amazon was in ‘the top 20 list of companies’ having the most workers in SNAP.¹⁸⁴

The researchers noted that the data they obtained did not include data on temporary workers at Amazon who are employed through agencies. However, they suspect that Amazon’s temporary workers are ‘likely’ to be reliant on SNAP ‘at even higher rates’ than the direct hires, given that employment agencies were ‘among the top 50 SNAP employers’ in each of the states that they analysed.¹⁸⁵ Moreover, when the researchers analysed statistics from the Bureau of Labor Statistics, they found that the ‘average hourly wage for non-managerial employees who work in warehousing and storage was \$17.53 as of January 2018’, a rate of pay that was higher than the equivalent rate of pay for Amazon workers in the states they had examined for dependence on SNAP.¹⁸⁶

The Institute for Local Self-Reliance, which also analysed the pay of Amazon’s warehouse workers in the United States, present similar findings. Analysing more than 1,300 wage postings on Glassdoor.com, which describes itself as ‘the worldwide leader on insights about jobs and companies’, the researchers concluded that ‘Amazon’s fulfilment center positions pay an hourly mean wage of \$12.32, which is 9% less than the industry average for comparable work, according to Bureau of Labor Statistics (BLS) data.’¹⁸⁷ Moreover, when the researchers compared average Amazon warehouse pay with the average pay for warehouse workers in ‘eleven metro areas where Amazon has a significant presence’, they found that

- in Dallas-Fort Worth, Amazon’s average hourly wage was lower, by 11%;
- in Seattle-Tacoma, it was lower, by 18%;
- in Phoenix, it was lower, by 6%;
- in Kenosha, it was lower by 22%;
- across all eleven areas, ‘Amazon wages were an average of 15% below the wages for comparable positions’.¹⁸⁸

Finally, an analysis of the pay of warehouse workers in 35 counties of the USA, by *The Economist*, shows that

- ‘warehouse workers in counties where Amazon operates a fulfilment centre earn about \$41,000 per year, compared with \$45,000 per year in the rest of the country, a difference of nearly 10%’;
- ‘in the ten quarters before the opening of a new Amazon centre, local warehouse wages

184. The researchers found, in addition, that in Arizona, one in three Amazon workers is dependent on SNAP, while in Pennsylvania and Ohio, one in ten Amazon workers is dependent on it; see H. Claire Brown, ‘Employees rely on food stamps, new data shows,’ *The Intercept*, April 19, 2018, <https://theintercept.com/2018/04/19/amazon-snap-subsidies-warehousing-wages/>.

185. They found, in particular, that Integrity Staffing Solutions was the ‘37th largest employer of SNAP recipients in Arizona.’ H. Claire Brown, ‘Employees rely on food stamps, new data shows,’ *The Intercept*, April 19, 2018, <https://theintercept.com/2018/04/19/amazon-snap-subsidies-warehousing-wages/>.

186. *Ibid.*

187. Olivia LaVecchia and Stacy Mitchell, *Amazon’s Stranglehold: How the Company’s Tightening Grip Is Stifling Competition, Eroding Jobs, and Threatening Communities* (Washington: Institute for Local Self Reliance, 2016), 38.

188. *Ibid.*, 38-9.

- increase by an average of 8%', whereas '[i]n the ten quarters after its arrival, they fall by 3%';
- after Amazon opened a warehouse in Lexington County, South Carolina, 'annual earnings for warehouse workers in the area ... [fell] from \$47,000 to \$32,000, a decline of over 30%';
- after Amazon opened a warehouse in Chesterfield, Virginia, the wages of warehouse workers in the region decreased 'by 17%';
- after Amazon opened a warehouse in Tracy, California, wages of warehouse workers in the region decreased 'by 16%'.¹⁸⁹

3.3 Conclusion

Our examination of the nature of the employment of production workers in Amazon's fulfilment centres suggests that the employment of these workers is best described as precarious; that is, given the general conditions of their employment, which is that they must accept their employer's organisation of the process of work, fulfilment centre workers are insecure, divided and exploited. The importance of this for the ethics and sustainability of the business model developed by Amazon is an important issue for further research, in order to chart a course for meeting customer needs in a way that also benefits all workers involved in the process.

189. The analysis was based on data obtained from the Bureau of Labor Statistics; see 'Unfulfilled: Is the world's largest online retailer underpaying its employees?' *The Economist*, January 20, 2018, <https://www.economist.com/united-states/2018/01/20/what-amazon-does-to-wages>.

Working Conditions in Fulfilment Centres

There is a remarkable degree of consistency in the accounts that fulfilment centre workers have given about the demands placed on them by the fulfilment process and its impact on their physical and mental health; and these issues have consequently attracted the attention of investigative journalists, trade unionists, and social campaigners. This provides a strong case for further research concerning the level of physical and mental demands placed on workers, and the extent to which they enable workers' to meet their essential needs, and the physical and mental harms arising from this work. As discussed below, there is considerable evidence that the level of demands is so high, and their range so wide, that they create serious risks of physical and mental harm.¹⁹⁰ This section elaborates on the key areas of concern, and presents a conceptual framework for exploring physical and mental demands and their consequences.

4.1 Physical Demands

The process of work is physically demanding, in general, to the extent that it depends on the movement of the human body.¹⁹¹ However, the process of fulfilment imposes particular demands, physically, because it depends on the relations between production workers and the particular tools and raw materials that they use to fulfil customer orders. Different characteristics of the fulfilment process impose various types of physical demand on Amazon workers. These characteristics include the ways in which workers are required to move, which can be conceptualised as the frequency, duration, and extension of their movement, and the ambient temperature and humidity under which this movement is performed, which is highlighted below as an important factor in how work activity affects the human body.

4.1.1 Frequency

The frequency of the work process is the number of repeated occurrences of a work activity in a unit of time, which is a standard way to measure the productivity of workers. For example, the productivity of a stower is measured as the number of units successfully stowed within an hour, the productivity of a picker as the number of units successfully picked within an hour, the productivity of a packer as the number of units successfully packed within an hour, and so on.¹⁹²

In published reports of working conditions in Amazon's fulfilment centres, the frequency of the work process is typically referred to either as the rate of production or

190. Commenting on the relationship between the physical demands of the work process inside Amazon's fulfilment centres and the risk of suffering physical harm, the New York Committee for Occupational Safety and Health writes, in its report on Amazon, that

safety and health can be seriously affected by pressure to perform strenuous activities faster. Muscles, joints, and bones can be severely impacted by physical demand and postural stress from performing tasks in an Amazon distribution center. These tasks include repetitive back bending while lifting objects, or the twisting and pulling or pushing of objects. Some of the tasks frequently required of warehouse workers ... repeatedly use stressful and awkward postures while manually handling a physical load. Research has shown that workers who perform these handling tasks are more likely to suffer from musculoskeletal disorders (MSDs) than workers who have less exposure to handling tasks.

See Marina Jabsky and Charlene Obernauer, *Time Off Task: Pressure, Pain, and Productivity at Amazon* (New York: New York Committee for Occupational Safety & Health, 2019), 4-5.

191. The concept of physical demand is defined in Appendix 2.

192. For stowers, pickers, and packers, a unit of production is a single item of merchandise.

as the productivity target. These reports are summarised in Table 5.

Role	Site	Rate	Year	Source
Receiver	Tilbury, UK	250/hour	2018	Aaron Callaway, <i>The Guardian</i>
Stower	Swansea, UK	90/hour	2013	BBC <i>Panorama</i>
Stower	Unknown, UK	280/hour	2018	GMB trade union
Stower	Staten Island, USA	720/hour	2019	Maureen Donnelly, <i>The New York Post</i>
Stower	Eastvale, USA	300/hour	2019	<i>Reveal</i>
Picker	Breinigsville, USA	120/hour	2011	<i>The Morning Call</i>
Picker	Swansea, UK	110/hour	2013	BBC <i>Panorama</i>
Picker	Tilbury, UK	300/hour	2017	Alan Selby, <i>The Mirror</i>
Picker	Shakopee, USA	332/hour	2019	William Stolz, <i>Transnational Organization against</i>
Picker	Staten Island, USA	400/hour	2019	<i>The Guardian</i>
Picker	Staten Island, USA	400/hour	2020	Juan Espinoza, <i>The Guardian</i>
Picker	UK	360/hour	2020	Anna, <i>The Guardian</i>
Packer	California, USA	240/hour	2013	<i>International Business Times</i>
Packer	Tilbury, UK	120/hour (single items), 85/hour (multiple items)	2017	Alan Selby, <i>The Mirror</i>
Packer	Rugeley, UK	120/hour	2018	Organise survey
Packer	Staten Island, USA	700/hour	2020	Raymond Velez, <i>The Guardian</i>

Table 5: Reported Productivity Targets¹⁹³

193. Donna Ferguson, 'The Amazon worker: paid £18,000 a year to shift 250 items an hour,' *The Guardian*, January 20, 2018, <https://www.theguardian.com/money/2018/jan/20/amazon-worker-warehouse>; Michael Sainato, "'We are not robots": Amazon warehouse employees push to unionize,' *The Guardian*, January 1, 2019, <https://www.theguardian.com/technology/2019/jan/01/amazon-fulfillment-center-warehouse-employees-union-new-york-minnesota>; Michael Sainato, "'I'm not a robot": Amazon workers condemn unsafe, grueling conditions at warehouse,' *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>; Transnational Social Strike Platform, 'Migrants and Locals Together in the Strike: Interview with William Stolz,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 54, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf; GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 9, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf; Alan Selby, 'Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,' *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>; Organise, *Amazon: What's it like where you work?* (Organise, 2018), 12, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>; Maureen Donnelly, 'Amazon warehouses are "cult-like" sweatshops run by robots: ex-employee,' *The New York Post*, November 30, 2019, <https://nypost.com/2019/11/30/amazon-warehouses-are-cult-like-sweatshops-run-by-robots-ex-employee/>; Will Evans, 'Behind the Smiles: Amazon's internal injury records expose the true toll of its relentless drive for speed,' *Reveal*, November 25, 2019, <https://www.revealnews.org/article/behind-the-smiles/>; Angelo Young, 'Amazon.com's Workers Are Low-Paid, Overworked And Unhappy; Is This The New Employee Model For The Internet Age?' *International Business Times*, December 19, 2013, <https://www.ibtimes.com/amazoncoms-workers-are-low-paid-overworked-unhappy-new-employee-model-internet-age-1514780>; BBC, 'The Truth Behind the Click,' *Panorama*, November 25, 2013, <https://www.bbc.co.uk/programmes/b03k5kzp>; John Harris, 'How Amazon became a pandemic giant – and why that could be a threat to us all,' *The Guardian*, November 18, 2020, <https://www.theguardian.com/technology/2020/nov/18/how-amazon-became-a-pandemic-giant-and-why-that-could-be-a-threat-to-us-all>; Spencer Soper, 'Inside Amazon's Warehouse,' *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

The reports cited in Table 5 indicate that, over time, targets are increased. Other accounts confirm this. For example,

- in the first wave of the UK-based survey conducted by Organise, two workers at Amazon's Rugeley fulfilment centre reported a doubling of their performance targets, while a third worker at the same fulfilment centre reported having their productivity target changed from 80 units per hour, which applied when they started in post, to 120 units per hour;¹⁹⁴
- in the second wave of the UK-based survey conducted by Organise, 73% of workers at Amazon's Rugeley fulfilment centre said that they had experienced an increase in their productivity targets;¹⁹⁵
- Hibaq Mohamed told *The Verge*, for its report on the strike action at the Shakopee fulfilment centre in July 2019, that her rate as a stower began at 120 units per hour but had risen to 280 units per hour;¹⁹⁶
- one worker who responded to a GMB trade union investigation wrote that 'Amazon is increasing the [productivity] target all the time', while another wrote that 'they always increase our target (units per hour)';¹⁹⁷
- in an investigation by *The Morning Call* into working conditions in one of Amazon's Breinigsville fulfilment centres in 2011, it was reported that Mark Zweifel, a receiver, experienced a doubling of his productivity target for smaller items, six months into his job, from 250 units per hour to 500 units per hour, while Stephen Dallal, a picker, experienced repeated increases in his productivity target – from 75 units to 100 units to 125 units per hour.¹⁹⁸

It appears from the evidence that productivity targets can be changed without debate and without warning. For example,

- Hibaq Mohamed told The Open Markets Institute that the rate of productivity that workers in fulfilment centres are expected to meet is changed 'behind the scenes';¹⁹⁹
- in an article in *The Atlantic* in 2018, a stower in Moreno Valley is reported as claiming that 'without warning, Amazon changed the amount of time workers had to stow an item from six minutes to four minutes and 12 seconds'.²⁰⁰

There are also strong indications from the evidence that a change in the frequency of the work process has been associated with the introduction of robotic stowing and picking.

194. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 12, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

195. *Ibid.*, 6.

196. Josh Dzieza, "'Beat the Machine": Amazon Warehouse Workers Strike to Protest Inhumane Conditions,' *The Verge*, July 16, 2019, <https://www.theverge.com/2019/7/16/20696154/amazon-prime-day-2019-strike-warehouse-workers-inhumane-conditions-the-rate-productivity>.

197. GMB, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 8, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

198. Spencer Soper, 'Inside Amazon's Warehouse,' *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

199. Mohamed said: "'We don't know what the rate is – they change it behind the scenes. You'll know when you get a warning. They don't tell you what rate you have to hit at the beginning.'" See Daniel A. Hanley and Sally Hubbard, *Eyes Everywhere: Amazon's Surveillance Infrastructure and Revitalizing Worker Power* (Open Markets Institute, September 2020), 10.

200. Alana Semuels, 'What Amazon Does to Poor Cities,' *The Atlantic*, February 1, 2018, <https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

For example, a former senior operations manager at Amazon told *Reveal* that, when robots were introduced, 'the productivity expectations for workers more than doubled' so that, whereas a worker would be expected to pick at 'about 100 items an hour' without the use of robotics, a worker would be expected to pick at 'rates of up to 400 an hour at robotic fulfilment centers.'²⁰⁰

4.1.2 Duration

The length of the working day, for Amazon employees (whether permanent or temporary) in the line of production outside peak season, is usually reported as being ten hours; the length of a shift is usually reported as being ten-and-a-half hours with a half-hour unpaid lunch break and two 15-minute paid breaks;²⁰² and the number of shifts that are worked each week is usually reported as being four.^{203, 204} Shorter night-time shifts have been reported, including an eight-hour overnight shift that ends at 4.45am and four- and five-hour morning shifts; however, the DCH1 Amazonians United organisation and an Amazon official spokesperson were cited in early 2021 describing the replacement of these shorter shifts by a new 'megacycle' of shifts involving 10-hour shifts starting around 1am, to enable customers to place orders right up to midnight and then have them immediately packed. Workers reported that they had been told to either accept these new shifts or lose their job, with no allowances made for caring responsibilities or other aspects of workers' lives outside work.^{205 206}

It also appears from the published evidence that workers are either offered, or required to work, overtime at points in the year when customer demand is relatively high (for example, from October to December).²⁰⁷ For example, most reports indicate that, in the USA, the working week during peak season is as much as 60 hours per week, when the

201. Ibid.

202. According to James Bloodworth, only ten minutes of each 15-minute break are paid; the remaining five minutes are unpaid because it is the time that Amazon allocates for walking from the warehouse floor to the canteen; see James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 52.

203. Alan Selby, 'Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,' *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>; Isobel Asher Hamilton and Aine Cain, 'Amazon warehouse employees speak out about the "brutal" reality of working during the holidays, when 60-hour weeks are mandatory and ambulance calls are common,' *Business Insider*, February 19, 2019, <https://www.businessinsider.com/amazon-employees-describe-peak-2019-2?r=US&IR=T>; Donna Ferguson, 'The Amazon worker: paid £18,000 a year to shift 250 items an hour,' *The Guardian*, January 20, 2018, <https://www.theguardian.com/money/2018/jan/20/amazon-worker-warehouse>; Carole Cadwalladr, 'My week as an Amazon insider,' *The Observer*, December 1, 2013, <https://www.theguardian.com/technology/2013/dec/01/week-amazon-insider-feature-treatment-employees-work>; Mary O'Connor, 'Sick Amazon "elves" face sack,' *The Times*, December 11, 2016, <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>; Angry Workers of the World, 'Welcome to the Jungle – Working and Struggling in Amazon Warehouses,' International, December 20, 2015, <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>; Robin Turner, 'Amazon hits back over Panorama claims about working conditions at Swansea warehouse,' News, November 25, 2013, <https://www.walesonline.co.uk/news/wales-news/amazon-hits-back-over-panorama-6337773>; James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 47-48.

204. The shift pattern is overlapping. For example, at the Poznań fulfilment centre in Poland, shifts run from 'Sunday to Wednesday, Monday to Thursday, and Wednesday to Saturday'; see Ralf Ruckus, 'Confronting Amazon,' *Jacobin*, March 31, 2016, <https://www.jacobinmag.com/2016/03/amazon-poland-poznan-strikes-workers>.

205. Accepting the new shifts would mean moving to a new Amazon warehouse because Amazon had announced that it would be shutting down the DCH1 delivery station; see Lauren Kaori Gurley, 'Amazon Is Forcing Its Warehouse Workers Into Brutal "Megacycle" Shifts,' *Vice*, February 4, 2021, <https://www.vice.com/en/article/y3gk3w/amazon-is-forcing-its-warehouse-workers-into-brutal-megacycle-shifts>.

206. Following Amazon's announcement that it would be closing DCH1, many DCH1 workers moved to DIL3, a delivery station in the south of Chicago; and, at the same time, Amazonians United DCH1 became Amazonians United Chicagoland, with a focus on organising Amazon warehouse workers across the whole of Chicago. See Lauren Kaori Gurley, 'Amazon Workers in Chicago Strike Over Ruthless "Megacycle" Shifts,' *Vice*, July 4, 2021, <https://www.vice.com/en/article/g5qxp/amazon-workers-in-chicago-strike-over-ruthless-megacycle-shifts>.

207. A worker at a sortation centre in Moreno Valley, California, writes that

[d]uring Peak Season, from October to the end of December, mandatory overtime was called on a constant basis. We had to come in an hour early four days a week. We had to. If you missed a mandatory overtime shift, and you didn't have a doctor's note, you'd get written up. During the so-called Blackout Period, from Black Friday to the middle of December, if you missed a shift at all, and you didn't have the Personal Time Off to cover those eleven hours, you'd better have a doctor's note, or you'd probably be let go of. No vacation requests would be honored, either.

See Hamilton Nolan, 'Inside an Amazon Warehouse, the Relentless Need to "Make Rate",' *Gawker*, June 6, 2016, <https://gawker.com/inside-an-amazon-warehouse-the-relentless-need-to-mak-1780800336>. According to one fulfilment centre worker in the United States, Voluntary Extra Time (VET) is usually offered to workers for Prime Day, Thanksgiving week, Black Friday weekend, Cyber Monday, and Christmas, via Amazon's A-Z app. The overtime that is obligatory during peak season is known as Mandatory Extra Time or MET. See The Sugar Family, 'Working at Amazon Warehouse: How much money can you truly make?,' December 7, 2020, https://www.youtube.com/watch?v=KEY08af0fOs&list=PL8Ja-dm83mgqj8B_cP4GtjMiRtn3k1nR9&index=5.

length and the number of shifts is increased;²⁰⁸ a similar increase in the length and the number of shifts that are worked during peak season is reported for the UK.²⁰⁹

Finally, there is some evidence from published reports which suggests that the standard length of the working day has increased over time. Sarah O'Connor, in her article about working conditions in Amazon's Rugeley fulfilment centre for the *Financial Times* in 2013, reported that the length of a shift was eight hours;²¹⁰ three years later, when James Bloodworth worked at the same fulfilment centre, the length of a standard shift was ten-and-a-half hours.²¹¹

4.1.3 Extension

The extension of the work process describes the spatial organisation of work activity, with implications for how far workers must move to complete tasks.

The distance some workers must walk has often been mentioned in published accounts of working in Amazon's fulfilment centres; in this respect, manual stowing and picking are the work processes that are most frequently mentioned since they require workers to walk long distances along aisles of shelving, from 5 miles to 15 miles each shift.²¹² During a training session in the UK, in 2016, new workers were reportedly told that they should expect to walk between 10 and 14 miles each shift, when picking customer orders.²¹³

Although the introduction of robotic drive units has eliminated the need for workers to walk long distances when stowing and picking, robotic stowing and picking remain demanding work processes because they require movements of the human body which put it under stress – for example, bending downwards to reach bins on lower levels of the pod or stretching upwards to reach bins on higher levels. Indeed, Amazon has publicly recognised the demands of such work, although their response appears to

208. Isobel Asher Hamilton and Áine Cain, 'Amazon warehouse employees speak out about the "brutal" reality of working during the holidays, when 60-hour weeks are mandatory and ambulance calls are common,' *Business Insider*, February 19, 2019, <https://www.businessinsider.com/amazon-employees-describe-peak-2019-2?r=US&IR=T>; Michael Sainato, "'We are not robots": Amazon warehouse employees push to unionize,' *The Guardian*, January 1, 2019, <https://www.theguardian.com/technology/2019/jan/01/amazon-fulfillment-center-warehouse-employees-union-new-york-minnesota>; Chavie Lieber, 'The human costs of Black Friday, explained by a former Amazon warehouse manager,' *Vox*, November 20, 2018, <https://www.vox.com/the-goods/2018/11/20/18103516/black-friday-cyber-monday-amazon-fulfillment-center>.

209. Alan Selby, 'Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,' *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>; Isobel Asher Hamilton and Áine Cain, 'Amazon warehouse employees speak out about the "brutal" reality of working during the holidays, when 60-hour weeks are mandatory and ambulance calls are common,' *Business Insider*, February 19, 2019, <https://www.businessinsider.com/amazon-employees-describe-peak-2019-2?r=US&IR=T>; Lorraine Kelly, 'Amazombies: Seven seconds to find an item, every move filmed and blistering 12-hour shifts with timed toilet breaks... what YOUR Christmas order does to your "worker elves",' *The Daily Mail*, December 3, 2016, <https://www.dailymail.co.uk/news/article-3997864/Amazombies-Seven-seconds-item-filmed-blistering-12-hours-shifts-timed-toilet-breaks-Christmas-order-does-worker-elves.html>; Anonymous, "'A sweatshop firing on all cylinders": what it's like to work at Amazon at Christmas,' *The Guardian*, December 19, 2018, <https://www.theguardian.com/us-news/2018/dec/19/how-your-holiday-shopping-drives-us-amazon-workers-to-exhaustion>.

210. Sarah O'Connor, 'Amazon unpacked,' *The Financial Times*, February 8, 2013, <https://www.ft.com/content/ed6a985c-70bd-11e2-85d0-00144feab49a>.

211. James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 12-13.

212. In fact, in this situation the stowers and pickers are not only moving by foot but are also pushing a cart full of merchandise at the same time. See Emily Guendelsberger, "'The most physically painful experience of my life": One month working in an Amazon warehouse|Book Excerpt,' *The Inquirer*, July 11, 2019, <https://www.inquirer.com/opinion/commentary/amazon-warehouse-on-the-clock-emily-guendelsberger-book-excerpt-20190711.html>; Mary O'Connor, 'Sick Amazon "elves" face sack,' *The Times*, December 11, 2016, <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>; Robin Turner, 'Amazon hits back over Panorama claims about working conditions at Swansea warehouse,' *News*, November 25, 2013, <https://www.walesonline.co.uk/news/wales-news/amazon-hits-back-over-panorama-6337773>; GMB, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 8, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf; Hamilton Nolan, 'True Stories of Life as an Amazon Worker,' *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

213. Lorraine Kelly, 'Amazombies: Seven seconds to find an item, every move filmed and blistering 12-hour shifts with timed toilet breaks... what YOUR Christmas order does to your "worker elves",' *The Daily Mail*, December 3, 2016, <https://www.dailymail.co.uk/news/article-3997864/Amazombies-Seven-seconds-item-filmed-blistering-12-hours-shifts-timed-toilet-breaks-Christmas-order-does-worker-elves.html>.

have been to introduce advanced training in ‘body mechanics’ rather than to reduce productivity targets.²¹⁴

The speed at which these movements must be performed adds to the level of stress. When Amazon introduced robotic stowing and picking, it increased the productivity targets for these work processes. As we saw in Table 5 above, the reported targets for manual stowing and picking at Amazon’s Swansea fulfilment centre, which opened in April 2008, were 90 and 110 units per hour, respectively. By contrast, the reported target for robotic stowing at Amazon’s Eastvale fulfilment centre, which opened in March 2018, was 300 units per hour, while the reported target for robotic picking at Amazon’s Staten Island fulfilment centre, which opened in September 2018, was 400 units per hour;²¹⁴ and when Alan Selby worked as a picker alongside Kiva robots in the Tilbury fulfilment centre, in 2017, his fitness tracker showed that, for one shift, his level of exertion was equivalent to walking at least 10 miles.²¹⁵ This requires further study.

4.1.4 Ambient Temperature and Humidity²¹⁶

Given that the temperature of the human body must remain stable, if it is to function effectively, significant increases or decreases in ambient temperature and humidity put the human body under greater physical strain, with the result that workers are at greater risk of overheating or underheating, as the case may be, and of suffering injury or illness as a result.

Published accounts suggest that extreme changes in the ambient temperature and humidity of the work process do make working inside Amazon’s fulfilment centres more demanding, physically. Reports indicate that, in the summer months, lack of, or inadequate, air conditioning leads to an atmosphere that is almost unbearable, with some workers collapsing from heat exhaustion. Problems with air conditioning were first reported in 2011, by journalist Spencer Soper, in an investigation of working conditions inside Amazon’s Breinigsville fulfilment centres;²¹⁷ but workers in fulfilment centres in the Charlotte and Raleigh-Durham areas of North Carolina reported similar problems in 2019.²¹⁸ Excessive heat has also been reported at delivery stations in Chicago and Northwest Portland, and at the Shakopee fulfilment centre;²¹⁹

214. Amazon press release, ‘From Body Mechanics to Mindfulness, Amazon Launches Employee-Designed Health and Safety Program called WorkingWell Across U.S. Operations’, 17 May 2021, <https://press.aboutamazon.com/news-releases/news-release-details/body-mechanics-mindfulness-amazon-launches-employee-designed>.

215. A fitness tracker works by means of an accelerometer, which tracks the movement of the body and converts these data into measurements of activity. In this case, the fitness tracker calculated that the movements that Alan had made were equivalent to the movements that he would have made, had he walked 10 miles. See Alan Selby, ‘Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,’ *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>.

216. The ambient temperature of the work process is the level of thermal energy in the air surrounding a work activity, while the ambient humidity is the level of concentration of water vapour in the air surrounding a work activity.

217. Spencer Soper, ‘Inside Amazon’s Warehouse,’ *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>. It was reported by Spencer Soper, in *The Seattle Times* in 2012, that, since his investigation into working conditions at one of Amazon’s Breinigsville fulfilment centres in 2011, Amazon had built new fulfilment centres with air conditioning units installed and had been retrofitting older fulfilment centres with air conditioning units, including the warehouses in Breinigsville. See Spencer Soper, ‘Amazon workers cool after company took heat for hot warehouses,’ *The Seattle Times*, June 6, 2012, <https://www.seattletimes.com/business/amazon-workers-cool-after-company-took-heat-for-hot-warehouses/>.

218. Michael Sainato, ‘Revealed: Amazon touts high wages while ignoring issues in its warehouses,’ *The Guardian*, August 6, 2019, <https://www.theguardian.com/technology/2019/aug/06/amazon-workers-minimum-wage-injuries-working-conditions>. 219. Rebecca Burns, ‘Angry About Low Pay and Sweltering Heat, These Amazon Warehouse Workers Are Organizing,’ *In These Times*, July 19, 2019, <http://inthesetimes.com/working/entry/21971/amazon-workers-chicago-prime-day-jeff-bezos-organize>. See also their campaign petition: ‘Amazon Management: Meet with DCH1 Amazonians United now!’ Petition, DCH1 Amazonians United, <https://www.coworker.org/petitions/amazon-management-meet-with-dch1-amazonians-united-now/>, and their Facebook page, ‘DCH1 Amazonians United,’ <https://www.facebook.com/DCH1United/>; Kate Davidson, ‘Amazon Workers Describe Heat And Noise At Portland Warehouse,’ *News*, July 13, 2019, <https://www.opb.org/news/article/amazon-flex-portland-warehouse-working-conditions/>; Michael Sainato, ‘“We are not robots”: Amazon warehouse employees push to unionize,’ *The Guardian*, January 1, 2019, <https://www.theguardian.com/technology/2019/jan/01/amazon-fulfillment-center-warehouse-employees-union-new-york-minnesota>.

while lack of heat was reported to be a problem, in the winter months, by a worker in shipping, when the bay doors of the warehouse are opened to allow trucks to pull in.²²⁰ Without further research it will be hard to ascertain the impact short, medium and long term impacts for workers.

4.2 Impact of Physical Demands

Trade unions and investigative journalists have generated a wealth of evidence, through surveys of workers' experiences and through requests for information from public authorities, which gives us an *approximate* idea of the rate at which workers in the line of production in Amazon's fulfilment centres are being injured, as well as of the types of injury that they are suffering. This indicates a need for further research to explore in more detail the differences in physical demands between work roles, between fulfilment centres, and between Amazon and other companies in the e-commerce and logistics sector—it is hoped that such comparisons may help to identify comparatively safe working practices which might inform a reduction of harm in the future.

Numerous current and former Amazon warehouse workers have also described, to national media, the physical consequences of the work process for their wellbeing. For example,

- a part-time sorter at a warehouse in Tennessee said that 'the stress and strain of standing in one place, and constantly doing the same garbage over and over again took its toll on me physically';²²¹
- a former picker, who worked on the night shift from 6.30pm to 5am, reported a loss of weight that was 'close to 7 pounds a week', despite eating more while working for Amazon;²²²
- a picker at a warehouse in Chester, Virginia, described developing severe pain in the feet, after 'miles of walking on concrete every day'.²²³

Added to this are a series of surveys and data gathered from public bodies. Looked at in total, the evidence reviewed and presented below suggests that the physical demands of the process of fulfilment lead to an increased risk of suffering physical harm.

4.2.1 Ambulance Call-Outs

As part of its investigation in 2018 and 2019, *Business Insider* submitted requests, under the UK's Freedom of Information Act (2000), for information about ambulance call-outs to some of Amazon's fulfilment centres in the UK. This information suggests that the

220. Hamilton Nolan, 'True Stories of Life as an Amazon Worker,' *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

The worker told *Gawker*: 'I was out for a month and a half due to severe leg pain caused by too much standing on concrete and not enough support.' See Hamilton Nolan, 'A Few More True Stories from Amazon Workers,' *Gawker*, August 6, 2013, <https://gawker.com/a-few-more-true-stories-from-amazon-workers-1043216113>.

221. Hamilton Nolan, 'As Amazon Struggles, More Insiders Speak,' *Gawker*, July 25, 2014, <https://gawker.com/as-amazon-struggles-more-insiders-speak-1610812487>.

222. Hamilton Nolan, 'True Stories of Life as an Amazon Worker,' *Gawker*, February, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

223. Hamilton Nolan, 'True Stories of Life as an Amazon Worker,' *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

risk of suffering physical harm increases during the peak season (November and December). Its request to the West Midlands Ambulance Service revealed that, for the Rugeley fulfilment centre in Staffordshire, there were, in total

- 38 call-outs in 2016
- 28 call-outs in 2017
- 17 call-outs in 2018

and that the rate at which ambulances were called out increased during the peak season so that

- for 2016, the highest number of call-outs (nine) was in November
- for 2017, the highest number of call-outs (eight) was in November
- for 2018, the highest number of call-outs (four) was in December.

Its request to the North West Ambulance Service revealed that, for the Manchester fulfilment centre

- the average rate of call-outs per month in the 27 months to December 2018 was between one and two
- the average rate of call-outs increased to 2.1 per month during the peak season.

Its request to the Welsh Ambulance Service revealed that, for the Swansea fulfilment centre

- the average rate of call-outs was 1.6 per month, for the period from 2016 to 2018
- the average rate of call-outs increased to 3.6 per month during the peak season.²²⁴

The GMB trade union obtained information under the UK's Freedom of Information Act (2000) from seven ambulance services about ambulance call-outs to Amazon's fulfilment centres within their areas of operation, for the period from 2016 to 2019.²²⁵

This information, published here for the first time, gives us an idea of the most typical reasons for call-outs, with chest pains, loss of consciousness, breathing problems, and cardiac events at the top of the list. (See Table 6, below.) Indeed, given that chest pain, difficulty breathing, and heart malfunction can all be symptoms of work-related stress, this information gives us an indication of the level of stress that fulfilment centre workers are under, and demonstrates how a mental disorder, such as stress, can have a physical manifestation. (Work-related stress is discussed in Section 4.4.3, below.)

224. Isobel Asher Hamilton and Áine Cain, 'Amazon warehouse employees speak out about the "brutal" reality of working during the holidays, when 60-hour weeks are mandatory and ambulance calls are common,' *Business Insider*, February 19, 2019, <https://www.businessinsider.com/amazon-employees-describe-peak-2019-2?r=US&IR=T>. The number of incidents that the Welsh Ambulance Service attended (1.1 per month, on average, for the period from 2016 to 2018 and 2.8 per month, on average, for the peak season) was lower than the number of call-outs that it received. This difference reminds us that ambulance call-out figures are an approximate indicator of the rate of injury; a more accurate (but far from perfect) indicator is the number of accident report forms that have been completed, in a given period of time.

225. The seven ambulance services were East of England, Northern Ireland, North West, North East, South West, West Midlands, and Yorkshire.

Reason for call-out	Frequency	Share
Chest pain	88	15.0%
Unconscious/not alert*	78	13.3%
Unknown*	73	12.5%
Breathing problems*	54	9.2%
Other*	44	7.5%
Cardiac	41	7.0%
Fitting/convulsions	41	7.0%
Trauma*	41	7.0%
Fall/collision*	27	4.6%
Pain (other specific region)	23	3.9%
Pregnancy-related	16	2.7%
Back complaint	11	1.9%
Stroke	11	1.9%
Bleeding*	9	1.5%
Diabetes	8	1.4%
Headache	6	1.0%
Mental health	5	0.9%
Immediate threats to life	4	0.7%
Intoxication**	3	0.5%
Assault/sexual assault**	2	0.3%

Table 6: Reasons for Ambulance Call-Outs²²⁶

* Not including a small number of reports (<5) that were suppressed by Yorkshire Ambulance Service.

** Including adverse reaction to medication, accidental overdoses, etc.

Such evidence calls for serious consideration of the causes of these increased risks, including the consequences of the increased pace of work during these peak periods, and the development of measures to better protect workers.

4.2.2 Physical Pain

The GMB trade union carried out a survey, in 2018, of its members who were working in Amazon fulfilment centres in Rugeley, Dunstable, Hemel Hempstead, Milton Keynes, Gourock, Edinburgh, and Warrington. Using a technique called ‘body mapping’, which involves asking workers to identify parts of the body in which they experience pain, the GMB union found that 87% of respondents experienced both constant and occasional pain, 10% experienced only occasional pain, and 3% did not experience any pain, as shown in Table 7.

²²⁶ The data in this table were provided by the GMB trade union’s research and policy department. The authors are grateful to the GMB for supplying them with this information.

Body Part	Occasional Pain	Constant Pain
Neck	42%	18%
Shoulders	37%	18%
Upper back	18%	30%
Elbows	21%	12%
Lower back	19%	54%
Wrist/hands	45%	15%
Hips/thighs/buttocks	19%	30%
Knees	37%	30%
Ankles/feet	27%	30%

Table 7: Areas of pain (GMB Survey, UK)²²⁷

From the written responses to the question in the survey about what workers thought was causing their pain, it was apparent, the GMB union said, that many workers were 'either suffering or starting to suffer' from musculoskeletal conditions. The GMB union also said that 'fatigue' was 'a major issue' for its members because productivity targets were 'high' yet there was insufficient 'recovery time'.²²⁸

Workers reported that they suffered pain from

- having to lift heavy boxes without assistance;
- pushing heavy carts long distances;
- repetitive actions, including lifting, bending down, stretching, and squatting;
- increases in productivity targets;
- breaks that are too short;
- excessive standing;²²⁹
- excessive walking.²³⁰

Work process hazards that had injured workers included objects left on the floor, faulty carts, and dust emitted from cardboard boxes.

The demands and hazards of the work process generated a range of health conditions for workers, including

- slipped discs;
- long-term shoulder and back pain;
- repetitive strain injuries;
- spondylosis.

227. GMB, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 4-6, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf. According to *The Guardian*, which also reported some of the results of the GMB's investigation, the number of survey respondents was 200; see Sarah Butler, 'Amazon accused of treating UK warehouse staff like robots,' *The Guardian*, May 31, 2018, <https://www.theguardian.com/business/2018/may/31/amazon-accused-of-treating-uk-warehouse-staff-like-robots>.

228. GMB, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 7, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

229. John Burgett also mentions excessive standing in his blog about his experiences of working at Amazon's fulfilment centre in Jeffersonville: 'Almost everyone stands, all day, except during very short breaks. Amazon employees stand, even when it doesn't seem to be a requirement of the work they are doing. It has always seemed to me that Amazon employees stand almost as a capricious rule.' He also reports what happened to the physical health of a colleague who worked in the re-binning section of the warehouse: 'In AFE, my fellow worker usually re-binned. ... She said her feet would swell and then wouldn't heal by the next shift, so it had a cumulative effect. Her back bothered her. ... Her revelations made me think that many Amazon employees suffer their pains quietly.' See John Burgett, 'Physical Environment, Size,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/physical-environment-size>.

230. John Burgett also writes that '[m]any Amazon employees operate at a very high pace for ten to eleven hours per day, forty to sixty hours per week. Much of the work is on hard concrete and can wear a body down physically in short periods of time, leaving the employee little recourse.' See John Burgett, 'Physical Environment, Size,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/physical-environment-size>.

The GMB union was also concerned about the way in which Amazon treated pregnant women, and the written responses to the survey indicated that the process of fulfilment was leaving these women in pain. One worker reported being denied a transfer to a different department and being told to carry on picking. After she informed her manager that she was struggling to walk and bend down to pick items of merchandise, she had a meeting with a safety manager, who told her that ‘it’s not what you want – it’s what we decide.’ When she spoke to her manager again, she was told that ‘most women are working on picking until their maternity leave’, a statement that she knew was true because she had witnessed women working in this condition.²³¹

Between 3 January and 7 May 2019, the New York Committee for Occupational Safety and Health (NYCOSH) surveyed 142 of the 2,500 workers at Amazon’s Staten Island fulfilment centre, asking them questions about issues of health and safety at work. NYCOSH conducted in-depth interviews with three other workers from the same fulfilment centre about the same issues.²³²

The researchers found that 66% of those surveyed ‘had experienced physical pain while performing their regular work duties’, while 42% ‘continued experiencing pain even when they were not at work’. These results led the researchers to conclude that ‘bodily pain is a regular way of life for workers employed at Amazon’s Staten Island distribution center.’²³³

Workers were asked to identify where on their body they experienced pain, and the areas of the body most frequently reported as painful are shown in Table 8.

Body Part	Respondents
Pectoral/chest, right shoulder	15%
Upper back, right shoulder	17%
Upper back, left shoulder	16%
Lower back, center/tail bone	18%
Lower back, right side	21%
Lower back, left side	20%
Left hand, palm	15%
Left knee	22%
Right knee	20%
Right ankle	17%
Left ankle	16%
Left foot	29%
Right foot	28%
Left heel	22%
Right heel	23%

Table 8: Areas of Pain (NYCOSH, USA)²³⁴

231. GMB, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 7-9, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

232. Marina Jabsky and Charlene Obernauer, *Time Off Task: Pressure, Pain, and Productivity at Amazon* (New York: New York Committee for Occupational Safety & Health, 2019), 6.

233. *Ibid.*, 9.

234. *Ibid.*, 11.

Commenting on these results, the researchers concluded that this range of injuries constituted evidence of the emergence of ‘work-related musculoskeletal disorders.’²³⁵ This suggests there is an urgent need for further research into the causes of such pain to inform strategies for harm reduction at Amazon and in other businesses using similar processes.

4.2.3 Work-Related Injuries

The GMB trade union requested information under the Freedom of Information Act (2000) from local authorities in the UK about accidents that Amazon warehouses had reported to the Health and Safety Executive (HSE) in the period from 2016-17 to 2018-19, in accordance with RIDDOR (2013) (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations).²³⁶ It found that 622 reports had been made in total during that period of time and that the total had increased from 152 in 2016-17 to 230 in 2017-18 and 240 in 2018-19. Injuries which had been reported to the HSE included

- loss of consciousness and respiration, when a worker in London was knocked over;
- fracture of the hand, when a worker in Manchester suffered trapped fingers;
- multiple head injuries and an inter-vertebral disc prolapse, when boxes fell onto a worker in Manchester;
- internal bruising, when a worker at Bardon Hill in Leicestershire was ‘knocked down and wedged under a heavy goods vehicle’.^{237, 238}

In the NYCOSH survey discussed above, 18% of the workers said that they had sustained an injury while at work, and 10% said that they had sustained an injury more than once.²³⁹ As the researchers noted, an injury rate of 18% is three times higher than the national, average, work-related injury rate for the warehouse industry as a whole in 2017 (5.2%) and almost seven times higher than the national average for all industries.²⁴⁰

Respondents were also asked about the ways in which they were injured, while working at Staten Island:

- 15% said that they had cut, lacerated or wounded themselves;
- 69% said that they had strained, pulled or dislocated a muscle;
- 23% said that they had been caught in, hit, or injured, by machinery;

235. *Ibid.*, 11.

236. ‘RIDDOR - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013,’ Health and Safety Executive, <https://www.hse.gov.uk/riddor/>.

237. Rob Davies, ‘Concerns over safety at Amazon warehouses as accident reports rise,’ *The Guardian*, February 17, 2020, <https://www.theguardian.com/technology/2020/feb/17/concerns-over-safety-at-amazon-warehouses-as-number-of-incidents-rise>; GMB Union, ‘GMB calls for parliamentary inquiry into Amazon as conditions for workers worsen,’ News, February 17, 2020, <https://www.gmb.org.uk/news/gmb-calls-parliamentary-inquiry-amazon-conditions-workers-worsen>.

238. Amazon’s obligations under the UK’s RIDDOR (2013) and Health and Safety at Work Act (1976) must also be understood within the context of the partnership arrangements that Amazon is entering into with the local authorities in which its fulfilment centres are located – for example, Cannock Chase, where Amazon’s Rugeley fulfilment centre is located. (The authors are grateful to the GMB trade union for providing them with a redacted copy of the ‘Summary of Partnership Arrangements’ between Amazon UK Services Limited and Cannock Chase District Council.) Under these arrangements, the local authority, in effect, becomes Amazon’s agent, in its relations with enforcing authorities such as the Health and Safety Executive and in its relations with third parties making requests under the Freedom of Information Act (2000). Given that Amazon will be a major provider of jobs within any local authority with which it enters into partnership and may also be paying fees to that authority for the provision of advice concerning matters of health and safety, the potential for regulatory capture under these arrangements is obvious.

239. Marina Jabsky and Charlene Obernauer, *Time Off Task: Pressure, Pain, and Productivity at Amazon* (New York: New York Committee for Occupational Safety & Health, 2019), 9.

240. *Ibid.*, 12.

- 15% said that they had slipped, tripped, or fallen.²⁴¹

The researchers concluded that the

“injuries reported in the ... survey, as well as the areas of pain indicated on the body map, are consistent with the current research of MSDs associated with work tasks, such as order picking and stocking, bending, reaching overhead, lifting, pushing, and pulling loads. These tasks are, in turn, consistent with the work conducted at the Amazon distribution facility.”²⁴²

A report on the rate of injury and illness at Amazon’s Staten Island fulfilment centre by Make the Road New York and New York Communities for Change supports the findings of the NYCOSH survey regarding work-related injury. Analysing data from the OSHA 300A logs for 2018, the authors find that:

- Amazon’s Staten Island fulfilment centre ‘had a total recordable incident rate of 15.2 per 100 employees’, a figure which is ‘higher than the national rate of any other job category monitored by the Bureau of Labor Statistics and a full three times higher than the national general industry average for warehouse work’;^{243, 244}
- workers at Staten Island missed ‘an average of 64.04 days of work’ in 2018, an indication of the severity of the physical harm they had suffered;²⁴⁵
- during the peak season, there were ‘63 recordable injuries, with 17 workers hurt so badly they were not ever able to return to work at Amazon.’²⁴⁶

4.2.4 Trends and Differences in the Risk of Injury

In its most recent investigation of injury rates, *Reveal* examined internal Amazon documents, including reports from safety teams and ‘weekly data from 2016 through 2019 from more than 150 Amazon warehouses’. The investigation team found trends in the rate of serious injury for all the fulfilment centres in its sample, as well as differences in the rate of serious injury between fulfilment centres and between Amazon and other employers in the warehousing sector.

In relation to trends, the researchers found that

- the rate of serious injury increased, in the four years from 2016 to 2019, by 33%, with the result that Amazon failed to achieve its aim of reducing the rate of serious injury by 20%, for 2018, and by 5%, for 2019;

241. *Ibid.*, 13.

242. *Ibid.*, 14.

243. Make the Road New York and New York Communities for Change, *Amazon’s Dangerous Jobs* (New York, NY: Make the Road New York and New York Communities for Change, 2019), 1, <https://maketheroadny.org/wp-content/uploads/2019/11/Amazons-Dangerous-Jobs-Report.pdf>. The corresponding figure for all industries (public and private) in 2018 is 3.1; for private industry alone, it is 2.8; and for general warehousing and storage it is 5.2. See ‘TABLE 1. Incidence rates of nonfatal occupational injuries and illnesses by industry and case types, 2018,’ U.S. Bureau of Labor Statistics, last updated November 7, 2019, https://www.bls.gov/iif/oshwc/osh/os/summ1_00_2018.htm.

244. The recordable incident rate is an indication of how frequently workers suffer serious injury or illness. According to the authors of the report, an injury or illness must be recorded formally ‘if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness, or significant injury or illness diagnosed by a physician or other licensed health professional.’ See Make the Road New York and New York Communities for Change, *Amazon’s Dangerous Jobs* (New York, NY: Make the Road New York and New York Communities for Change, 2019), 1, <https://maketheroadny.org/wp-content/uploads/2019/11/Amazons-Dangerous-Jobs-Report.pdf>.

245. *Ibid.*, 2.

246. *Ibid.*, 2.

- in each of the four years, the highest rates of serious injury occurred during the weeks of Prime Day (normally in July) and Cyber Monday (normally in November).²⁴⁷

In relation to differences across the warehousing sector, the researchers found that

- in 2019, the rate of serious injury was 7.7 per 100 employees, a figure that is 'nearly double' the average rate for general warehousing and storage in the United States (4 per 100 employees);
- at the DuPont fulfilment centre in Washington state, there were '22 serious injuries for every 100 workers ... a rate more than five times higher than the most recent industry average';
- at the Fall River fulfilment centre in Massachusetts, the rate of serious injury increased by over 50% between 2018 and 2019 to about 15 serious injuries per 100 workers, which is roughly four times the average rate for general warehousing and storage.

In relation to differences across fulfilment centres, the researchers found that the difference between the rate of serious injury in warehouses operating with robotics and the rate of serious injury in warehouses operating without robotics was over 50%.²⁴⁸

These indications of differences in injury rates between companies, over time, and between more and less automated sites, can help to direct further longitudinal and comparative research in order to identify the critical factors that contribute to safer workplaces for future work design for Amazon and other companies.

4.2.5 Death in Service

In 2018, the National Council for Occupational Safety and Health (NCOSH) in the United States included Amazon in its list of 'companies that put workers and communities at risk' – the 'Dirty Dozen'.²⁴⁹ It selected companies using information provided by its 'network of health and safety activists', which includes 'local COSH groups, workers, unions, worker centres, occupational clinics, health and safety professional and allied groups and individuals.' This information covered the 'severity of injuries to workers; exposure to unnecessary and preventable risk; repeat citations by relevant state and federal authorities; and activity by workers and allies to improve their health and safety

247. In 2019, for example, the highest rate of serious injury occurred during the week of Prime Day, with nearly 400 serious injuries occurring in fulfilment centres across the United States – an outcome that Amazon's safety director had anticipated.

248. Will Evans, 'How Amazon hid its safety crisis,' *Reveal*, September 29, 2020, <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>.

249. National Council for Occupational Safety and Health, *The Dirty Dozen 2018: Employers Who Put Workers and Communities at Risk* (National Council for Occupational Safety and Health, 2018), 3, [https://coshnetwork.org/sites/default/files/Dirty%20Dozen%202018,%204-25-18+FINAL\(1\).pdf](https://coshnetwork.org/sites/default/files/Dirty%20Dozen%202018,%204-25-18+FINAL(1).pdf). The National Council for Occupational Safety and Health describes itself as 'a national leader in the fight for safe, healthy working conditions' that 'works to ensure that all workers can earn their living with dignity and respect and return home alive and well at the end of their shift.' It operates 'through a network of 23 state and local non-profit COSH groups', which 'unite with labor, community, legal and health allies to win decent, just working conditions and build a powerful movement encompassing racial, economic and environmental justice.' See 'About Us', National Council for Occupational Safety and Health, <https://nationalcosh.org/about-us>.

conditions.²⁵⁰

The authors observe that, in the period from 2013 to the writing of the report, seven workers had been killed in Amazon's fulfilment centres, 'including three workers within five weeks in 2017'. They claim that these three workers 'died during the beginning of holiday rush shipping season at Amazon, one of the most intense periods in one of the world's most intense workplaces.'²⁵¹

In its latest report, for 2019, NCOSH once again includes Amazon as one of its 'Dirty Dozen' employers, noting that six more workers have died at Amazon facilities in the United States since 2018 and highlighting recent media reports about working conditions in Amazon's fulfilment centres, including the analysis of 911 calls by *The Daily Beast*, in the United States, and James Bloodworth's account of his experience of working at the Rugeley fulfilment centre, in the United Kingdom.²⁵²

Warehouse Workers Stand Up, which investigated working conditions in warehouses in New Jersey, including Amazon's fulfilment centres, reports that Amazon's fulfilment centre in Avenel, New Jersey, was inspected by the OSHA, when a worker was killed through being 'dragged and crushed by a conveyor belt at an Amazon warehouse in Avenel, New Jersey in 2013. However, Amazon did not receive a citation, with respect to this incident.'²⁵³

4.3 Mental Demands

The process of work is mentally demanding, in general, to the extent that it depends on the operation of the human mind. However, the process of work is especially demanding, mentally, where it is organised through the social relation of employment and the rules of this relation are subject to ongoing negotiation and enforcement via emergent interpersonal relationships.

The mental demands of the process of fulfilment, therefore, derive from characteristics of the associated working relationships, which include the degree of control, by the employee, over the work process; the level of trust in co-workers; the extent to which the employer accommodates the physiological needs of the employee; the extent to which employees feel that their achievements at work are valued by their employer; and the number of opportunities that the employer provides for employees to develop their capabilities.

250. National Council for Occupational Safety and Health, *The Dirty Dozen 2018: Employers Who Put Workers and Communities at Risk* (National Council for Occupational Safety and Health, 2018), 10, [https://coshnetwork.org/sites/default/files/Dirty%20Dozen%202018,%204-25-18+FINAL\(1\).pdf](https://coshnetwork.org/sites/default/files/Dirty%20Dozen%202018,%204-25-18+FINAL(1).pdf).

251. *Ibid.*, 11. The three workers who were killed in close succession, in 2017, were Devan Michael Shoemaker, who was 'run over by a truck at an Amazon warehouse in Carlisle, Pennsylvania' on 19 September; Phillip Terry, whose 'head was crushed by a forklift at an Amazon warehouse in Plainfield, Indiana' on 23 September; and Karla Kay Arnold, who was 'hit by a sports utility vehicle in the parking lot of an Amazon warehouse in Monee, Illinois' on 23 October.

252. The six workers who have died since 2018 were 'employees of other firms or contract workers'. See National Council for Occupational Safety and Health, *The Dirty Dozen 2019: Employers Who Put Workers and Communities at Risk* (National Council for Occupational Safety and Health, 2019), 12-13, https://nationalcosh.org/sites/default/files/uploads/2019_Dirty_Dozen.pdf.

253. Warehouse Workers Stand Up, *The Future of the Warehouse State: New Jersey Must Improve Job Quality in Warehouse Distribution Centers* (Warehouse Workers Stand Up, 2018), 8, http://warehouseworkersstandup.org/wp-content/uploads/2018/12/The_Future_of_the_Warehouse_State.pdf.

4.3.1 Work Control

The degree of control that people have over the work process can be understood as the amount of discretion that they have to decide, for example, which tasks to undertake and how to undertake them. The less discretion that they have – that is, the more their actions are externally regulated – the more they experience a lack of volition, integrity, and vitality, and the more their innate need for autonomy remains unsatisfied. If human beings experience pleasure from being able to make choices that are aligned with their values and thus feel powerful, their experience of being unable to do this will tend to result in suboptimal wellbeing. Therefore, we may say that, the less control that Amazon production workers have over the work process, the more mental strain they will experience, and the greater will be their risk of suffering mental harm.²⁵⁴

There are various ways of measuring feelings of control among the workforce. For example, in the Skills and Employment Survey 2017 for Great Britain, the concept of worker control is measured via the concept of worker influence, with respondents being asked how much influence they have on how hard they work (variable BMe1), on deciding what tasks they are to do (variable BMe2), on deciding how they are to do the task (variable BMe3), and on deciding the quality standard to which they work (variable BMe4).²⁵⁵

A survey of Amazon workers, of this sort, has not been carried out. However, it is possible to begin to explore the issue of work control using information from published accounts of workers' experiences.

Task Intensity

Many reports indicate that Amazon production workers lack a substantial degree of control over how hard they work, and that management is a source of external pressure. For example,

- 80% of the workers at Staten Island who responded to the NYCOSH survey about working conditions said that they felt 'pressured to work harder and/or faster' by management;²⁵⁶
- the anonymous writer of The Amazon Diaries in *The Guardian* describes 'an emotionally toxic culture, where the stress of meeting productivity targets leads managers to treat workers like things, to be pushed harder and faster without regard for the emotional or personal cost';²⁵⁷

254. This argument is based on the insights of self-determination theory. See Edward L. Deci and Richard M. Ryan, 'The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behaviour,' *Psychological Inquiry* 11, no. 4 (2000): 227-68, <https://www.jstor.org/stable/1449618>, and Richard M. Ryan and Edward L. Deci, 'Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being,' *American Psychologist* 55, no. 1 (January 2000): 68-78, <https://psycnet.apa.org/doiLanding?doi=10.1037%2F0003-066X.55.1.68>.

255. Note that the response options to the questions about worker influence in the Skills and Employment Survey 2017 included 'A great deal', 'A fair amount', 'Not much', and 'None at all'; see 'UK Data Archive Study Number 8581 – Skills and Employment Survey, 2017,' UK Data Service, http://doc.ukdataservice.ac.uk/doc/8581/mrdoc/pdf/8581_sceli_eib_ses_questionnaires.pdf.

256. Marina Jabbsky and Charlene Obernauer, *Time Off Task: Pressure, Pain, and Productivity at Amazon* (New York: New York Committee for Occupational Safety & Health, 2019), 7.

257. Anonymous, 'Our new column from inside Amazon: "They treat us as disposable",' *The Guardian*, November 21, 2018, <https://www.theguardian.com/us-news/2018/nov/21/our-new-column-from-inside-amazon-they-treat-us-as-disposable>.

- a worker who responded to the GMB’s survey of UK-based Amazon workers said that management ‘put pressure on us’, that ‘they always increase our target (units per hour) and [that] they stress us severely with idle time’, while another said that ‘Amazon is increasing the target all the time and is forcing the workers to push themselves in order to achieve the target.’²⁵⁸

Reports also indicate that workers will be penalised, through disciplinary action, if they fail to meet the expected level of performance. For example,

- Rina Cummings, a sorter at Amazon’s Staten Island fulfilment centre, told *The Guardian* that she would be penalised by managers for not meeting the mandated productivity target (30 units/minute), if, for example, she had to stop the conveyor belt to clean up the contents of a package that had burst open;²⁵⁹
- Raymond Velez, who worked as a picker at Staten Island from October 2018 to November 2019, told *The Guardian* that he ‘was required to pick at a rate of 700 items per hour’ and would be penalised for missing this target;²⁶⁰
- William Stolz, working as a picker at the Shakopee fulfilment centre in Minnesota, told *The New Yorker* that ‘whenever we ask for the speed of work or the repetitive motions to be changed, we’re told that’s not going to happen.’²⁶¹

In total, these reports suggest that productivity targets are imposed on workers by managers and that any worker who is unable to meet their expectations is penalised through dismissal.²⁶²

Task Allocation

Many reports indicate that Amazon production workers lack a substantial degree of control over which tasks they are required to do, and that decisions about the allocation of tasks, and thus the distribution of workers across the line of production, are made entirely by managers. For example,

- an Amazon worker at Staten Island reported to *Gizmodo* that Amazon’s managers refused to move a pregnant worker to a different task to reduce the amount of bending and stretching that the worker was doing, with the result that she suffered a miscarriage;²⁶³
- Cecilia Hoyos, who injured her hip while working at the DuPont warehouse in Washington state, said that managers do not listen, when workers ask to be

258. GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 8, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

259. Michael Sainato, ‘“I’m not a robot”: Amazon workers condemn unsafe, gruelling conditions at warehouse,’ *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-gruelling-conditions-warehouse>.

260. Ibid.

261. Charles Duhigg, ‘Is Amazon Unstoppable?’ *The New Yorker*, October 21, 2019, <https://www.newyorker.com/magazine/2019/10/21/is-amazon-unstoppable>.

262. *The Verge* reported that about 300 workers at an Amazon fulfilment centre in Baltimore had been fired between August 2017 and September 2018 for missing productivity targets. See Colin Lecher, ‘How Amazon automatically tracks and fires warehouse workers for “productivity”,’ *The Verge*, April 25, 2019, <https://www.theverge.com/2019/4/25/18516004/amazon-warehouse-fulfillment-centers-productivity-firing-terminations>.

263. Bryan Menegus, ‘Exclusive: Amazon’s Own Numbers Reveal Staggering Injury Rates at Staten Island Warehouse,’ *Gizmodo*, November 25, 2019, <https://gizmodo.com/exclusive-amazons-own-numbers-reveal-staggering-injury-1840025032>. Another pregnant worker, who responded to a question about the causes of physical pain in the GMB’s survey of Amazon workers in the UK in 2018, reported that managers denied her request to be transferred from the picking section to a different section, telling her that it was for managers to decide which tasks she did. See GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 8, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

moved to a different job 'to lessen the repetitive strain',²⁶⁴

- an Amazon worker in the UK told *Business Insider* that, after he suffered an asthma attack while working as a picker, he was moved to the packing department but then moved back to picking a few days later.²⁶⁵

Task Execution

Many reports indicate that Amazon production workers lack a substantial degree of control over how they are required to perform the tasks that they are given, and that it is always managers who decide how tasks should be carried out. This means that workers are often expected to carry out tasks in ways that are unsafe. For example,

- the anonymous writer of The Amazon Diaries in *The Guardian* described being expected by managers to unload inbound packages in a way that is unsafe, when not being observed by safety teams;²⁶⁶
- Austin Wendt, who worked as an on-site medical representative in Amazon's DuPont warehouse in Washington state, in 2016, told *Reveal* that workers had to take 'shortcuts' (such as stretching upwards, instead of climbing a ladder, or bending down and twisting, instead of squatting) when working, because they were '[u]nder constant pressure to hit ever-increasing production rates';²⁶⁷
- an Amazon worker who was transferred to Staten Island to help with the training of new workers reported that senior managers 'repeatedly ignored' issues of health and safety that the worker raised with them.²⁶⁸

In fact, some reports indicate that workers are afraid to report issues of health and safety, whether to managers or external authorities, because this might lead to their dismissal. For example,

- Lindsay Florence Johnson, a former worker at Amazon's San Bernardino fulfilment centre in California, told *The Guardian* that some workers are 'scared' to report injuries, and the health and safety issues which are associated with them, because managers might respond by taking them off the job;²⁶⁹
- Jamie Sohn, a former worker at an Amazon sortation centre in the Raleigh Durham area of North Carolina, told *The Guardian* that she was dismissed from her job, in January 2019, 'after a box fell on her head, just weeks after she

264. Will Evans, 'How Amazon hid its safety crisis,' *Reveal*, September 29, 2020, <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>.

265. When he told Amazon's managers that he had been moved because he suffered from asthma, he was told that he did not have a choice about where he worked, that he had to do "whatever was needed." See Shona Ghosh, 'Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories,' *Business Insider*, May 5, 2018, <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=UK>.

266. Anonymous, 'Hate lugging cat litter? Don't make us Amazon warehouse workers do it,' *The Guardian*, December 5, 2018, <https://www.theguardian.com/us-news/2018/dec/05/hate-lugging-cat-litter-dont-make-us-amazon-warehouse-workers-do-it>.

267. Will Evans, 'How Amazon hid its safety crisis,' *Reveal*, September 29, 2020, <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>.

268. Michael Sainato, "'I'm not a robot': Amazon workers condemn unsafe, grueling conditions at warehouse,' *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>.

268. Michael Sainato, 'Accidents at Amazon: workers left to suffer after warehouse injuries,' *The Guardian*, July 30, 2018, <https://www.theguardian.com/technology/2018/jul/30/accidents-at-amazon-workers-left-to-suffer-after-warehouse-injuries>.

269. Michael Sainato, 'Revealed: Amazon touts high wages while ignoring issues in its warehouses,' *The Guardian*, August 6, 2019, <https://www.theguardian.com/technology/2019/aug/06/amazon-workers-minimum-wage-injuries-working-conditions>.

informed management the way the boxes were stacked posed a safety issue’;²⁷⁰

- according to Warehouse Workers Stand Up, Eugene Johnson, who worked as an ‘on-site medical representative’ at an Amazon fulfilment centre near Logan Township in New Jersey, was fired, when he reported to the OSHA health and safety issues that he had raised with managers but that they had ignored.²⁷¹

These reports raise the question of whether workers might be expected, as a matter of routine, to carry out tasks in such a way that they might become injured or unwell.

Task Quality

There is also evidence to suggest that production workers lack a substantial degree of control over the quality of their work, and that workers have to accept a disciplinary system that considers any mistakes they make. For example,

- it was reported in *The Sunday Times*, in December 2016, following an undercover investigation into the disciplinary process at Amazon’s Dunfermline fulfilment centre in Scotland, that workers would accrue penalty points for making too many errors;²⁷²
- legal documents obtained by *The Verge* reveal that Amazon’s computer system monitors, not only the productivity of each worker but also the quality of their work;²⁷³
- a former temporary worker at Amazon’s Swansea fulfilment centre during the peak season of 2012 reported that workers would accrue penalty points for making errors such as ‘not putting the right amount of brown paper in a box or forgetting to put in the advertisements’;²⁷⁴
- Kendra Briken and Phil Taylor, who interviewed temporary and permanent workers at Amazon’s Swansea fulfilment centre, report that workers accrue penalty points for making “‘etiquette errors’” – for example, when a receiver checks a product description against a barcode or when a stower records an item’s location in the warehouse – with three such errors in a week leading to disciplinary action;²⁷⁵
- workers at the Shakopee fulfilment centre who took strike action in July 2019 told *The Verge* that their permissible error rate had changed so that, whereas in the

270. Warehouse Workers Stand Up, *The Future of the Warehouse State: New Jersey Must Improve Job Quality in Warehouse Distribution Centers* (Warehouse Workers Stand Up, 2018), 8, http://warehouseworkersstandup.org/wp-content/uploads/2018/12/The_Future_of_the_Warehouse_State.pdf.

271. Warehouse Workers Stand Up, *The Future of the Warehouse State: New Jersey Must Improve Job Quality in Warehouse Distribution Centers* (Warehouse Workers Stand Up, 2018), 8, http://warehouseworkersstandup.org/wp-content/uploads/2018/12/The_Future_of_the_Warehouse_State.pdf.

272. Mary O’Connor, ‘Sick Amazon “elves” face sack,’ *The Times*, December 11, 2016, <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>.

273. The computer system issues warnings or terminations automatically; see Colin Lecher, ‘How Amazon automatically tracks and fires warehouse workers for “productivity”,’ *The Verge*, April 25, 2019, <https://www.theverge.com/2019/4/25/18516004/amazon-warehouse-fulfillment-centers-productivity-firing-terminations>.

274. Swansea Socialist Party, ‘For Workers’ Rights at Amazon,’ *News*, September 28, 2013, <http://www.swanseasocialistparty.org.uk/view/news/2013-09-28/268-for-workers-rights-at-amazon.html>.

275. Briken and Taylor describe how managers monitor and control worker performance via an ‘Asset Management Programme (AMP) that measures workers’ speed, productivity, accuracy and errors in real-time’ and ‘provides the statistical basis for direct supervisor intervention.’ See Kendra Briken and Phil Taylor (2018), ‘Fulfilling the “British way”: beyond constrained choice – Amazon workers’ lived experiences of workfare,’ *Industrial Relations Journal* 49, no. 5-6 (November 2018): 453-53, <https://onlinelibrary.wiley.com/doi/abs/10.1111/irj.12232>.

past they had been allowed 'one error per 1,000 items', now they were permitted 'one error per 2,200.'²⁷⁶

This calls for further research, including the implications of such control, or lack thereof, on workers' physical and mental wellbeing.

4.3.2 Trust

The degree of trust that Amazon fulfilment centre workers have in their co-workers, including managers, can be understood as the amount of confidence they have that those with whom they are working will not harm them. When Amazon workers feel threatened by managers (for example, when they are told that they will lose their job, if they fail to maintain the expected rate of production), they feel uncared for and their innate need for relatedness, through secure attachment to others, remains unsatisfied. If human beings experience pleasure through being cared for, their experience of not being cared for by others, and of feeling insecure as a result, will tend to result in suboptimal wellbeing. Therefore, we may say that, the less Amazon production workers feel they can trust colleagues, including managers, the more mental strain they will experience, and the greater will be their risk of suffering mental harm.²⁷⁷

Once again, the degree of trust that Amazon workers have in their colleagues could be measured through a survey of the workforce. However, in the absence of such a survey it is possible to begin to explore the issue of trust using information from published accounts of workers' experiences. Consistent themes emerged from our examination of these reports, regarding the extent to which some managers are alleged to:

- emotionally manipulate production workers;
- attempt to deceive both external authorities and production workers;
- victimise production workers and other managers;
- harass and intimidate production workers;
- subject production workers to unreasonable surveillance;
- be negligent in relation to production workers' health and safety.

In addition, production workers in the USA report problems with receiving compensation from Amazon's insurers, when they are seriously injured. Each of these themes is discussed, in turn, below.

276. Josh Dzieza, "'Beat the Machine': Amazon Warehouse Workers Strike to Protest Inhumane Conditions," *The Verge*, July 16, 2019, <https://www.theverge.com/2019/7/16/20696154/amazon-prime-day-2019-strike-warehouse-workers-inhumane-conditions-the-rate-productivity>.

277. This argument is based on the insights of self-determination theory. See Edward L. Deci and Richard M. Ryan, 'The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behaviour,' *Psychological Inquiry* 11, no. 4 (2000): 227-68, <https://www.jstor.org/stable/1449618>, and Richard M. Ryan and Edward L. Deci, 'Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being,' *American Psychologist* 55, no. 1 (January 2000): 68-78, <https://psycnet.apa.org/doiLanding?doi=10.1037%2F0003-066X.55.1.68>.

Manipulation

Numerous reports indicate the extent to which production workers feel manipulated by fulfilment centre managers. For example, in the first instalment of *The Amazon Diaries* in *The Guardian* newspaper, an anonymous Amazon worker describes witnessing the effects of ‘sexism, racism, and ageism in a promotion culture tainted with favoritism’, the manipulation of workers via the disciplinary process, and ‘an emotionally toxic culture’.²⁷⁸ In the second instalment, the same worker alleges that, when workers suffer injuries, safety teams deflect responsibility for the underlying issue onto those who have suffered the injury, questioning them on whether or not they still wish to report the injury. The anonymous worker writes that ‘[w]e know [that] the safety team isn’t here for us. We know that if we get hurt, it’s most likely going to fall on us.’²⁷⁹ In the same vein, Amazon worker Ashleigh Strange told *Logic* that one of the reasons workers tend not to report injuries is that managers will ‘find a way to tell you it’s your fault’.²⁸⁰

A worker at the Amazon warehouse in Chester, Virginia, used the term ‘mind games’, when describing the working environment there: ‘They paint this picture of it being a fun place. That you get to play games during breaks and have so much fun. The only games they play with you is mind games.’²⁸¹

Deception

Numerous reports also claim that some managers are involved in covering up rule-breaking inside fulfilment centres. One area of rule breaking relates to the obligation to maintain social distancing during the coronavirus pandemic. For example,

- William A. Moore III, an Amazon worker at a fulfilment centre in New Jersey, disclosed to *Roll Call* that, although workforce team meetings were still occurring, despite Amazon having stated publicly that it had suspended them during the coronavirus pandemic, managers had ‘asked him to report in an internal survey that they weren’t happening, and that workers were keeping six feet apart’;²⁸²
- an anonymous Amazon worker at a fulfilment centre in Pennsylvania also disclosed to *Roll Call* that, during the coronavirus pandemic, workers had been given a piece of paper instructing them, in English and Spanish, how to answer a question in an internal survey about whether or not they had seen ‘crowding at breaks, meals and shift changes’.²⁸³

Another area of rule breaking in which managers are allegedly involved relates to the recording of work-related injuries. For example, a former safety official in the Campbellsville warehouse told *The Seattle Times* that ‘in-house medical staff were

278. Anonymous, ‘Our new column from inside Amazon: “They treat us as disposable”’, *The Guardian*, November 21, 2018, <https://www.theguardian.com/us-news/2018/nov/21/our-new-column-from-inside-amazon-they-treat-us-as-disposable>.

279. Anonymous, ‘Hate lugging cat litter? Don’t make us Amazon warehouse workers do it,’ *The Guardian*, December 5, 2018, <https://www.theguardian.com/us-news/2018/dec/05/hate-lugging-cat-litter-dont-make-us-amazon-warehouse-workers-do-it>.

280. Sam Adler-Bell, ‘Surviving Amazon,’ *Logic*, August 3, 2019, <https://logicmag.io/bodies/surviving-amazon/>.

281. Hamilton Nolan, ‘True Stories of Life as an Amazon Worker’, *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

282. In addition, Moore said that posters in the warehouse instructed workers how to answer the question in the internal survey about whether or not workers were maintaining social distancing. See Emily Kopp, ‘Amazon workers tally virus cases, voice alarms about risks’, *Roll Call*, April 29, 2020, <https://www.rollcall.com/2020/04/29/amazon-workers-tally-virus-cases-voice-alarms-about-risks/>.

283. Ibid.

asked to treat wounds, when possible, with bandages rather than refer workers to a doctor for stitches that could trigger federal reports', while other safety workers revealed that they were under pressure to attribute workplace injuries 'to pre-existing conditions' so that these 'did not trigger federal reports.'²⁸⁴

In fact, evidence of systematic underreporting or misclassification of work-related injuries was uncovered by *The Intercept* and Type Investigations during the course of their inquiry into the provision of medical care in Amazon's fulfilment centres. For example, four of the '15 current and former on-site medical representatives' who were interviewed revealed that they had been 'pressured to underreport or misclassify injuries.'²⁸⁵ In addition,

- when the OSHA investigated the Robbinsville fulfilment centre in 2015, inspectors found that '26 injuries over four months' had been 'left out of official recordkeeping logs', contrary to federal regulations, and that 'supervisors were discouraging workers from reporting injuries';
- when the OSHA inspected an Amazon warehouse in Kenosha, they 'found that the warehouse failed to record 15 injuries in a 28-day period in October 2015';
- when the OSHA inspected the fulfilment centre in Florence, New Jersey, for the period from 20 September to 31 October 2017, following a complaint about managers discouraging workers from reporting injuries, they 'identified four instances of medical mismanagement – broadly, anything that compromises workers health – and nine additional instances of suspected mismanagement within the six-week period', as well as 'two cases that should have been recorded and an additional six potential record-keeping violations';²⁸⁶
- between January 2016 and August 2018, at least three complaints about inaccurate injury record keeping in different Amazon fulfilment centres were made, anonymously, to the OSHA.^{287, 288}

284. Hal Bernton and Susan Kelleher, 'Amazon warehouse jobs push workers to physical limit,' *The Seattle Times*, April 3, 2012, <https://www.seattletimes.com/business/amazon-warehouse-jobs-push-workers-to-physical-limit/>.

285. A former safety manager at an Amazon warehouse in southern California between 2016 and 2017 told *The Intercept* that 'managers face immense internal scrutiny from their own supervisors if their fulfilment centers report too many injuries to federal authorities' and that his manager 'pressured him to participate in a system in which managers reviewed each other's injury reports to justify classifying some incidents in a way that wouldn't require official documentation'. This practice, which was also confirmed by an on-site medical representative 'who worked at an Amcare clinic around the same time', involved safety managers reviewing the classification of incidents that physicians had made using 'NRJs' or 'non-recordable justifications' and sending these reviews to Amazon's regional managers, who 'would then have to approve the decision not to record an injury.' Both the former safety manager and the on-site medical representative who spoke to *The Intercept* said that they believed that Amazon has stopped this practice. See H. Claire Brown, 'How Amazon's On-Site Emergency Care Endangers the Warehouse Workers It's Supposed to Protect,' *The Intercept*, December 2, 2019, <https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>.

286. Of the four cases of medical mismanagement, one involved Amcare not sending a worker with a serious eye injury for external medical treatment, while the other three 'involved failure to follow protocol and failure to refer employees to the doctor for musculoskeletal injuries like strains and sprains'. See H. Claire Brown, 'How Amazon's On-Site Emergency Care Endangers the Warehouse Workers It's Supposed to Protect,' *The Intercept*, December 2, 2019, <https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>.

287. The three complaints referred to Amazon warehouses in Carlsbad, California; Lebanon, Tennessee; and Phoenix, Arizona. See H. Claire Brown, 'How Amazon's On-Site Emergency Care Endangers the Warehouse Workers It's Supposed to Protect,' *The Intercept*, December 12, 2019, <https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>.

288. According to *Reveal*, the OSHA re-inspected the Robbinsville warehouse in 2017 and found that workers were still being discouraged by managers from reporting injuries. This was the year after Brian Huseman, Vice President for Public Policy, claims that Amazon changed its approach to record keeping 'and began to take an aggressive stance on recording injuries – no matter how big or small'. See Will Evans, 'How Amazon hid its safety crisis,' *Reveal*, September 29, 2020, <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>. The change in approach to record keeping is described in Brian Huseman's letter to Senators Elizabeth Warren and Edward Markey and Representative Joseph Kennedy III; see Will Evans, 'Amazon Safety Response 02 21 2020,' <https://www.documentcloud.org/documents/6786669-Amazon-Safety-Response-02-21-2020.html>. See also the letter that the Senators and the Representative sent to Amazon, in response to an earlier report from *Reveal* about injury rates in Amazon's fulfilment centres: Sherrrod Brown, 'Brown, Sanders, Baldwin Demand Answers from Amazon as Work-Related Injuries Continue to Rise,' Press Release, February 10, 2020, <https://www.brown.senate.gov/newsroom/press/release/brown-sanders-baldwin-demand-answers-from-amazon-as-work-related-injuries-continue-to-rise->

The most recent investigation of injury rates in Amazon's fulfilment centres by *Reveal* made similar findings and illustrates ways in which some of Amazon's managers are alleged to avoid 'lost-time injuries' being recorded on OSHA logs.

- One way involves reassigning injured workers to jobs that carry lighter duties, a practice that led to a fall in the 'rate of lost-time injuries' in 2019 but that led to a simultaneous rise in the 'rate of injuries needing a job restriction or accommodation'.²⁸⁹
- Another way involves re-contracting with providers of external medical care that are more amenable to employers' interest in keeping recordable injuries to a minimum. For example, in March 2019 Amazon's safety managers at the Thornton fulfilment centre in Colorado terminated the contract with the existing medical care provider and, in April 2019, signed a new contract with a company, Advanced Urgent Care & Occupational Medicine, that promised to treat workers' injuries in such a way that they would not need to be recorded in OSHA logs.²⁹⁰

This latest investigation by *Reveal* suggests that Amazon's safety managers have been responding to the injury problem in the fulfilment centres, not by addressing the causes of the problem (the physical and mental demands of employment) but by managing the effects of that problem, in different ways, and, in doing so, saving on the cost of paying workers to take time off as well as the cost of paying workers' compensation insurance.^{291, 292}

Workers also reported feeling deceived by managers over the payment of bonuses. For example, a worker at a sortation centre in Moreno Valley, California, stated:²⁹³

"We were promised that if we met a certain quota of products shipped during Peak, we'd all get big bonuses ... by the end of Peak. Well, we met the quota. The site as a whole did really well. ... But what we weren't told was that even though our site met the quota, since ... other sites in the network did not, we would not be getting our bonuses. This little condition was never explained to us beforehand. I consider this a lie by omission. Yes, Amazon lied to me."

289. Will Evans, 'How Amazon hid its safety crisis,' *Reveal*, September 29, 2020, <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>. In his letter to Senators Elizabeth Warren and Edward Markey, and Representative Joseph Kennedy III, Brian Huseman, Amazon's Vice President for Public Policy, denied that such a practice existed within Amazon's fulfilment centres; see Will Evans, 'Amazon Response to Warren Markey Kennedy Letter,' <https://www.documentcloud.org/documents/7215123-Amazon-Response-to-Warren-Markey-Kennedy-Letter.html>.

290. Medical staff who worked for this company told *Reveal* that 'clinic directors instructed them to avoid giving any treatment to Amazon workers that would make their injuries recordable'. This meant that medical staff were under pressure to send Amazon employees back to work without prescribing for them 'any medication, days of rest, physical therapy or workplace restrictions, such as guidance to avoid climbing stairs or lifting anything above a certain weight.' Moreover, the owner of Advanced Urgent Care, Tony Euser, confirmed to *Reveal* that some employers 'seek to limit recordable injuries and lean on workers' compensation doctors to help them out'. Will Evans, 'How Amazon hid its safety crisis,' *Reveal*, September 29, 2020, <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>.

291. Of course, by managing the effects of the problem, Amazon also hopes to become less of a target for OSHA inspection.

292. Complementing this response to the problem is the assumption, which managers make, 'that workers are to blame for their own injuries' and that they should therefore 'instruct workers on how to lift and bend to ... reduce the risks of injury.' However, as the authors of *Packaging Pain* point out 'stretching and lifting instructions are not preventing the injuries, because the injuries workers are experiencing are caused by unsafe conditions at work. Four decades of research shows that designing safer workplaces and establishing safer processes to organize the work are the most effective approaches for reducing injuries. See Athena Coalition, *Packaging Pain: Workplace Injuries in Amazon's Empire*, December 2019 (Athena Coalition, 2019), 19, <https://293.www.amazonpackagingpain.org/the-report>.

293. Hamilton Nolan, 'Inside an Amazon Warehouse, the Relentless Need to "Make Rate"', *Gawker*, June 6, 2016, <https://gawker.com/inside-an-amazon-warehouse-the-relentless-need-to-mak-1780800336>.

Another worker at the Chester warehouse in Virginia described a similar problem with how managers dealt with bonuses:²⁹⁴

“Another part of unrealistic goals is they have this bonus pay deal, where if the warehouse has no errors, you get a bonus in your paycheck. Of course, that never happens, and you NEVER see how the other warehouses do. They SAY other warehouses have better numbers, but they do not show you how the warehouses elsewhere calculate it. You just have to take their word for it, that the Chester Virginia warehouse is a bunch of asshole losers.”

John Burgett suggests that managers deceive production workers through creating illusions and through pretence. In his blog about working in Amazon’s Jeffersonville fulfilment centre, he argues that the relationship between employer and employee is characterised by an ‘illusion of voice’ – that is, the company will always listen to what the employee has to say and will pretend that new policies are benevolent to workers but, in reality, will only make policy changes, if they are to the ‘strategic advantage’ of the company.²⁹⁵

Finally, James Bloodworth describes managers deceiving temporary workers by offering them the prospect of a permanent contract in exchange for their agreement to change the pattern of their shifts;²⁹⁶ while Spencer Soper reports that temporary workers in one of Amazon’s Breinigsville fulfilment centres feel deceived when they are told, at the start of their employment, that, if they work hard, their employment status will be ‘converted’ from temporary to permanent.²⁹⁷

Victimisation

Some reports indicate that Amazon victimises workers and managers, when they raise concerns about safety or attempt to organise the workforce in response to managers’ negligence in relation to issues of health and safety. Some workers and managers have been victimised by being fired. For example,

- when a manager at Amazon’s Campbellsville warehouse in Kentucky wrote to an Amazon regional vice president to communicate ‘concerns about unreasonable expectations of workers during extremely hot days, how production rates were set and other issues’, the manager was ‘accused’ – about a week later – ‘of a minor rules infraction and given the choice of leaving the company or getting fired’;²⁹⁸
- Bashir Mohamed, a former worker at the Shakopee fulfilment centre who was officially fired ‘for ... violating social distancing guidelines’, claims that the real reason for the termination of his contract was his organisation of the work force

294. Hamilton Nolan, ‘True Stories of Life as an Amazon Worker,’ *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

295. John Burgett, ‘Open Door Policy,’ *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/open-door-policy>.

296. James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 20.

297. The temporary workers whom Soper interviewed said that few temporary workers are made permanent; in fact, it was more usual for temporary workers to quit after a few months, in response to managers’ changing performance expectations, or to have their contract terminated, when they fail to meet these expectations. See Spencer Soper, ‘Inside Amazon’s Warehouse,’ *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

298. The manager could not understand this response because, in his view, “[t]here were huge problems at Campbellsville, and I wanted them to do an investigation.” Hal Bernton and Susan Kelleher, ‘Amazon warehouse jobs push workers to physical limit,’ *The Seattle Times*, April 3, 2012, <https://www.seattletimes.com/business/amazon-warehouse-jobs-push-workers-to-physical-limit/>.

to protest about Amazon's inadequate response to the coronavirus pandemic;²⁹⁹

- Courtney Bowden was officially fired from her job at the fulfilment centre in King of Prussia, Pennsylvania, for engaging in a dispute with a colleague but suspects that the real reason she was fired was her attempt to organise workers in support of demands for Amazon to provide paid time off for part-time workers;³⁰⁰
- a former worker in human resources at Campbellsville said that managers would hold meetings to discuss how to “get rid of people who were hurt.”³⁰¹

Other workers have been victimised by being suspended or written up. For example,

- John Hopkins, who was suspended from his job at Amazon's fulfilment centre in San Leandro, California, for being on site, after the end of his shift, longer than permitted (a policy that Hopkins says is new to him), suspects that the real reason for his suspension was 'distributing pamphlets with information about union organizing to co-workers ... in response to safety concerns he ... had about how Amazon has protected workers from coronavirus';³⁰²
- Hibaq Mohamed, who 'was written up on July 10 for spending too much time away from her work station, or logging too many "time off tasks"', believes that this was in response to her raising concerns, in public, about Amazon workers' safety during the coronavirus pandemic.³⁰²

Harassment/Intimidation

There are also reports that some managers harass and intimidate production workers. For example, Hibaq Mohamed disclosed to The Open Markets Institute that fulfilment centre workers often feel harassed by management:³⁰⁴

“Managers are always hovering around ... They feel comfortable physically harassing people; that's a regular thing ... The workers who speak up, they feel threatened physically and mentally.”

Other reports claim that some managers of fulfilment centres engage in bullying and harassment of production workers:

- just over 40% of the respondents to the first wave of the Organise survey of

299. Jason Del Rey, 'Amazon fired 3 employee activists who criticized its warehouse safety measures,' *Vox*, April 14, 2020, <https://www.vox.com/recode/2020/4/14/21220899/amazon-fired-activist-employees-warehouse-conditions-emily-cunningham-bashir-mohamed-maren-costa>.

300. Bowden has submitted a complaint about her dismissal to the National Labor Relations Board. Samir Quasir, who works at Amazon's delivery station in Chicago, also claims that he received a written warning from managers about not following the social distancing rule, despite other workers not being able to follow the rule and not being reprimanded. Quasir says that the real reason he was given a warning was his participation in protests about working conditions in the delivery station. See Sebastian Herrera, 'Fired Amazon Warehouse Workers Accuse Company of Retaliation, Which It Denies,' *The Wall Street Journal*, April 14, 2020, <https://www.wsj.com/articles/fired-amazon-warehouse-workers-accuse-company-of-retaliation-which-it-denies-11586891334?mod=flipboard>.

301. She said that, whenever she tried to find injured workers alternative jobs to do, managers would reject her suggestion because “[t]hey wanted the workers to exhaust their time off so they could fire them.” Hal Bernton and Susan Kelleher, 'Amazon warehouse jobs push workers to physical limit,' *The Seattle Times*, April 3, 2012, <https://www.seattletimes.com/business/amazon-warehouse-jobs-push-workers-to-physical-limit/>.

302. Michael Sainato, 'Amazon is cracking down on protesters and organizing, workers say,' *The Guardian*, May 5, 2020, <https://www.theguardian.com/technology/2020/may/05/amazon-protests-union-organizing-cracking-down-workers>. It is reported that his suspension was lifted in June 2020, following an internal health and safety investigation; see Shirin Ghaffary and Jason Del Rey, 'The real cost of Amazon,' *Vox*, June 29, 2020, <https://www.vox.com/recode/2020/6/29/21303643/amazon-coronavirus-warehouse-workers-protest-jeff-bezos-chris-smalls-boycott-pandemic>.

303. Mohamed wrote to the US Attorney General, Keith Ellison, to complain; see Annie Palmer, 'Amazon warehouse worker says she was written up in July for taking too many breaks from work,' *CNBC*, July 17, 2020, <https://www.cbc.com/2020/07/17/amazon-worker-claims-company-wrote-her-up-for-tot-policy-in-july.html>.

304. Daniel A. Hanley and Sally Hubbard, *Eyes Everywhere: Amazon's Surveillance Infrastructure and Revitalizing Worker Power* (Open Markets Institute, September 2020), 11.

Amazon workers in the UK said that they had witnessed bullying or harassment in their warehouse;³⁰⁵

- a worker who responded to the first wave of the Organise survey said that, when managers sent home a packer because she was unfit to do a different job, she ‘was bullied into signing a piece of paper she had no understanding of’ and was distressed and embarrassed as a result;³⁰⁶
- commenting on Amazon’s policy on break time, John Burgett writes that ‘Amazon systematically hassles good employees for no good reason’.³⁰⁷

There is also a report of intimidation of workers by managers at the Chicago delivery station DCH1.³⁰⁸ When Amazon workers at the delivery station walked off the job in protest at the lack of protection from the coronavirus at the end of March 2020, Amazon’s managers responded with ‘basic surveillance and intimidation’ as workers stood outside the warehouse refusing to work. The workers suspected that they were being watched so that managers could accuse them of violating the social distancing rule, even though they say that it is impossible for them to complete their work tasks, while keeping to this rule.^{309, 310}

While the kind of serious allegations cited above clearly require further investigation to test their veracity and extent, such serious allegations emerging regularly within the public accounts of many different workers suggest a level of stress and antagonism within the work process that is likely to have harmful consequences on the mental health of workers.

Surveillance

In a report for The Open Markets Institute, Daniel Hanley and Sally Hubbard draw attention to ‘the distrust often created between workers and employers because of the implied condition that employers are surveilling employees because employers suspect that employees might be engaged in nefarious behaviour.’^{311, 312} Multiple reports indicate that Amazon does monitor, systematically, not only the movements of workers inside fulfilment centres but also their communications via email. For example,

- according to Hibaq Mohamed, a worker at the Shakopee fulfilment centre in Minnesota, Amazon’s managers use CCTV cameras to monitor workers and

305. Organise, *Amazon: What’s it like where you work?* (Organise, 2018), 13, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

306. *Ibid.*, 14.

307. John Burgett, ‘Scan to Scan, Pick to Pick,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/scan-to-scan-pick-to-pick>.

308. Annie Palmer, ‘Amazon is tracking warehouse workers and says it could fine them for violating social distancing rules,’ *News*, April 6, 2020, <https://www.cnbc.com/2020/04/06/amazon-says-workers-could-be-fired-for-violating-social-distancing-rules.html>.

309. Alex Press, ‘“They Don’t Think Our Lives Matter as Much as Theirs”: An Interview with Terry Miller,’ *Jacobin*, April 3, 2020, <https://jacobinmag.com/2020/04/chicago-amazon-warehouse-walkout-coronavirus-pandemic>. Samir Quasir, one of the Chicago workers who participated in the protests about working conditions, alleges that Amazon’s managers retaliated against him for participating by giving him a final written warning about violating the social distancing rule; Caroline O’Donovan, ‘The NLRB Is Looking Into Claims That Amazon Violated Employees’ Rights During The Coronavirus Pandemic,’ *BuzzFeed News*, April 18, 2020 <https://www.buzzfeednews.com/article/carolineodonovan/federal-labor-regulators-are-looking-into-claims-that>. The full set of complaints about violations of the National Labor Relations Act (1935), which the Chicago workers submitted to the NLRB and which include unlawful disciplining, interrogation, and surveillance of workers engaging in trade union activity, is available to read here: https://www.documentcloud.org/documents/20514752-ulp_charge_for_safety_strike_retaliation_etc.

310. It is reported that, in February 2021 the NLRB informed the Chicago workers who had submitted the complaint about unfair labour practices that their claim had merit; and in March the same year, the NLRB told them that Amazon would be settling the case with the NLRB. See Rachel Cohen, ‘Amazon Retaliated Against Chicago Workers Following Spring Covid-19 Protests, NLRB Finds,’ *The Intercept*, March 17, 2021, <https://theintercept.com/2021/03/17/amazon-covid-chicago-nlr-strike/>.

prevent them from organising;³¹³

- in April 2020, it was reported that Amazon wanted to prevent employees from expressing disagreement with company policies via internal email lists through stricter enforcement of moderation rules – a development that employees said would make it ‘impossible for workers to use listservs to mobilize their colleagues’;³¹⁴
- in September 2020, it was reported that
 - a group of Amazon employees were ‘alarmed’ when they discovered that Human Resources was monitoring internal email lists ‘dedicated to employees who are minorities and those who are involved in activism’;³¹⁵
 - an employee from Amazon Web Services had sent an email to ‘a series of internal Amazon listservs’ to inform them ‘that their communications were being monitored for labor organizing efforts and processed in a data farming project by the company’s Global Security Operations’;³¹⁶
 - Amazon ‘has for years had a sophisticated, secret program and team to spy on its workers in closed Facebook groups’;³¹⁷

in October 2020, it was reported that Amazon ‘is making significant investment in technology to track and counter the threat of unionization’ and that it had advertised two vacancies, for the posts of Intelligence Analyst and Senior Intelligence Analyst, both of which were connected to its ‘Global Security Operations’ (GSO) Global Intelligence Program (GIP), the team that’s responsible for physical and corporate security operations such as insider threats and industrial espionage’.^{318, 319}

311. Daniel A. Hanley and Sally Hubbard, *Eyes Everywhere: Amazon’s Surveillance Infrastructure and Revitalizing Worker Power* (Open Markets Institute, September 2020), 5. Commenting on the extent of contemporary workplace surveillance, Hanley and Hubbard write that ‘employers have extended their surveillance beyond what any employer could reasonably justify – and Amazon is the quintessential offender. Amazon has adopted worker surveillance technologies in nearly every aspect of its operations, creating exceptionally oppressive conditions for its workers.’ These technologies include the network of CCTV cameras that monitor the movements of workers inside fulfillment centres, the body scanners that workers must pass through when leaving the floor of the warehouse, and the scanners that workers must use to complete their tasks, that monitor their rate of productivity and that display commands issued by Amazon’s computer system. See Daniel A. Hanley and Sally Hubbard, *Eyes Everywhere: Amazon’s Surveillance Infrastructure and Revitalizing Worker Power* (Open Markets Institute, September 2020), 7-9.

312. James Bloodworth makes a similar point, when commenting on his experience of being under constant surveillance in Amazon’s Rugeley fulfilment centre: ‘There is something unusually oppressive about an environment like that. ... The entire time I was working at Amazon I felt as though I was under a dark cloud of suspicion. I would find myself cringing under the accusatory questions of a supervisor or security guard when I had done nothing wrong.’ See James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 49.

313. Mohamed told The Open Markets Institute: ‘“When they want to know something, the management, they use that camera. ... when there was a slowdown of work before the pandemic in my area ... we [workers] would come together and talk. But [the camera] is how they can come so quickly and spread workers out.”’ She said that workers are prohibited from talking to each other, on the floor of the warehouse, because managers know that it is through talking that workers can organise themselves. She also said that the introduction of social distancing inside Amazon’s warehouses has given managers another opportunity to retaliate against labour organisers by giving them warnings for violating the social distancing rule, even when managers were not complying with this rule. See Daniel A. Hanley and Sally Hubbard, *Eyes Everywhere: Amazon’s Surveillance Infrastructure and Revitalizing Worker Power* (Open Markets Institute, September 2020), 12-13.

314. Shirin Ghaffary and Jason Del Rey, ‘Amazon is cracking down on internal communication after a surge in worker activism,’ *Vox*, April 29, 2020, <https://www.vox.com/recode/2020/4/29/21240049/amazon-internal-corporate-employee-backlash-email-listservs-worker-activism-coronavirus>.

315. Shirin Ghaffary and Jason Del Rey, ‘Amazon employees fear HR is targeting minority and activism groups in email monitoring program,’ *Vox*, September 24, 2020, <https://www.vox.com/recode/2020/9/24/21455196/amazon-employees-listservs-minorities-underrepresented-groups-worker-dissent-unionization>.

316. Lauren Kaori Gurley and Janus Rose, ‘Amazon Employee Warns Internal Groups They’re Being Monitored For Labor Organizing,’ *Vice*, September 25, 2020, <https://www.vice.com/en/article/m7jz7b/amazon-employee-warns-internal-groups-theyre-being-monitored-for-labor-organizing>.

317. The workers being monitored were Amazon Flex Drivers, who are classified by Amazon as ‘independent contractors’ rather than as employees; see Lauren Kaori Gurley and Joseph Cox, ‘Inside Amazon’s Secret Program to Spy On Workers’ Private Facebook Groups,’ *Vice*, September 1, 2020, <https://www.vice.com/en/article/3azegw/amazon-is-spying-on-its-workers-in-closed-facebook-groups-internal-reports-show>. The monitoring is carried out by Amazon’s Advocacy Operations Social Listening Team; see Joseph Cox, ‘Senators Demand Amazon Stop Spying on Workers,’ *Vice*, September 17, 2020, <https://www.vice.com/en/article/bv8emz/senators-demand-amazon-stop-spying-on-workers-flex-drivers>.

318. The new technology that Amazon is planning to introduce is called the ‘geo Spatial Operating Code’, which is intended to ‘help the company analyse and visualize at least around 40 different data sets’. A former Amazon executive said that Amazon sees unionization as a threat to its business model because ‘its warehouse operations would become less efficient if employees unionized.’ See Jason Del Rey and Shirin Ghaffary, ‘Leaked: Confidential Amazon memo reveals new software to track unions,’ *Vox*, October 6, 2020, <https://www.vox.com/recode/2020/10/6/21502639/amazon-union-busting-tracking-memo-spic>.

319. One of the threats that was mentioned most often in the advertisements was the threat from organised labour. See Lorenzo Franceschi-Bicchierai, ‘Amazon Is Hiring an Intelligence Analyst to Track “Labor Organizing Threats”,’ *Vice*, September 1, 2020, <https://www.vice.com/en/article/qj4aqw/amazon-hiring-intelligence-analyst-to-track-labor-organizing-threats>.

Humiliation

Some reports claim that in some cases Amazon's managers attempt to control workers' performance by publicly shaming them when they underperform. For example, Ashleigh Strange, who worked at an Amazon fulfilment centre in Breinigsville, Pennsylvania, between 2013 and 2015 told *Logic Magazine* that managers would display 'a ranking of employee productivity at the end of each day' as a way of shaming the worst performing workers.³²⁰

Writing about his experience of working in Amazon's Jeffersonville fulfilment centre, John Burgett reports the same managerial tactic:³²¹

"[i]n 2014, spreadsheets of worker's individual rates were posted four times per day (first break, lunch, second break, end of shift) on a bulletin board at the AFE [Amazon Fulfilment Engine] stand-up area ... The rate lists were delineated by all workers at or above expected rate and all those below rate. A worker could be talked to, or written up for falling below rate for as little as a few hours. These two forms of reprimand were not automatic, but were always looming for a worker who was not working fast enough."

Negligence

Numerous reports allege that, in relation to matters of health and safety, some managers deliberately overlook breaches of regulations, to ensure that production targets are met. For example,

- in the second instalment of *The Amazon Diaries*, an anonymous Amazon worker describes how managers tell production workers that safety is the top priority but, when the safety teams are absent, expect workers to breach safety rules to ensure that production targets are met;³²²
- James Bloodworth, in his book *Hired*, describes workers at Rugeley having to run to meet productivity targets, despite running in a fulfilment centre being prohibited under health and safety legislation;³²³
- the authors of a report about working conditions in Amazon's US-based fulfilment centres that was published by *Reveal* state that production workers 'had to break the safety rules to keep up'.³²⁴

Other reports indicate that fulfilment centre managers were negligent, in relation to transmission of the coronavirus. For example,

320. The rankings could be displayed on a whiteboard, an electronic display or as a printed report. See Sam Adler-Bell, 'Surviving Amazon,' *Logic*, August 3, 2019, <https://logicmag.io/bodies/surviving-amazon/>.

321. John Burgett, 'AFE (Amazon Fulfillment Engine),' *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/afe-amazon-fulfillment-engine>.

322. This might mean expecting workers to unload an inbound shipment individually rather than collectively. See Anonymous, 'Hate lugging cat litter? Don't make us Amazon warehouse workers do it,' *The Guardian*, December 5, 2018, <https://www.theguardian.com/us-news/2018/dec/05/hate-lugging-cat-litter-dont-make-us-amazon-warehouse-workers-do-it>. It might also mean, in the case of picking items from shelves that are '6 or 7 feet high', jumping up to reach the item or standing 'on the metal ledge of the bottom-most shelf' rather than fetching a stool. See Hamilton Nolan, 'As Amazon Struggles, More Insiders Speak,' *Gawker*, July 25, 2014, <https://gawker.com/as-amazon-struggles-more-insiders-speak-1610812487>.

323. James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 48.

324. The report's authors write: 'They would jump or stretch to reach a top rack instead of using a step ladder. They would twist and bend over to grab boxes instead of taking time to squat and lift with their legs. They would hoist extra-heavy items alone to avoid wasting time getting help. They had to, they said, or they would lose their jobs. So they took the risk.' They also tell us that, if workers were to become injured, 'they would lose their job anyway.' See Will Evans, 'Behind the Smiles: Amazon's Internal Injury Records expose the true toll of its relentless drive for speed,' *Reveal*, November 25, 2019, <https://revealnews.org/article/behind-the-smiles/>.

- Heather Harr, a worker in Amazon’s Eastvale fulfilment centre in southern California, told *Reveal* that, when the coronavirus started to spread across the USA in March 2020, ‘Amazon management didn’t seem to take the risk of exposure seriously’;³²⁵
- in the UK, the GMB union reported failures to protect workers from infection in the early period of the pandemic, describing workers ‘being left in crowds of 200-300 people and having to reuse equipment multiple times with no hand sanitiser available’;³²⁶
- a worker at a fulfilment centre in New Jersey told *Vox* that she was unable to maintain social distancing properly because, in the case of picking, equipment (such as bins and pallets) is kept in close proximity but is used by multiple workers at the same time.³²⁷

In fact, CNBC reported that Amazon’s response to the coronavirus pandemic had ‘sown feelings of distrust between workers and their managers.’ In their view, the inadequate amount of paid time off, protective equipment (such as masks and disposable gloves) and sanitisation of work places meant that Amazon workers faced a choice between going to work to get paid but at the risk of contracting the virus, and staying at home to protect themselves but without the income they needed to survive. In particular,

- an Amazon worker at a warehouse in Michigan told CNBC that parts of the work process had been designed in such a way that workers could not maintain a distance of six feet from each other;
- Hibaq Mohamed, an Amazon worker at Shakopee in Minnesota, said that ‘there continues to be crowding in the break room’, that workers ‘are using the same microwaves to heat up their lunch’ and that ‘hand sanitizer remains in short supply’;
- three other workers told CNBC that ‘the pressure to make rate ... means they have fewer opportunities to step away and wash their hands, which in some cases is their only choice if there’s no sanitizer available’;
- an Amazon worker in Orlando, Florida, said that ‘her work station remains dirty and employees are only allowed to take two pairs of gloves per week from the facility, despite the CDC [Centers for Disease Control and Prevention] recommending that users throw away gloves after they’re worn once.’^{328, 329}

325. She said that, when she asked for more protective equipment (such as a face mask and disposable gloves), she was told that these were not available, and that, at times, the design of the work process meant that she was unable ‘to keep her distance from co-workers’. On the basis of this experience, she concluded that Amazon’s managers cared more about maintaining production than about protecting workers from the risk of contracting the coronavirus. Will Evans, ‘Inside one of Amazon’s hardest-hit warehouses: “Why aren’t we closing the building?”’, *Reveal*, May 20, 2020, <https://www.revealnews.org/article/inside-one-of-amazons-hardest-hit-warehouses-why-arent-we-closing-the-building/>.

326. GMB Union, ‘“Petrified” Amazon workers left in “300 Strong Crowds”’, *News*, March 24, 2020, <https://www.gmb.org.uk/news/petrified-amazon-workers-left-300-strong-crowds>.

327. Shirin Ghaffary and Jason Del Rey, ‘The real cost of Amazon’, *Vox*, June 29, 2020, <https://www.vox.com/recode/2020/6/29/21303643/amazon-coronavirus-warehouse-workers-protest-jeff-bezos-chris-smalls-boycott-pandemic>.

328. Annie Palmer, ‘“They’re putting us all at risk”: What it’s like working in Amazon’s warehouses during the coronavirus outbreak’, *CNBC*, March 26, 2020, <https://www.cnbc.com/2020/03/26/amazon-warehouse-employees-grapple-with-coronavirus-risks.html>. See also CNBC, ‘What it’s like inside an Amazon warehouse during the Covid-19 pandemic,’ Video, April 22, 2020, <https://www.cnbc.com/video/2020/04/22/amazon-warehouse-in-covid-19-pandemic-an-inside-look.html>.

329. CNBC also reported that the coronavirus infection rate for the Amazon warehouse in Shakopee, Minnesota, was far higher than the infection rate for the surrounding community. See Annie Palmer, ‘Amazon memo reveals Covid-19 was more prevalent in Minnesota warehouse than surrounding areas,’ *CNBC*, June 30, 2020, <https://www.cnbc.com/2020/06/30/amazon-minnesota-warehouse-workers-infected-with-coronavirus-at-higher-rate.html>.

There are also claims that some managers are negligent in relation to the accommodation of workers' physical disabilities. For example, Rina Cummings, who works as a sorter at Staten Island and has a visual impairment, told *The Guardian* that managers had ignored all the safety suggestions that her 'mobility counsellor' had sent to them and that 'new managers consistently try to place her in other departments she is unable to do the work in.' (In fact, she alleged one manager asked her if she was sure that she could not see.)³³⁰

The TUC has also revealed the case of a female Amazon worker being subjected to verbal and physical harassment by a male worker who was intoxicated through alcohol whilst inside a fulfilment centre. After the man had been removed by managers, the woman 'was taken to the canteen where she was told it was not that big a deal and there was no need to record it as an incident. Twenty minutes later two other managers came to speak to her and record the incident but were equally dismissive saying that with 3,000 people on site it was not possible for security to control everyone'. Moreover, the woman 'asked to go home ... but management were more concerned with marking her absent for clocking off early than with what she had experienced.'³³¹

Lack of Compensation

At least two reports also indicate that, when workers have been seriously injured, they have found the process of claiming compensation from Amazon's insurers frustrating, causing them to question the claim that Amazon is an industry leader in this area. For example,

- Jade Velez, a picker at Amazon's Robbinsville fulfilment centre, injured her shoulder on 1 July 2019 yet she discovered, on 8 July 2019, that Sedgwick, Amazon's workers compensation claims insurer, had denied her claim for compensation;³³²
- Michelle Quinones told *The Guardian* that, in 2017 she started to suffer from carpal tunnel syndrome but was repeatedly sent back to work by Amazon's on-site medical team and that, by November 2017, when her condition had worsened to the point at which she required surgery, this was not authorized by Amazon's workers compensation insurer until February 2019.³³³

Conclusion

Although the reports presented above do not provide direct evidence of the degree to which production workers trust their colleagues, they do suggest that some production workers have lost trust in Amazon's managers, safety officials, medical representatives, and insurers. Further independent research is needed to ascertain more fully the pattern

330. Michael Sainato, "'I'm not a robot': Amazon workers condemn unsafe, grueling conditions at warehouse," *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>.

331. TUC, *Challenging Amazon: What can we do about Amazon's treatment of its workers?* (London: TUC, 2020), 14.

332. Michael Sainato, 'Revealed: Amazon touts high wages while ignoring issues in its warehouses,' *The Guardian*, August 6, 2019, <https://www.theguardian.com/technology/2019/aug/06/amazon-workers-minimum-wage-injuries-working-conditions>.

333. Michael Sainato, 'Revealed: Amazon employees are left to suffer after workplace injuries,' *The Guardian*, April 2, 2019, <https://www.theguardian.com/technology/2019/apr/02/revealed-amazon-employees-suffer-after-workplace-injuries>. For a more detailed account of Michelle's experience of injuring herself while working at Amazon, including Sedgwick's covert surveillance of her, see Tom Hall, 'Amazon hired private detectives to spy on injured worker,' News, December 22, 2018, <https://www.wsws.org/en/articles/2018/12/22/amaz-d22.html>.

of attitudes among workers toward managers and fellow workers, and to test the patterns of alleged malpractice by managers discussed above.

4.3.3 Accommodation of Physiological Needs

The extent to which Amazon workers' physiological needs are accommodated can be understood as the extent to which their need for physiological stability is satisfied by the working environment, with consequences for mental health and harm.^{335, 336}

Accommodation of physiological needs encompasses the making of reasonable adjustments to task requirements or to the pace, duration, extension, and ambient temperature and humidity of the work process (to maintain homeostasis). To the extent that these needs are not accommodated, workers will experience displeasure and suboptimal wellbeing. Indeed, we may say that, the less the physiological needs of Amazon's workers are accommodated by the working environment, the greater the mental strain they will be under and the greater will be their risk of suffering mental harm.

Once again, despite a lack of statistical evidence concerning the degree to which the physiological needs of Amazon's production workers are accommodated, it is possible to begin to explore the issue of the accommodation of these needs through examination of the published reports of workers' experiences. These reports reveal a common set of complaints, which call into question the extent to which production workers' need for physiological stability are fully satisfied by the working environment. .

At a general level, some production workers have described feeling as if they are being treated like a robot, a slave, a number, a disposable commodity or even as cattle; these workers are implying that their human needs, including their physiological needs, are not being satisfied.³³⁷ Other production workers have described particular ways in which their physiological needs are left unfulfilled. These are considered, in turn, below., in order to help direct further research.

334. John Burgett, 'February 2016 All hands,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/february-2016-all-hands-meeting>.

335. The concept of physiological need is addressed in the work of Maslow. See Abraham H. Maslow, *Motivation and Personality*, (New York: Harper & Row, 1954), chapter 4.

336. Physiological stability depends on the functioning of processes that are essential to human life and that maintain homeostasis – for example, respiration, nutrition, hydration, urination, defecation, perspiration, etc. See also Valerie Lebel, Marie Alderson, and Marilyn Aita, 'Physiological stability: a concept analysis,' *Journal of Advanced Nursing* 70, no. 9 (September 2014): 1995-2004, <https://onlinelibrary.wiley.com/doi/abs/10.1111/jan.12391>.

337. Michael Sainato, "'I'm not a robot': Amazon workers condemn unsafe, grueling conditions at warehouse," *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>; Lindsay Rittenhouse, 'Amazon Warehouse Employees' Message to Jeff Bezos – We Are Not Robots,' *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>; Anonymous, 'Our new column from inside Amazon: "They treat us as disposable",' *The Guardian*, November 21, 2018, <https://www.theguardian.com/us-news/2018/nov/21/our-new-column-from-inside-amazon-they-treat-us-as-disposable>; Organise, Amazon: What's it like where you work? (Organise, 2018), 10, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>; Max Zahn and Sharif Paget, "'Colony of Hell': 911 Calls From Inside Amazon Warehouses," *The Daily Beast*, March 11, 2019, <https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouses>; Charles Duhigg, 'Is Amazon Unstoppable?' *The New Yorker*, October 21, 2019, <https://www.newyorker.com/magazine/2019/10/21/is-amazon-unstoppable>; John Burgett, 'Labor Commodity, Negotiate,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/labor-commodity-negotiate>; GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 10-11, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf; Hamilton Nolan, 'Amazon Insiders Tell the Good, the Bad, and the Ugly,' May 2, 2014, *Gawker*, <https://gawker.com/amazon-insiders-tell-the-good-the-bad-and-the-ugly-1570866439>.

Injury and Illness

Production workers have complained about being sanctioned, when unwell, and about receiving inadequate medical treatment, when injured. In relation to taking time off from work during periods of illness, for example, just over 55% of the respondents to the second wave of the Organise survey of Amazon workers in the UK said that they had received a disciplinary point for being unwell, including

- two workers, at the Rugeley fulfilment centre, who said that this occurred, despite them following the rules and presenting Amazon with a GP certificate;³³⁸
- another worker at Rugeley who said that she received a disciplinary point for being unwell, when she was pregnant.³³⁹

By sanctioning workers who take time off from work when they are unwell, even when they follow Amazon's rules on reporting illness, Amazon might be interpreted as indicating to those workers that it is not prepared to accommodate their need for time off from work to recover.

In relation to the issue of inadequate medical care, *The Intercept* and Type Investigations found that

- Amazon workers have made at least ten, upheld complaints to the OSHA about matters of health and safety in fulfilment centres since 2015, including allegations that
 - 'employees were being sent back to work with no medical care after requesting treatment'
 - 'injured employees were being told they must wait two weeks to see if their conditions worsened before being seen by doctors'
 - 'Amcare staffers were not adequately trained';
- Amazon workers have also submitted complaints to California's Department of Fair Employment and Housing that refer to 'inadequate medical care' – for example,
 - an employee who injured his back in July 2018 and who 'was treated with ice for two weeks at Amcare and then told that he must return to his regular duties, despite the fact that he had not yet seen a doctor';
 - an injured employee, in 2016, whose request to go to the hospital emergency department was refused;

338. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 8, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>. This was also James Bloodworth's experience of working at Rugeley; see James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 42-43.

339. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 7, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>. In addition, the GMB reports the case of a woman working for Amazon who had a miscarriage and with whom the company reached a settlement that included a non-disclosure agreement. See GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 7, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

- an employee whose back injury was treated with Icy Hot but whose employment was terminated after a request for outside medical treatment;³⁴⁰
- a complaint was made to the OSHA, in 2017, that a temporary worker at the fulfilment centre in Florence, New Jersey, was prevented by managers from receiving first aid, after experiencing a cut to the head, because ‘a corporate audit team was inspecting the building’ at the time of the injury;³⁴²
- when the OSHA re-inspected the Robbinsville fulfilment centre in New Jersey, in 2019, they found ‘six incidents between February and May ... where Amazon failed to provide adequate medical care to injured employees’ and that on-site medical representatives ‘were still working outside their scope of practice with no on-site medical supervision’.³⁴³

By failing to provide adequate medical care to injured workers and by sanctioning workers who challenge this failure, Amazon might be interpreted as indicating to these workers that it is not prepared to provide the treatment they need to recover from their injury and continue working free from physical pain.

Physical Disabilities

In many countries, disability is a legally protected characteristic and, in the UK and the USA, for example, employers are obliged to make reasonable adjustments to the work process, for disabled workers, under the provisions of the Equalities Act (2010) and the Americans with Disabilities Act (1990), respectively. However, some production workers have complained that Amazon’s managers do not make reasonable adjustments to the work process in consideration of disabilities. For example,

- Rina Cummings, a worker at Staten Island who is visually impaired, told *The Guardian* that managers failed to accommodate her disability, when they ignored the safety improvements to her working environment that her ‘mobility counsellor’ had suggested;³⁴⁴
- Nick Veasley told *The Daily Beast* that, when he worked at the Amazon warehouse in Etna, Ohio, he was suffering from irritable bowel syndrome and diverticulitis, which necessitated frequent trips to the bathroom, and that, in response to the amount of time that he was taking off task, managers wrote him up twice and told him that ‘another violation could result in suspension or termination’;³⁴⁵

340. As part of their investigation into the provision of medical care in Amazon’s fulfilment centres, The Intercept and Type Investigations interviewed ‘15 current and former on-site medical representatives ... from fulfilment centers in 11 states’. Of these, ‘[t]en ... said their bosses pressured them to send injured employees back to the warehouse floor when they likely needed additional medical attention’, while ‘[e]ight felt like there was a conflict of interest between their manager’s priorities and their duties as medical professionals’. In addition, a worker at the Robbinsville fulfilment centre complained to the OSHA’s New Jersey office, in September 2015, that Amcare staff were refusing to refer injured workers for outside treatment and that ‘managers ignored doctors’ orders that injured employees be put on light duty.’ See H. Claire Brown, ‘How Amazon’s On-Site Emergency Care Endangers the Warehouse Workers It’s Supposed to Protect,’ *The Intercept*, December 2, 2019, <https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>.

341. Ibid.

342. Ibid.

343. Ibid. See also the letter from Paula Dixon-Roderick, Area Director of the OSHA, to Andrew Ming, Senior Regional EHS Manager, August 19, 2019: Will Evans, ‘Amazon Robbinsville OSHA Letter 081919,’ <https://www.documentcloud.org/documents/6584275-Amazon-Robbinsville-OSHA-Letter-081919.html>.

344. Michael Sainato, ‘“I’m not a robot”: Amazon workers condemn unsafe, grueling conditions at warehouse,’ *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>.

345. Max Zahn and Sharif Paget, ‘“Colony of Hell”: 911 Calls From Inside Amazon Warehouses,’ *The Daily Beast*, March 11, 2019, <https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouses>.

- Briana Henson, a former employee at Amazon’s Robbinsville fulfilment centre in New Jersey, claims that Amazon dismissed her, on 15 July 2016, on the grounds of being disabled.³⁴⁶

By failing to make reasonable adjustments for workers who are disabled, whether permanently or temporarily, Amazon indicates to these workers that it is not prepared to accommodate differences in physical ability.

Scheduled Breaks

Some production workers in published accounts have complained that the length of the scheduled breaks in the work process is inadequate, given the time that production workers must spend walking to the break area. This issue is reported repeatedly. For example,

- workers from the Rugeley fulfilment centre who responded to the first wave of the survey of Amazon workers that was conducted by Organise revealed that, within the allocated break time of 15 minutes, they spent approximately 6 minutes walking to the canteen;³⁴⁸
- James Bloodworth writes that, because the Rugeley warehouse is the size of ‘10 football pitches’, it took him ‘around seven minutes to walk from the back of the warehouse ... and through the airport-style security scanners to the break area’ and ‘two minutes ... to get back to the pick desk at the end of the break’ so that the actual break time was ‘about six minutes’;³⁴⁹
- Neal Heimbach, a worker at a warehouse in Breinigsville, told *International Business Times* that, because it takes three minutes to reach the break area, and three minutes to get back, the length of a break ‘is really nine minutes’;³⁵⁰
- Maureen Donnelly, who worked at Amazon’s Staten Island fulfilment centre and was told that it was the size of ‘18 football fields’, reported, in *The New York Post*, that she spent 15 minutes of the 30 minutes that she was given for her lunch break walking to the canteen;³⁵¹
- a picker at the Amazon warehouse in Chester, Virginia, said that it took five minutes to walk to the break area so that ‘[i]n a ten hour day, you get to sit down for 2 FIVE minute breaks and one 20 minute break’;³⁵²

346. She claims that Amazon denied her the opportunity to take on another role, after she was diagnosed with carpal tunnel syndrome in 2016. She says that Amazon put her on paid leave, questioned her inability to work via a telephone conversation with a supervisor, and then dismissed her. She is suing Amazon for \$75,000 in the Superior Court of the State of New Jersey in Burlington County. See Lindsay Rittenhouse, ‘Amazon Warehouse Employees’ Message to Jeff Bezos – We Are Not Robots,’ *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

347. After a period of physical exertion, human beings need to rest, and to consume food and water, to restore their supplies of energy. An adequate break in the work process, therefore, is one that enables workers to satisfy these physiological needs. Indeed, without sufficient, rest, food, and water, workers lose the ability to concentrate and become less able to maintain control of equipment, thereby putting themselves and co-workers at greater risk of injury.

348. Organise, *Amazon: What’s it like where you work?* (Organise, 2018), 11, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

349. James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 52.

350. Angelo Young, ‘Amazon.com’s Workers Are Low-Paid, Overworked And Unhappy; Is This The New Employee Model For The Internet Age?’ *International Business Times*, December 19, 2013, <https://www.ibtimes.com/amazoncoms-workers-are-low-paid-overworked-unhappy-new-employee-model-internet-age-1514780>.

351. Maureen Donnelly, ‘Amazon warehouses are “cult-like” sweatshops run by robots: ex-employee,’ *The New York Post*, November 30, 2019, <https://nypost.com/2019/11/30/amazon-warehouses-are-cult-like-sweatshops-run-by-robots-ex-employee/>.

352. Hamilton Nolan, ‘True Stories of Life as an Amazon Worker,’ *Gawker*, February 8, 2013, <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

- one worker at an Amazon fulfilment centre in Germany disclosed to *Business Insider* that the lunch break was ‘stressful’ because she spent about 20 minutes going through the security process and 10 minutes actually having a break, while another worker said that the ‘two 15-minute breaks in a standard 10-hour shift are actually two 10-minute breaks because the time to get to a break room or a toilet eats up at least five minutes’.^{353, 354}

By failing to consider the amount of time that workers must spend walking to the break area, Amazon shows that it is not prepared to meet workers’ basic physiological needs.

Unscheduled Breaks

Some production workers have complained, not only about the length of scheduled breaks in the work process but also about the length of unscheduled breaks – that is, the allowance of time off task.^{355, 356} This is usually insufficient for workers’ physiological because, given the size of Amazon’s fulfilment centres, the time it would take them to walk to a bathroom or water dispenser that is operational would exceed their allowance exceed their allowance of time off task.^{357, 358} For example, one worker told *Business Insider* that leaving the work area to use the bathroom ‘might take 10 to 15 minutes’;³⁵⁹ while another worker at Staten Island said that to meet a productivity target of 400 units per hour, pickers could not take bathroom breaks.³⁶⁰ In addition, as John Burgett points out in his blog about working at the Jeffersonville fulfilment centre, time off task is also counted against the employee’s actual productivity rate.³⁶¹ If, therefore, workers did need to use the bathroom outside of the standard breaks in the work process, ‘the

353. Shona Ghosh, ‘Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories,’ *Business Insider*, May 5, 2018, <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=UK>.

354. A worker at a sortation centre in Moreno Valley, California, also described the problem with breaks:

Amazon ... allowed us to have “two-and-a-half minutes to walk to, and from the break rooms,” as management would gleefully inform us. Never mind that it often took longer than that to walk to a break area, sometimes through a metal detector – heaven help you if that thing dinged, there’s like half your break right there. And if you happened to be in a part of the warehouse that took longer than that to get back from, well, your break was just taken from you. You should have planned your bladder better than that, now get back to work.

See Hamilton Nolan, ‘Inside an Amazon Warehouse, the Relentless Need to “Make Rate”,’ *Gawker*, June 6, 2016, <https://gawker.com/inside-an-amazon-warehouse-the-relentless-need-to-mak-1780800336>.

355. Most production workers report that two, 15-minute, paid breaks are scheduled before and after an unpaid lunch break of 30 minutes; see Maureen Donnelly, ‘Amazon warehouses are “cult-like” sweatshops run by robots: ex-employee,’ *The New York Post*, November 30, 2019, <https://nypost.com/2019/11/30/amazon-warehouses-are-cult-like-sweatshops-run-by-robots-ex-employee/>; Emily Guendelsberger, ‘I Worked at an Amazon Fulfillment Center; They Treat Workers Like Robots,’ *Time*, July 18, 2019, <https://time.com/5629233/amazon-warehouse-employee-treatment-robots/>; James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 52; Mary O’Connor, ‘Sick Amazon “elves” face sack,’ *The Times*, December 11, 2016, <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>.

356. Managers can see, if there is a break in work activity, because the time of the stoppage is measured and recorded by Amazon’s computer system as time that the task is not being completed.

357. Published accounts of experiences of working in Amazon’s fulfilment centres indicate that the allowance of time off task is no more than 20 minutes. See Emily Guendelsberger, ‘I Worked at an Amazon Fulfillment Center; They Treat Workers Like Robots,’ *Time*, July 18, 2019, <https://time.com/5629233/amazon-warehouse-employee-treatment-robots/>; Chavie Lieber, ‘The human costs of Black Friday, explained by a former Amazon warehouse manager,’ *Vox*, November 20, 2018, <https://www.vox.com/the-goods/2018/11/20/18103516/black-friday-cyber-monday-amazon-fulfillment-center>; Nelson Lichtenstein, ‘Making History at Amazon,’ *Dissent*, February 12, 2020, https://www.dissentmagazine.org/online_articles/making-history-at-amazon.

358. The size of Amazon’s fulfilment centres should not be underestimated. It is reported that Amazon’s Tilbury fulfilment centre, for example, covers ‘2 million square feet’ – or ‘around 28 football pitches’ – and includes ‘16 miles of conveyor belts’, ‘3,000 workers’ and ‘around 8,000 towers of shelves’ that are carried by ‘thousands of Kiva robots’. See Jamie Woodcock, ‘I’ve been inside Amazon’s new hi-tech warehouses – and I’ve seen how robots will change how we work,’ *The Independent*, July 27, 2019, <https://www.independent.co.uk/voices/amazon-fulfillment-centre-warehouse-worker-jeff-bezos-a9023516.html>. It is also reported that the Swansea fulfilment centre is the size of 11 football pitches and the Dunfermline fulfilment centre is the size of 14 football pitches; see Carole Cadwalladr, ‘My week as an Amazon insider,’ *The Observer*, December 1, 2013, <https://www.theguardian.com/technology/2013/dec/01/week-amazon-insider-feature-treatment-employees-work>.

359. Shona Ghosh, ‘Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories,’ *Business Insider*, May 5, 2018, <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=UK>.

360. Michael Sainato, ‘“We are not robots”: Amazon warehouse employees push to unionize,’ *The Guardian*, January 1, 2019, <https://www.theguardian.com/technology/2019/jan/01/amazon-fulfillment-center-warehouse-employees-union-new-york-minnesota>.

361. Burgett writes: ‘SDF8 is a massive building, with a lot of employees. Bathrooms are simply inadequate. Several central bathrooms are dispersed about the facility on the ground floor. Most employees have to walk a long time to get to one. Then, if there is a problem with the bathroom (no open stalls or closed for cleaning), the employee faces the dilemma of either waiting, or walking a long way to another bathroom area. For either of these choices, the time off task clock is ticking, and the employee’s rate is falling.’ See John Burgett, ‘Bathroom Breaks,’ *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/bathroom-breaks>.

pressure was on to hold it in', in the words of Alan Selby;³⁶² or the temptation is to urinate inside plastic bottles, which James Bloodworth discovered, when he worked as a picker at the Rugeley fulfilment centre.³⁶³ One former warehouse worker, who was employed by Integrity Staffing Solutions, put the matter this way:^{364, 365}

"you were almost encouraged to not use the bathroom or anything else since this would reduce your picks/hour rate. If you had low pick rates, there were actually Integrity people who circulated ... [who] would ... find you and ask you why."

In its response to the investigation by *Business Insider* into working conditions inside its fulfilment centres, Amazon said that its warehouse workers 'have easy access to toilet facilities which are just a short walk from where they are working.' However, one Amazon worker in the United States challenged this response, telling *Business Insider* that it was 'not true' that toilets were 'a short distance' from work areas; the worker said that there were not enough toilets and that 'they are always a good distance from you.'³⁶⁶ In fact, one worker who responded to the GMB's survey of working conditions in Amazon's UK-based fulfilment centres pointed to the lack of toilets at the Rugeley warehouse, writing that there were only three toilets for workers to use;³⁶⁷ as the GMB noted, approximately 1,000 people are at work in Rugeley, a number that increases significantly in peak season.³⁶⁸

Once again, indications of failing to consider the amount of time that workers must spend walking to a bathroom or water dispenser that is operational raise questions about the extent to which workers' basic physiological needs are met.

Pregnancy

There are also reports that some of Amazon's managers fail to accommodate the physiological needs of pregnant workers. For example, the TUC reports the case of a pregnant supervisor at the Doncaster fulfilment centre, who had been working for Amazon for eight years with an 'unblemished record' and who was called to attend a

362. Alan Selby, 'Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,' *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>. Note also that 74% of the respondents to the second wave of the Organise survey said that they avoided going to the toilet at work; their reasons included being scared of missing the productivity target and being scared of being fired. See Organise, *Amazon: What's it like where you work?* (Organise, 2018), 9, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

363. James Bloodworth told *The Sun* that, when he worked on the top floor of the Rugeley fulfilment centre, 'the closest toilets were down four flights of stairs' and that workers urinated in plastic bottles 'because they lived in fear of being disciplined over "idle time"'; see Chris Pollard, 'P*SS THE PARCEL: Rushed Amazon warehouse staff pee into bottles as they're afraid of "time-wasting",' *The Sun*, April 15, 2018, <https://www.thesun.co.uk/news/6055021/rushed-amazon-warehouse-staff-time-wasting/>. Moreover, according to *Business Insider*, some Amazon workers in the United States of America have urinated in rubbish bins inside the warehouse; see Shona Ghosh, 'Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories,' *Business Insider*, May 5, 2018, <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=UK>.

364. Hamilton Nolan, 'Amazon Insiders Tell the Good, the Bad, and the Ugly,' *Gawker*, May 2, 2014, <https://gawker.com/amazon-insiders-tell-the-good-the-bad-and-the-ugly-1570866439>.

365. A worker at a sortation centre in Moreno Valley, California, also cited different examples of situations in which having to take time off task would reduce a worker's rate of production:

Rate was constant. Rate was on you all day. If you went to the bathroom, that lowered your Rate. If your boss came by to see how you were doing, that distraction lowered your Rate. If you ran out of bags and had to go get new ones yourself, that lowered your Rate. If you cut yourself on a box cutter or pinched a finger in the conveyor belt right next to you ... and had to go to the on-site Amcare office ... well, you were still on Rate, and that lapse in work lowered your Rate. If your boss pulled you aside to talk to you about your low Rate, I mean, you're still *on* Rate during that talking-to, so that *further* lowered your Rate.

See Hamilton Nolan, 'Inside an Amazon Warehouse, the Relentless Need to "Make Rate",' *Gawker*, June 6, 2016, <https://gawker.com/inside-an-amazon-warehouse-the-relentless-need-to-mak-1780800336>.

366. See Shona Ghosh, 'Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories,' *Business Insider*, May 5, 2018, <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=UK>.

367. GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 13, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

368. *Ibid.*, 3.

disciplinary hearing for gross misconduct, in the summer of 2019, for five hours and without food or drink. (The supervisor had been absent from work through pregnancy-related illness.) After Amazon gave her a final written warning, the supervisor appealed the decision; but Amazon allegedly organised the appeal to take place on the day she was due to give birth, and 'wanted her punishment to commence after her maternity leave.'³⁶⁹

In addition,

- a pregnant worker who responded to the GMB's survey of Amazon workers in the UK said that managers refused her request for a transfer to a different section;³⁷⁰
- a worker at the Rugeley fulfilment centre who responded to the second wave of the Organise survey said that, despite being pregnant for six months, managers did not care that she was pregnant and that they expected her to meet the same productivity target – an experience she said was 'worse than [being in] a prison'.³⁷¹

These reports suggest there is a need for further investigation of the extent to which at least some of Amazon's managers may be failing to respect the specific physical limitations, and to meet the other specific physiological needs, of pregnant women who work in fulfilment centres.

This calls for further research to establish the veracity and extent of such issues, and the implications for equality across the workforce, in order to inform strategies to ensure all workers needs are accommodated in the future.

4.3.4 Feeling Valued

The degree to which Amazon workers, including managers, value each other can be indicated by the degree to which they recognise each other's achievements at work. When workers feel valued in this way, they feel that they belong with others. But when they do not feel valued by others, they feel uncared for and their innate need for relatedness, through secure attachment to others, remains unfulfilled. If human beings experience pleasure through belonging with others, their experience of not feeling valued by others, and of feeling insecure as a result, will tend to result in suboptimal wellbeing. Indeed, we may say that, the less that Amazon production workers feel that their achievements (such as meeting productivity targets consistently) are valued (through recognition by their managers, for example), the more mental strain they will experience and the greater will be their risk of suffering mental harm.³⁷²

Once again, despite a lack of statistical evidence concerning the extent to which Amazon workers feel valued, it is possible to begin to explore this issue through

369. TUC, *Challenging Amazon: What can we do about Amazon's treatment of its workers?* (London: TUC, 2020), 14.

370. GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 8, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

371. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 10, <https://static1.squarespace.com/>

[static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf](https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf).

372. This argument is based on the insights of self-determination theory. See Edward L. Deci and Richard M. Ryan, 'The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behaviour,' *Psychological Inquiry* 11, no. 4 (2000): 227-68, <https://www.jstor.org/stable/1449618>, and Richard M. Ryan and Edward L. Deci, 'Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being,' *American Psychologist* 55, no. 1 (January 2000): 68-78, <https://psycnet.apa.org/doiLanding?doi=10.1037%2F0003-066X.55.1.68>.

examination of the published reports of workers' experiences. These reports suggest that, just as production workers do not feel that their managers are willing to accommodate their physiological needs, that they can trust their managers, or that they have any significant degree of control over their tasks and working conditions, so they do not feel that their managers appreciate the work that they do. For example, an employee at Amazon's Florence fulfilment centre in New Jersey said that 'Amazon sees its employees just as bodies and does not truly value the work they do'.³⁷³ This is consistent with the conclusion drawn by Alan Selby, that Amazon 'makes more money by treating its workers as expendable commodities'.³⁷⁴

Indeed, the perception that managers regard production workers as disposable is consistent across the published accounts reviewed for this report. For example,

- Heike Geissler, who wrote a book documenting her experiences working as a temporary associate at a fulfilment centre in Leipzig, Germany, describes the gradual loss of her sense of self, as a result of "work that leaves no space to be human", and a relationship with management that depends on disposability;³⁷⁵
- the writer of *The Amazon Diaries* tells us, in the third instalment, that as soon as peak season is over (the day after Christmas), managers start to dispose of temporary workers, firing those who have under-performed 'mid-shift by text message';³⁷⁶
- a former employee at Amazon's Carteret fulfilment centre in New Jersey said that a worker 'can be released at any time' and that Amazon 'won't even tell you that you're fired';³⁷⁷
- a worker who responded to the second wave of the Organise survey reported not feeling valued at all and said that an Amazon fulfilment centre was not a good place to work – that it looked 'more like a school yard where nothing is serious apart from the rates'.³⁷⁸

This calls for further investigation.

4.3.5 Opportunities for Personal Development

The extent to which Amazon's fulfilment centre workers are able to develop reflects the extent to which they can realise their human potential through work. Opportunities for personal development are therefore important because, if human beings experience pleasure through learning new skills and developing new capabilities, so that their

373. The employee said that, the only reward that workers receive for meeting or exceeding production goals is "swag bucks" or 'Monopoly money that we can use in the Swag store', this store being the place where Amazon's own products are sold. See Lindsay Rittenhouse, 'Amazon Warehouse Employees' Message to Jeff Bezos – We Are Not Robots,' *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

374. Alan Selby, 'Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,' *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>.

375. "You're at their disposal from the very beginning. You're an item on a list." Quoted in Alex Press, 'No space to be human: work on the Amazon assembly line,' *The Nation*, December 20, 2018, <https://www.thenation.com/article/archive/heike-geissler-seasonal-associate-amazon/>. See also Heike Geissler, *Seasonal Associate* (Cambridge, MA: Semiotext(e), 2018).

376. Anonymous, "'A sweatshop firing on all cylinders": what it's like to work at Amazon at Christmas,' *The Guardian*, December 19, 2018, <https://www.theguardian.com/us-news/2018/dec/19/how-your-holiday-shopping-drives-us-amazon-workers-to-exhaustion>.

377. In the words of this employee, '[o]ne day, you just show up and your ID card doesn't swipe into the building.' See Lindsay Rittenhouse, 'Amazon Warehouse Employees' Message to Jeff Bezos – We Are Not Robots,' *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

378. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 11, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

innate need for competence is satisfied, lack of opportunities to learn new skills and develop new capabilities (for example, through training, secondment, or promotion in the workplace) will tend to result in suboptimal wellbeing. Indeed, we may say that, the fewer opportunities that are made available to Amazon production workers to develop their human potential, the higher the degree of mental strain they will experience, and the greater will be their risk of experiencing mental harm.³⁷⁹

Once again, despite a lack of statistical evidence concerning the extent to which workers in Amazon's fulfilment centres are offered opportunities for personal development, it is possible to begin to explore this issue by examining published reports of workers' experiences. These reports suggest that, although workers are sometimes moved between departments, these transfers are usually made in accordance with the needs of the business (for example, to cover labour shortages); and we found no evidence that they are part of a systematic policy of relieving workers of the monotony of performing the same task continuously.^{380, 381} The published reports of workers' experiences also suggest that Amazon offers them little in the way of opportunities for advancing. Indeed, lack of such opportunities is one of the complaints that workers at Amazon's Shakopee fulfilment centre have made. For example, during a work stoppage in March 2019 they demanded 'more opportunities for promotion',³⁸² and the same workers, during their strike action in July 2019, called for, not only improvements to working conditions but also for provision of 'opportunities for advancement'.³⁸³ There are reports that Amazon offers some of its employees the opportunity to become an Amazon Ambassador, a role which involves training new workers.³⁸⁴ However, an employee at Amazon's Florence fulfilment centre in New Jersey argued that this role is not a promotion because it involves taking on additional responsibility without additional pay.³⁸⁵

There are some examples, in mainstream media reports, of employees who have progressed through the ranks of the fulfilment centre. One example is David Koneck, who started working as a picker on a night shift before being promoted. He was promoted again two years later into a management role and is now an operations manager. He told *The Atlantic* that Amazon had offered him 'lots of opportunities to move up and receive training in different areas'.³⁸⁶ Another example is Cathryn Kachura,

379. This argument is based on the insights of self-determination theory. See Edward L. Deci and Richard M. Ryan, 'The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behaviour,' *Psychological Inquiry* 11, no. 4 (2000): 227-68, <https://www.jstor.org/stable/1449618>, and Richard M. Ryan and Edward L. Deci, 'Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being,' *American Psychologist* 55, no. 1 (January 2000): 68-78, <https://psycnet.apa.org/doiLanding?doi=10.1037%2F0003-066X.55.1.68>.

380. John Burgett suggests that the movement of workers between departments also has the effect of making worker organisation more difficult to achieve. See John Burgett, 'Union Fight,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/union-fight>.

381. The US-based fulfilment centre workers, whom Alana Semuels spoke to, described the work on Amazon's production line as 'monotonous'. See Alana Semuels, 'What Amazon Does to Poor Cities,' *The Atlantic*, February 1, 2018, <https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

382. Josh Dzieza, "'Beat the Machine": Amazon Warehouse Workers Strike to Protest Inhumane Conditions,' *The Verge*, July 16, 2019, <https://www.theverge.com/2019/7/16/20696154/amazon-prime-day-2019-strike-warehouse-workers-inhumane-conditions-the-rate-productivity>.

383. Jasmine Wu and Katie Schoolov, 'Amazon workers in Minnesota walk out as Prime Day orders roll in,' News, July 15, 2019, <https://www.cnbc.com/2019/07/15/amazon-workers-prime-day-strike-begins-in-minnesota.html>.

384. It is reported, in *The Guardian*, that a worker at the Staten Island fulfilment centre had been transferred there 'to help train the new workers'; the worker subsequently moved to a different fulfilment centre. See Michael Sainato, "'I'm not a robot": Amazon workers condemn unsafe, grueling conditions at warehouse,' *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>.

385. Lindsay Rittenhouse, 'Amazon Warehouse Employees' Message to Jeff Bezos - We Are Not Robots,' *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

386. Alana Semuels, 'What Amazon Does to Poor Cities,' *The Atlantic*, February 1, 2018, <https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

who was promoted through the ranks to become a flow control specialist at Amazon's sortation centre in Denver, Colorado.³⁸⁷ However, these stories of advancement appear to be the exception rather than the rule. Indeed, the workers whom Alana Semuels spoke to, for her article on Amazon's US-based fulfilment centres, claimed that 'few employees' stay with Amazon for more than a year and that Amazon would fire employees just before they became eligible to exchange their Amazon shares for cash.³⁸⁸

Finally, it should be understood that Amazon's business model depends on depriving the majority of its fulfilment centre workers of opportunities for development; and it is telling that, in 2019, half of the fulfilment centres involved in a worker rotation pilot project, to reduce repetitive strain injuries, suspended this practice during Prime week, when customer demand increases.³⁸⁹

In short, Amazon hires thousands of agency workers on temporary contracts in response to expected increases in customer demand;³⁹⁰ yet workers' reports suggest that managers frequently treat workers as disposable, that few workers are offered the opportunity to convert their temporary contract into a permanent one, and that, for the lucky few whose contracts are converted, becoming an Amazon Tier One employee appears to offer them few opportunities to develop their human potential through work.³⁹¹

Developmental opportunities within the e-commerce and logistics sector would therefore benefit from further research.

4.4 Impact of Mental Demands

Although there is less evidence about the consequences of the mental demands of the process of fulfilment for human wellbeing than there is about the consequences of the physical demands, the evidence that does exist highlights risks of mental harm, including disorders of anxiety, mood, and stress, which suggest an urgent need for further research..

4.4.1 Anxiety

In the second wave of the Organise survey of UK-based fulfilment centre workers, 57% of respondents said that they had become 'a lot more anxious' since they started working at Amazon.³⁹² The main cause of this anxiety appears to be the threat that

387. Meg Coyle, 'New robots, new jobs,' News, Amazon, June 5, 2019, <https://blog.aboutamazon.com/operations/new-robots-new-jobs?linkId=68603272>.

388. Alana Semuels, 'What Amazon Does to Poor Cities,' *The Atlantic*, February 1, 2018, <https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

389. Another project running in 2019, which was also intended to reduce ergonomic issues, was suspended in the weeks leading up to Prime Day in five out of the six fulfilment centres where it was being piloted; see Will Evans, 'How Amazon hid its safety crisis,' *Reveal*, September 29, 2020, <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>.

390. In his blog about working at Amazon, John Burgett claims that two thirds of the entire workforce (about 3,000 workers) of the Jeffersonville fulfilment centre is hired each year, a rate of turnover that he describes as 'fast and high'; see 'Union Fight,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/union-fight>.

391. Note that John Burgett, in his blog about working as a picker, touches on the question of the development of human potential, writing that Amazon 'does not allow the employee to seek, discover, or explore her work potential on her own behalf, on behalf of her fellow employees, and on behalf of her employer.' See John Burgett, "'Time to Pick" Countdown Timer,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/time-to-pick-countdown-timer>.

392. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 3, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

workers will be the subject of disciplinary action, if they underperform in their role. For example,

- a former Amazon worker at the Etna warehouse in Ohio told *The Daily Beast* that he ‘was constantly fearful that he would receive citations’ for not being able to ‘stay on pace’;³⁹³
- Vincent Tortora told *The Street* that, when he worked as a stower at Amazon’s Robbinsville fulfilment centre in New Jersey in 2017, he was afraid of being punished (‘written up’), if he did not scan merchandise quickly enough;³⁹⁴
- in an article on working conditions in Amazon’s fulfilment centres in *Logic*, a stower at Amazon describes, in a post on Reddit, feeling anxious about not being able to meet performance expectations;³⁹⁵
- commenting on the effect of the introduction of APEP (‘Attacking Processes, Engaging People’) at the Jeffersonville fulfilment centre in 2016, John Burgett writes that the three categories of performance evaluation were ‘more threatening’ than managers made them out to be, and that the coaching and write-ups that managers would use, if workers were not to meet performance expectations, were ‘tactics to apply daily pressure, always leaving the employee on unsure footing.’³⁹⁶

Managers’ threats of disciplinary action toward workers who underperform rest on the knowledge that workers fear losing their jobs. For example,

- *Business Insider* reported Amazon fulfilment centre workers being in a constant state of anxiety about losing their jobs, if they did not meet their performance targets;³⁹⁷
- the US-based fulfilment centre workers who spoke to *The Atlantic* said that they were fearful of losing their jobs, if they did not meet Amazon’s performance expectations;³⁹⁸
- a worker at Tilbury who responded to the second wave of the Organise survey said that workers were ‘fear[ful] for their jobs’ and that an ‘Amazon fulfilment centre is the most terrify[ing] place to work’;³⁹⁹
- according to *International Business Times*, ‘Amazon warehouse employees ... contend they’re told by Amazon and outsourced managers to meet productivity

393. He said that he developed ‘permanent anxiety’ about his performance at work, realising that he would lose his job, were he to accumulate ‘enough write-ups’. See Max Zahn and Sharif Paget, ‘“Colony of Hell”: 911 Calls From Inside Amazon Warehouses,’ *The Daily Beast*, March 11, 2019, <https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouses>.

394. Lindsay Rittenhouse, ‘Amazon Warehouse Employees’ Message to Jeff Bezos – We Are Not Robots,’ *The Street*, September 29, 2017, <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

395. The worker wrote: ‘I constantly dread going to work ... I hate stowing and I can’t get better no matter how hard I try’. See Sam Adler-Bell, ‘Surviving Amazon,’ *Logic*, August 3, 2019, <https://logicmag.io/bodies/surviving-amazon/>.

396. Burgett explains: ‘An employee does not have to fall into the bottom 5% to lose his job. He only needs to fall under 100% of rate for two weeks out of the last six to receive documented coaching. After documented coaching, the employee will receive weekly escalations if he does not meet or exceed expectations. These escalations consist of a first write-up, then final write-up, then possible termination.’ See John Burgett, ‘June 2016 All Hands, APEP,’ *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/june-2016-all-hands-meeting>.

397. Burgett explains: ‘An employee does not have to fall into the bottom 5% to lose his job. He only needs to fall under 100% of rate for two weeks out of the last six to receive documented coaching. After documented coaching, the employee will receive weekly escalations if he does not meet or exceed expectations. These escalations consist of a first write-up, then final write-up, then possible termination.’ See John Burgett, ‘June 2016 All Hands, APEP,’ *Amazon Emancipatory*, 2016, <https://amazonemancipatory.com/june-2016-all-hands-meeting>.

398. Shona Ghosh, ‘Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories,’ *Business Insider*, May 5, 2018, <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=UK>.

399. Alana Semuels, ‘What Amazon Does to Poor Cities,’ *The Atlantic*, February 1, 2018, <https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

goals designed to be unattainable for most in an effort to keep them in a perpetual state of insecurity about their continued employment'.⁴⁰⁰

But what also makes production workers feel anxious is the level of surveillance to which they are subjected. For example,

- Hibaq Mohamed, a worker at the Shakopee fulfilment centre in Minnesota, says that the level of surveillance that fulfilment workers experience makes her feel 'afraid' and that the anxiety that workers feel about working in an Amazon fulfilment centre stays with them, even when they are at home;⁴⁰¹
- Daniel Hanley and Sally Hubbard write, in their report on Amazon's surveillance infrastructure, that the relationship between employer and employee is one of 'unabating anxiety' and that the scanners, which monitor workers' time off task, 'create the psychological effect of a constant "low-grade panic" to work';⁴⁰²
- workers' feelings that they are under extensive surveillance is confirmed by leaked internal documents showing that Amazon employs intelligence analysts, supplemented by private security agencies, to closely monitor trade union activities among its workforce.⁴⁰³

4.4.2 Mood

In the second wave of the Organise survey of UK-based fulfilment centre workers, 55% of respondents said that they had 'suffered from depression' since they had started working at Amazon, while just under 10% said that they had 'considered suicide'.⁴⁰⁴

Other workers, including undercover journalists, have also reported feeling depressed, while working in an Amazon fulfilment centre. For example,

- Alan Selby, who worked undercover for *The Sunday Mirror* as a picker and a packer at Tilbury in 2017, said that he became depressed, while working there;⁴⁰⁵
- Maureen Donnelly, who spent one month working as a stower in Amazon's Staten Island fulfilment centre, wrote in *The New York Post*, in 2019, that she was 'cranky' with her family, while she was working there;⁴⁰⁶
- another pregnant worker who responded to the GMB survey said that she had to stand the entire length of her shift and that this left her feeling depressed;⁴⁰⁷

400. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 10, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

401. Referring to Simon Head's book, *The New Ruthless Economy*, the author of this article describes Amazon's production strategy as 'management by stress'. See Angelo Young, 'Amazon.com's Workers Are Low-Paid, Overworked And Unhappy; Is This The New Employee Model For The Internet Age?' *International Business Times*, December 19, 2013, <https://www.ibtimes.com/amazoncoms-workers-are-low-paid-overworked-unhappy-new-employee-model-internet-age-1514780>.

402. She says: "I feel – and a lot of workers, they feel, even when they're sleeping – that they're docking to try and hit their rate. Because they're worried about next week what's going to happen; you don't know what's going to happen. I don't know what I finished this week. Next week if I hit the rate, if the rate will change. And managers are watching you and coming to you all the time. You feel like someone is watching you while you are sleeping." See Daniel A. Hanley and Sally Hubbard, *Eyes Everywhere: Amazon's Surveillance Infrastructure and Revitalizing Worker Power* (Open Markets Institute, September 2020), 7-11.

403. *Ibid.*, 10.

404. Organise, *Amazon: What's it like where you work?* (Organise, 2018), 3-5, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

405. Alan Selby, 'Timed toilet breaks, impossible targets and workers falling asleep on feet: Brutal life working in Amazon warehouse,' *The Mirror*, November 25, 2017, <https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>.

406. Maureen Donnelly, 'Amazon warehouses are "cult-like" sweatshops run by robots: ex-employee,' *The New York Post*, November 30, 2019, <https://nypost.com/2019/11/30/amazon-warehouses-are-cult-like-sweatshops-run-by-robots-ex-employee/>.

407. GMB Union, *GMB Union Report On Amazon*, 2018 (London: GMB Union, 2018), 8, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

- a worker who responded to the GMB’s survey of UK-based fulfilment centre workers reported ‘feeling depressed when at work’.⁴⁰⁸

In the United States, *The Daily Beast* examined 911 call logs, and ambulance and police reports, relating to 46 Amazon fulfilment centres across 17 states and calculated that emergency workers had been ‘summoned to Amazon warehouses at least 189 times for suicide attempts, suicidal thoughts, and other mental-health episodes’.⁴⁰⁹ Other reports confirm that workers have been driven to contemplate self-harm or even suicide as a result of working in an Amazon fulfilment centre. For example,

- a sheriff’s report revealed that, at an Amazon warehouse in Etna, Ohio, in July 2018, a young man was thinking about hurting himself because he felt that Amazon had lied to him, when they told him, at his orientation, that they ‘‘valued his employment’’ and that they would treat him ‘‘as if he mattered and not just a number’’;⁴¹⁰
- a police report revealed that, in June 2018, an Amazon employee at a warehouse in Shakopee, Minnesota, was suicidal, crying and admitting to police officers that she wanted to kill herself using box cutters;⁴¹¹
- another sheriff’s report revealed that, at an Amazon warehouse in Jacksonville, Florida, in December 2017, a woman said that she was going to kill herself, by cutting her wrist with a butter knife, when she got home, because she was being dismissed and felt she had nothing to live for;⁴¹²
- Nick Veasley told *The Daily Beast* that working at the Amazon warehouse in Etna, Ohio, left him seriously depressed and with suicidal thoughts, in February 2018, and that he was admitted to a psychiatric ward for three days, as a result.⁴¹³

There are also reports that refer to the effect of the work process as demoralizing or soul destroying. For example,

- James Bloodworth writes that the nature of the work in an Amazon fulfilment centre leaves people feeling miserable – that it is ‘mentally deadening’;⁴¹⁴
- John Burgett writes in his blog that one of the effects of the working environment of the fulfilment centre in Jeffersonville is ‘low morale’;⁴¹⁵
- John Burgett also says that it is ‘demoralizing’, when the countdown timer on the

408. Ibid., 11.

409. Max Zahn and Sharif Paget, ‘‘Colony of Hell’’: 911 Calls From Inside Amazon Warehouses,’ *The Daily Beast*, March 11, 2019, <https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouses>.

410. Ibid.

411. Ibid.

412. Ibid.

413. Police were called, when Veasley admitted to security that he wanted ‘to drive his car off a cliff’. Needless to say, Amazon fired Veasley for exceeding the limit for unpaid time off – time which Veasley says he used for counselling and medical appointments. See Max Zahn and Sharif Paget, ‘‘Colony of Hell’’: 911 Calls From Inside Amazon Warehouses,’ *The Daily Beast*, March 11, 2019, <https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouses>.

414. Bloodworth comments that working in an Amazon fulfilment centre ‘required an emotional palliative in the same sense that your burning and suppurating feet required sticking plasters at the end of the day.’ See James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 51.

415. Commenting on the thousands of full-time workers who ‘have come and gone during my short tenure’, Burgett writes: ‘Their enthusiasm and excitement turns to sullen capitulation, then they are just gone.’ See John Burgett, ‘AFE (Amazon Fulfilment Engine),’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/afe-amazon-fulfillment-engine>.

- scanner that he uses, when picking, tells him that he has run out of time to pick, even before he has reached the picking destination;⁴¹⁶
- commenting on what happens to young workers at Amazon’s Jeffersonville fulfilment centre, John Burgett writes that it is ‘sad for me to see how visibly demoralized young, vibrant workers become after a very short period of time in the SDF8 work environment’.⁴¹⁷

This calls for further comparative research to put such figures in context, and detailed qualitative investigation to ascertain the extent to which the experience of work contributes to these mood disorders.

4.4.3 Stress

Many reports of experiences of working in an Amazon fulfilment centre refer to the pressure of the work and the stress that builds up as a result. For example, a worker who spoke to *The Express & Star* during the demonstration outside the Rugeley fulfilment centre, in November 2017, described working conditions there as ‘hellish’ and said that the problem was ‘the pressure you are put under’.⁴¹⁸ Similarly, the US-based fulfilment centre workers who spoke to *The Atlantic* reported feeling pressured ‘to work faster and faster’.⁴¹⁹

Pressure is reported, from workers’ perspectives, as coming from managers, who demand that workers meet ever increasing production targets. For example,

- William Stolz, who works as a picker at the Shakopee fulfilment centre in Minnesota, told *The New Yorker* that there is ‘a constant pressure to hit your numbers’;⁴²⁰
- a worker at Rugeley who responded to the second wave of the Organise survey reported feeling stressed about not being able to meet productivity targets;⁴²¹
- GMB members who responded to the survey about working conditions wrote that they are ‘[a]lways under pressure’ and that they feel ‘stressed’ to achieve their productivity target ‘[e]very day’;⁴²²
- John Burgett writes in his blog that Amazon ‘coerces the employee to make rate through constant pressure and manipulation using a never-ceasing stream of messages and warnings’;⁴²³

416. Commenting further on the effect of the countdown timer on the worker, Burgett writes: ‘Good, hard work is not enough. This system removes agency from the employee who intends to do her job well. In fact, even when she is applying all necessary effort, diligence, and skill she can still be chastised by a nameless computer screen or a Production Assistant or Area Manager’. See John Burgett, ‘“Time to Pick” Countdown Timer,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/time-to-pick-countdown-timer>.

417. John Burgett, ‘Young People,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/young-people>.

418. Rob Golledge, ‘Protest at Amazon Rugeley over “hellish” working conditions,’ *Express & Star*, December 14, 2017, <https://www.expressandstar.com/news/local-hubs/staffordshire/rugeley/2017/12/14/protest-at-amazons-rugeley-warehouse-over-hellish-working-conditions/>.

419. Alana Semuels, ‘What Amazon Does to Poor Cities,’ *The Atlantic*, February 1, 2018, <https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

420. Charles Duhigg, ‘Is Amazon Unstoppable?’ *The New Yorker*, October 21, 2019, <https://www.newyorker.com/magazine/2019/10/21/is-amazon-unstoppable>.

421. Organise, *Amazon: What’s it like where you work?* (Organise, 2018), 6, <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.

422. GMB Union, *GMB Union Report On Amazon, 2018* (London: GMB Union, 2018), 10-11, https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

423. John Burgett, ‘“Time to Pick” Countdown Timer,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/time-to-pick-countdown-timer>.

- a worker at one of Amazon’s warehouses in Allentown, Pennsylvania, from October 2012 to February 2013, told *Gawker* that ‘stress from that job built up’ because managers told workers that, if they did not pack 1200 boxes per day, they would be fired’.⁴²⁴

It should also be noted that, according to a former manager of the packing section of a fulfilment centre in California, area managers were under pressure to remove ‘the weak links’ in production – a pressure that they transmitted to the workers in the line of production:⁴²⁵

“Amazon has built this system so that managers and workers have entirely different incentives. Workers constantly feel like their jobs are on the line, because they are. We were supposed to be observing their ... rate and not be concerned with how hard it is to pack things. Managers were pressured to identify the weak links and get them out so that we can have a faster rate. It’s a pressure cooker environment, and that’s what you have to be to get to Amazon’s level of efficiency.”

Likewise, a former safety manager at Amazon’s Campbellsville warehouse in Kentucky told *The Seattle Times*, in 2012, that Amazon headquarters in Seattle was constantly pressurising local managers about ‘production numbers’. The former manager said:

“There would be phone conferences [with Seattle], and all this screaming, about production numbers. That was always the problem; the production numbers weren’t high enough”.⁴²⁶

4.5 Further Impact of Physical and Mental Demands

The published reports of individual Amazon workers’ experiences and the results of surveys of Amazon workers indicate that fulfilment centre workers are experiencing a level of physical and mental strain whose consequence is an elevated risk of experiencing physical and mental harm. But it should be understood that the physical and mental dimensions of workers’ health are interconnected and compounding in their effects: that is, a mental disorder (such as an anxiety, mood or stress disorder) can have physical consequences (such as hyper-arousal and hypo-arousal of the autonomic nervous system), while a physical disorder (such as a musculoskeletal disorder) can have mental consequences – for example, if it prevents human beings from fulfilling their basic needs through working with others.

This dialectical understanding of human health is implicit in John Burgett’s commentary about his experience of picking at the Jeffersonville fulfilment centre:⁴²⁷

424. Hamilton Nolan, ‘A Few More True Stories from Amazon Workers,’ *Gawker*, August 6, 2013, <https://gawker.com/a-few-more-true-stories-from-amazon-workers-1043216113>.

425. Chavie Lieber, ‘The human costs of Black Friday, explained by a former Amazon warehouse manager,’ *Vox*, November 20, 2018, <https://www.vox.com/the-goods/2018/11/20/18103516/black-friday-cyber-monday-amazon-fulfillment-center>.

426. Hal Bernton and Susan Kelleher, ‘Amazon warehouse jobs push workers to physical limit,’ *The Seattle Times*, April 3, 2012, <https://www.seattletimes.com/business/amazon-warehouse-jobs-push-workers-to-physical-limit/>.

427. John Burgett, ‘Pick Paths,’ *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/pick-paths>.

“I enjoy the healthy use of the body... I’ve done construction, farm labor, etc. I’ve worked every kind of labor job from small company to large... But I’ve never seen anything like Amazon’s physical + psychological manipulation. Amazon has the X-factor of an unhealthy labor environment. Not physically edifying, it breaks the body and the spirit down.”

A dialectical understanding of human health is also implicit in remarks made by William Stolz, a picker at the Shakopee fulfilment centre in Minnesota, who has been participating in strike action over working conditions:⁴²⁸

“I work ten hours a day, four days a week. I’ve been at the pick department for the whole time ... I had done warehouse work before in other places, but I’ve never seen as many injuries and so much turnover as ... when I came to Amazon. Seeing people ... being injured or having to quit because they reached a point of exhaustion, that had an impact on me, and I was experiencing a lot of the same things myself. I haven’t been injured but it’s very physically intense work: the stress and strain of it is hard, especially with repetitive motion, performing at these fast speeds to keep up with the demands of the computer system at your station – all of that takes a big ... [toll] on our bodies and our minds.”

In short, not only can workers’ health be damaged by the mental strain of being controlled (coerced and manipulated) by managers but, at the same time, it can also be damaged by the physical strain associated with highly intensive work processes – in particular, by the pace at which tasks must be carried out and by their duration.

428. Transnational Social Strike Platform, ‘Migrants and Locals Together in the Strike: Interview with William Stolz,’ in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 53-4, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

Workers' Responses to Physical and Mental Demands

Given the issues documented throughout this report, it is not surprising that turnover in Amazon's fulfilment centres is suspected to be relatively high, although the kind of data that would be needed to draw firm conclusions about this are lacking. For example, John Burgett, reflecting on his experience of working in Amazon's Jeffersonville fulfilment centre, concludes:⁴²⁹

"[t]he results of this environment are disillusionment, low morale, high turnover. Many of my hire group quit in the first week, month, or few months. Several thousand full-time Amazon SDF8 employees have come and gone during my short tenure. ... I know of only one member of my hire group ... who is still employed at SDF8."

Moreover, the consequences of the physical and mental demands of the process of fulfilment include, not only the short-term or immediate consequences – for example, the various injuries and disorders that workers develop – but also the long-term consequences – for example, a heightened risk of developing serious health conditions such as heart disease and cancer. John Burgett recognises this possible outcome:⁴³⁰

"The real safety hazards at SDF8 are the sustained physical, psychological, and economic stresses placed on the employee. ... The danger, in my opinion, is not from an immediate incident. It is from the chronic, cumulative effects of the Amazon labor system on the health and well-being of the employee, the health and well-being of the employee's family, and the health and well-being of the employee's community."

How are Amazon workers in the line of production responding to dehumanising working conditions? John Burgett suggests, in his final blog, that workers are resigned to these conditions: that the choice before them is either to submit to managers' demands or to quit their jobs. He writes:⁴³¹

"Using methods and strategies traditionally associated with authoritative control systems ... Amazon is challenging [the] limits of culturally acceptable labor control methods in the United States. To what avail? Allegiance is low, morale is low, turnover is high, submission is high, passive resignation is high. The strategy fails and wins at the same time."

In other words, Burgett suggests that an attitude of 'passive resignation' is leading to either worker compliance with, or worker rejection of, Amazon's demands. However, other accounts in the published literature provide examples of both collective and individual acts of worker resistance.

429. John Burgett, 'AFE (Amazon Fulfillment Engine),' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/afe-amazon-fulfillment-engine>.

430. John Burgett, 'Safety,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/safety>.

431. John Burgett, 'Wrap It Up,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/wrap-it-up>.

5.1 Collective Resistance

In some cases, Amazon's fulfilment centre workers are showing us that it is possible to challenge managers' performance expectations and put forward demands for change that relate to unmet human needs. This challenge is manifest in some Amazon workers organising themselves, often with the help of trade unions, to carry out protests in the form of demonstrations, work stoppages, and work slowdowns; and it is a way forward that stems from an attitude, not of resignation, but of collective resistance, to the dehumanising working environment of the fulfilment centre.

Of course, Amazon sees its employees' attempts to unionise as a threat to the continuing profitability of its business and has continued to take steps to undermine these efforts.⁴³² However, both current and former Amazon workers are continuing with their efforts to organise themselves into trade unions.⁴³³

5.1.1 Demonstrations

Media reports indicate that in the period from November 2017 to December 2019 workers demonstrated outside Amazon's fulfilment centres in at least six countries in North America and Europe. Some of these demonstrations were timed to coincide with strike action taking place at fulfilment centres in other countries (for example, Italy and Germany), and most were held during the weeks of peak customer demand, when serious injury rates increase (that is, the weeks including Black Friday, Cyber Monday, and Prime Day).

Demonstrations in the UK were organised by the GMB trade union and took place in November 2017;⁴³⁴ November 2018;⁴³⁵ July 2019;⁴³⁶ and November and December 2019.⁴³⁷

432. For example, in early 2021 the company launched a website targeting workers at BHM1, its warehouse in Bessemer, Alabama, with the intention of convincing them to vote against a proposal to form a union, and the company was also accused of sending anti-union text messages to workers. See Lauren Kaori Gurley, 'Amazon Launches Anti-Union Website to Derail Alabama Union Drive,' *Vice*, January 15, 2021, <https://www.vice.com/en/article/5dpkad/amazon-launches-anti-union-website-to-derail-alabama-union-drive>. As a result of Amazon's extraordinary efforts to persuade its workers to vote against unionisation, a majority of workers at BHM1 did vote against joining the Retail, Wholesale and Department Store Union. See Alex Press, 'Amazon Waged a Brutal Anti-Union Campaign. Unsurprisingly, They Won,' *Jacobin*, April 9, 2021, <https://www.jacobinmag.com/2021/04/amazon-bessemer-union-drive-vote-nlr>, and Annie Palmer, 'How Amazon fought the union drive in Alabama,' *CNBC*, April 16, 2021, <https://www.cnbc.com/2021/04/16/how-amazon-fought-the-union-drive-in-alabama.html>.

433. For example, Christian Smalls, a former supervisor at JFK8, Amazon's Staten Island facility, who was officially fired for violating social-distancing rules during the Covid-19 pandemic but is widely believed to have been fired for organising a protest about unsafe working conditions, is now leading an effort to persuade enough current workers at JFK8 to support an election for an independent trade union called Amazon Labor Union (ALU). See Alex Press, 'Amazon and Jeff Bezos's Worst Enemy Is Chris Smalls,' *Jacobin*, July 12, 2021, <https://jacobinmag.com/2021/07/amazon-staten-island-jfk8-chris-smalls-jeff-bezos-union-organizing-working-class>. For the background to the dismissal of Christian Smalls, see Paul Blest, 'Amazon Fired the Warehouse Worker Who Organized a Walkout Over Coronavirus,' *Vice*, March 31, 2020, <https://www.vice.com/en/article/5dmea3/amazon-fired-the-warehouse-worker-who-organized-a-walkout-over-coronavirus>. It was also revealed that Amazon executives planned to smear Christian Smalls: see Paul Blest, 'Leaked Amazon Memo Details Plan to Smear Fired Warehouse Organizer: "He's Not Smart or Articulate"', *Vice*, April 2, 2020, <https://www.vice.com/en/article/5dm8bx/leaked-amazon-memo-details-plan-to-smear-fired-warehouse-organizer-hes-not-smart-or-articulate>.

434. The demonstration took place outside the Rugeley fulfilment centre in Staffordshire. See Rob Gollidge, 'Protest at Amazon Rugeley over "hellish" working conditions,' *Express & Star*, December 14, 2017, <https://www.expressandstar.com/news/local-hubs/staffordshire/rugeley/2017/12/14/protest-at-amazons-rugeley-warehouse-over-hellish-working-conditions/>.

435. The demonstrations were organised to take place on Black Friday at the fulfilment centres in Rugeley, Swansea, Peterborough, Milton Keynes, and Warrington. See GMB Union, 'Amazon Black Friday Protests Across UK,' News, November 22, 2018, <https://www.gmblondon.org.uk/news/amazon-black-friday-protests-across-uk>.

436. The demonstrations were planned at fulfilment centres including Rugeley, Swansea, Peterborough, Warrington, Coventry, Doncaster, and Milton Keynes. See GMB Union, 'UK-wide Amazon Prime Day Protests,' News, July 15, 2019, <https://www.gmb.org.uk/news/uk-wide-amazon-prime-day-protests>.

437. The demonstrations in the UK, which took place on 29 November and 2 December, were planned for the fulfilment centres in Bolton, Manchester, Warrington, Rugeley, Coalville, Peterborough, Newport, Sheffield, and London. See GMB Union, 'Amazon Black Friday protests staged across UK,' News, November 29, 2019, <https://www.gmb.org.uk/news/amazon-black-friday-protests-staged-across-uk>. On the struggle of the Amazon workers in the UK more generally, see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 28-31.

East African workers in the USA organised demonstrations about working conditions in Eagan, Minnesota, in June 2018;⁴³⁸ and in Minneapolis, Minnesota, in December 2018.⁴³⁹ Workers also demonstrated outside Amazon's fulfilment centre in Staten Island, New York City, in November 2019.⁴⁴⁰

Demonstrations took place in Spain, in July 2019;⁴⁴¹ and in November and December 2019.⁴⁴² They also occurred in Poland, in July 2019;⁴⁴³ and at multiple sites in France, in November 2019.⁴⁴⁴

5.1.2 Work Stoppages

Fulfilment centre production workers have engaged in strike action in countries across North America and Europe, with much of it coordinated through the international network Amazon Workers International (amworkers.wordpress.com). Below, we give an overview of the strike action that has taken place over the last few years in the USA, and in Germany, Italy, France, and Spain.^{445, 446}

USA

Media reports indicate that Amazon production workers in the United States have organised work stoppages at fulfilment centres and delivery stations on numerous occasions between 2018 and 2020.⁴⁴⁷ Details of some of these stoppages, including the length of the stoppage and the reason for it, are presented in Table 9.

438. It is reported that the workers held a news conference outside the fulfilment centre, during which they claimed that they had been suffering from 'exhaustion, dehydration and injuries' through work. See Emma Sapong, 'East African workers demand safer working conditions at Amazon's Eagan warehouse,' News, June 4, 2018, <https://www.mprnews.org/story/2018/06/04/east-african-workers-demand-safer-working-conditions-at-amazons-eagan-warehouse>.

439. Chavie Lieber, 'Muslim Amazon workers say they don't have enough time to pray. Now they're fighting for their rights,' Vox, December 14, 2018, <https://www.vox.com/the-goods/2018/12/14/18141291/amazon-fulfillment-center-east-africa-workers-minneapolis>.

440. It is reported that, during the demonstration, workers called for a manager to collect a petition, which contained demands for changes to working conditions and which had been signed by 600 people. See Lisa Fickenscher, 'Workers at Amazon's Staten Island warehouse hold rally over high injury rates,' *The New York Post*, November 25, 2019, <https://nypost.com/2019/11/25/workers-at-amazons-staten-island-warehouse-to-hold-rally-over-high-injury-rates/>.

441. Isobel Asher Hamilton, 'Thousands of Amazon workers across Europe and the US are striking and protesting on Prime Day,' *Business Insider*, July 15, 2019, <https://www.businessinsider.com/amazon-workers-across-europe-and-us-protest-prime-day-2019-7?r=US&IR=T>.

442. Isobel Asher Hamilton, 'Thousands of people across Europe are protesting and striking against Amazon on Black Friday,' *Business Insider*, November 29, 2019, <https://www.businessinsider.com/amazon-strikes-and-protests-sweep-across-europe-on-black-friday-2019-11?r=US&IR=T>.

443. Isobel Asher Hamilton, 'Thousands of Amazon workers across Europe and the US are striking and protesting on Prime Day,' *Business Insider*, July 15, 2019, <https://www.businessinsider.com/amazon-workers-across-europe-and-us-protest-prime-day-2019-7?r=US&IR=T>.

444. Isobel Asher Hamilton, 'Thousands of people across Europe are protesting and striking against Amazon on Black Friday,' *Business Insider*, November 29, 2019, <https://www.businessinsider.com/amazon-strikes-and-protests-sweep-across-europe-on-black-friday-2019-11?r=US&IR=T>; BBC, 'Black Friday backlash: Protests against Amazon erupt across France,' News, November 29, 2019, <https://www.bbc.co.uk/news/world-europe-50598575>.

445. Note that in May 2019, after Amazon pulled out of negotiations with trade unions involved in the dispute about conditions of employment, the trade unions in Poland proceeded with a strike ballot, which started on 15 July and was expected to be live until September 2019. For the background to the dispute in Poland, see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 31-5. See also UNI Global Union, 'Polish Amazon workers escalate push for better wages, working conditions,' News, May 10, 2019, <https://www.uniglobalunion.org/news/polish-amazon-workers-escalate-push-better-wages-working-conditions>; UNI Global Union, 'Amazon shuts down talks with Polish unions,' News, July 4, 2019, <https://www.uniglobalunion.org/news/amazon-shuts-down-talks-polish-unions>; UNI Global Union, 'Polish Prime Day protests include a strike vote,' News, July 18, 2019, <https://www.uniglobalunion.org/news/polish-prime-day-protests-include-a-strike-vote>; OZZIP, 'Strike alert! – Message of solidarity to all striking and protesting Amazon workers in the world during the Prime Day 2019,' News, July 14, 2019, <https://www.ozzip.pl/english-news/item/2502-strike-alert-message-of-solidarity-to-all-striking-and-protesting-amazon-workers-in-the-world-during-the-prime-day-2019>.

446. According to OZZ Inicjatywa Pracownicza, about 5,500 workers had taken part in the strike ballot, by the autumn of 2019, which is about 30% of the whole workforce in Poland. Despite a majority of those having participated being in favour of strike action, for the outcome of the ballot to be valid, the level of participation must exceed 50%; hence, the strike ballot was still in progress, in the autumn of 2019. See OZZ Inicjatywa Pracownicza in Amazon, 'Warning Signals for Amazon: Struggles in Poland & Beyond,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 18-25, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

447. On the struggle of the Amazon workers in the USA, see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 43.

	2018	2019	2020
Mar		Fulfilment centre, Shakopee, Minnesota; 3 hours; conditions of employment ⁴⁴⁸	Fulfilment centre, Queens, New York City; lack of protection from Covid-19 ⁴⁴⁹ Fulfilment centre, Staten Island, New York City; lack of protection from Covid-19 ⁴⁵⁰ Delivery station, Chicago; lack of protection from Covid-19 ⁴⁵¹
Apr			Fulfilment centre, Romulus, Michigan; lack of protection from Covid-19 ⁴⁵²
May			Workers at Amazon and other companies; lack of protection from Covid-19 ⁴⁵³
Ju		Fulfilment centre, Shakopee, Minnesota; 6 hours; conditions of employment ⁴⁵⁴	
Aug		Delivery station, Eagan, Minnesota; 2 hours; parking conditions ⁴⁵⁵	
Oct		Delivery station, Eagan, Minnesota; 2½ hours; conditions of employment ⁴⁵⁶	
Dec	Fulfilment centre, Shakopee, Minnesota; working conditions ⁴⁵⁷	Delivery station, Sacramento, California; 2 hours; conditions of employment ⁴⁵⁸	

Table 9: Work Stoppages, USA, 2018-2020

448. Joe Demanuelle-Hall, 'That's Strike One, Amazon,' *Jacobin*, March 26, 2019, <https://jacobinmag.com/2019/03/minnesota-strike-amazon-somali-awood>.

449. Olga Khazan, 'Exclusive: Amazon Confirms First Known Coronavirus Case in an American Warehouse,' *The Atlantic*, March 19, 2020, <https://www.theatlantic.com/health/archive/2020/03/amazon-warehouse-employee-has-coronavirus/608341/>.

450. Annie Palmer, 'Amazon fires warehouse worker who led Staten Island strike for more coronavirus protection,' *News*, March 30, 2020, <https://www.cnbc.com/2020/03/30/amazon-fires-staten-island-coronavirus-strike-leader-chris-smalls.html>, and Annie Palmer, 'Amazon workers plan strike at Staten Island warehouse to demand coronavirus protections,' *News*, March 29, 2020, <https://www.cnbc.com/2020/03/29/amazon-workers-in-staten-island-plan-strike-over-coronavirus-safety.html>.

451. Caroline O'Donovan, 'As More Amazon Employees Contract The Coronavirus, Workers Are Walking Off The Job,' *BuzzFeed News*, April 14, 2020, <https://www.buzzfeednews.com/article/carolineodonovan/amazon-employees-coronavirus-walkout>. The workers set out their demands in a petition: 'DCH1 Amazonians United Petition for Coronavirus Protections,' Petition, DCH1 Amazonians United, <https://docs.google.com/forms/d/e/1FAIpQLSdo3wwVB9e-5pQK5jKjtcPsvGQ5JGIySFetQmuNe9koGy99dA/viewform>.

452. The protest was organised by Tonya Ramsay and Mario Crippen, who accused Amazon of putting workers, their families and communities in danger; see Annie Palmer, 'Amazon workers protest at Michigan warehouse, calling for coronavirus protections,' *News*, April 1, 2020, <https://www.cnbc.com/2020/04/01/amazon-workers-plan-strike-at-michigan-warehouse-for-covid-19-protections.html>.

453. It is not known exactly how many workers from Amazon participated and from which fulfilment centres; see Lauren Kaori Gurley, 'Amazon, Whole Foods, Instacart Workers Organize a Historic Mass Strike,' *Vice*, April 29, 2020, https://www.vice.com/en_us/article/n7j8zw/amazon-whole-foods-instacart-workers-organize-a-historic-mass-strike; Rachel Lerman and Nitasha Tiku, 'Amazon, Instacart workers launch May Day strike to protest treatment during the coronavirus pandemic,' *The Washington Post*, May 1, 2020, <https://www.washingtonpost.com/technology/2020/05/01/amazon-instacart-workers-strike/>; Michael Sainato, 'Retail workers at Amazon and Whole Foods coordinate sick-out to protest Covid-19 conditions,' *The Guardian*, May 1, 2020, <https://www.theguardian.com/world/2020/may/01/retail-workers-at-amazon-and-whole-foods-coordinate-sick-out-to-protest-covid-19-conditions>.

454. Josh Dzieza, "'Beat the Machine": Amazon Warehouse Workers Strike to Protest Inhumane Conditions,' *The Verge*, July 16, 2019, <https://www.theverge.com/2019/7/16/20696154/amazon-prime-day-2019-strike-warehouse-workers-inhumane-conditions-the-rate-productivity>; Jasmine Wu and Katie Schoolov, 'Amazon workers in Minnesota walk out as Prime Day orders roll in,' *News*, July 15, 2019, <https://www.cnbc.com/2019/07/15/amazon-workers-prime-day-strike-begins-in-minnesota.html>. According to William Stolz, a picker at the Shakopee fulfilment centre, about 35 workers took part in the strike action on 15 July, their demands relating to the 'speed of the work and the risk of injuries' as well as to the conversion of contracts and wage levels. See Transnational Social Strike Platform, 'Migrants and Locals Together in the Strike: Interview with William Stolz,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 51, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

455. Workers were having to double park, owing to a lack of parking spaces, and management was ordering cars that were blocking delivery vehicles to be towed away, leaving workers to pay a release fee of as much as \$350. In response to the protest, Amazon agreed to repay the fees and to provide more parking spaces. See CBS Minnesota, 'Striking Workers Reach Agreement With Eagan Amazon Over Parking Conditions,' *News*, August 8, 2019, <https://minnesota.cbslocal.com/2019/08/08/striking-workers-reach-agreement-with-management-at-eagan-amazon-over-parking-conditions/>, and Timothy B. Lee, 'Amazon workers in Minnesota walk off the job over parking issues,' *Ars Technica*, August 9, 2019, <https://arstechnica.com/tech-policy/2019/08/amazon-faces-growing-labor-unrest-with-minnesota-warehouse-protest/>.

456. Josh Dzieza, 'Amazon workers in Minnesota walk out in protest over part-time work,' *The Verge*, October 3, 2019, <https://www.theverge.com/2019/10/3/20897119/amazon-workers-walk-out-protest-part-time-work-minnesota>.

457. Sam Adler-Bell, 'Surviving Amazon,' *Logic*, August 3, 2019, <https://logicmag.io/bodies/surviving-amazon/>.

458. 36 workers on the night shift stopped work and delivered a petition to managers demanding that they be given paid time off; see Shirin Ghaffary, 'Amazon warehouse workers doing "back-breaking" work walked off the job in protest,' *Vox*, December 10, 2019, <https://www.vox.com/recode/2019/12/10/21005098/amazon-warehouse-workers-sacramento>.

Germany

Amazon workers in Germany have engaged in a long struggle with Amazon's managers over conditions of employment and working conditions; this is the longest industrial dispute in the history of the Federal Republic of Germany and has led to over 300 days being lost to strike action in the period from April 2013 to July 2019.^{459, 460} In Table 10, details of most of the strikes that have taken place in fulfilment centres in Germany from 2013 to 2020 are presented, with the names of the fulfilment centres involved and the length of the stoppage (where known). Note that not all the stoppages are reported by the media. All the strikes that are included in Table 10 (over page) relate to disputes over conditions of employment, including working conditions, apart from the strikes in June 2020, which relate to a dispute over health and safety (lack of protection from transmission of the coronavirus).

	2013	2014	2015	2016	2017	2018	2019	2020
Mar			Bad Hersfeld (2 days) ⁴⁶¹	Koblenz ⁴⁶²	Rheinberg ⁴⁶³			
Apr	Bad Hersfeld ⁴⁶⁴	Bad Hersfeld and Leipzig ⁴⁶⁵			Leipzig and Bad Hersfeld ⁴⁶⁶		Rheinberg, Werne, Bad Hersfeld, and Koblenz ⁴⁶⁷	
May	Bad Hersfeld and Leipzig ⁴⁶⁸				Bad Hersfeld ⁴⁶⁹			
Jun	Bad Hersfeld and Leipzig ⁴⁷⁰	Bad Hersfeld and Graben ⁴⁷¹						Bad Hersfeld, Rheinberg, Werne, Koblenz, and Leipzig (2 days) ⁴⁷²

Table 10: Work Stoppages, Germany, 2013-2020

459. For further information about this struggle, see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 9-12, and Angry Workers of the World, 'Welcome to the Jungle – Working and Struggling in Amazon Warehouses,' International, December 20, 2015, <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>.

460. On the struggle in Germany from the perspective of Verdi, the trade union that has been organising Amazon workers, see 'Common Strategy to Gain Power and Think Bigger: Interview with Christian Krähling,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019* journal, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 13-17, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf. The different tactics that Verdi has used to disrupt the fulfilment process include 'non-announced strikes with varying duration and number of ... [fulfilment centres] involved, "fake strikes", spontaneous strikes in case of high volume of orders, strikes out of running business, and in-out-in strikes.' Holding a 'fake strike' involves establishing a pretence of strike action – for example, 'by driving a trade union car in front of the ... [fulfilment centre] ... which happens normally if there is going to be a strike'; a 'strike out of running business' involves starting work and then leaving it 'suddenly', to go on strike; an 'in-out-in strike' involves starting work, going out on strike and then returning to work 'after one or two hours.' See Georg Barthel, 'Against the Logistics of Amazon: Challenges to Build[ing] Effective Power,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019* journal, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 68, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

461. UNI Global Union, 'Amazon Germany workers on strike again,' News, March 17, 2015, <https://www.uniglobalunion.org/news/amazon-germany-workers-strike-again>.

462. Reuters in Berlin, 'Amazon employees hold strike over pay,' *The Guardian*, March 22, 2016, <https://www.theguardian.com/technology/2016/mar/22/amazon-workers-go-on-strike-over-pay>.

463. UNI Global Union, 'Walk out strike action in Amazon, Rheinberg, Germany,' News, March 22, 2017, <https://uniglobalunion.org/fr/node/38393>.

464. Jörn Boewe and Johannes Schulten, 'In the Belly of the Beast,' *Jacobin*, June 19, 2017, <https://www.jacobinmag.com/2017/06/amazon-germany-union-strikes-works-councils>.

465. Sarah Sloat, 'Amazon Workers in Germany Strike Again, Union Says,' *The Wall Street Journal*, April 17, 2014, <https://www.wsj.com/articles/amazon-workers-in-germany-to-strike-again-union-says-1397716407>.

466. *Leipziger Internet Zeitung*, 'Erneuter Streik bei Amazon in Leipzig – Beschäftigte lassen nicht locker,' *Leipziger Internet Zeitung*, April 18, 2017, <https://www.l-iz.de/melder/wortmelder/2017/04/Erneuter-Streik-bei-Amazon-in-Leipzig-%E2%80%93-Beschaeftigte-lassen-nicht-locker-174762>; *Fuldainfo*, 'Wieder Streik bei Amazon Bad Hersfeld,' News, April 18, 2017, <https://www.fuldainfo.de/wieder-streik-bei-amazon-bad-hersfeld/>.

467. Reuters Staff, 'Amazon workers strike at four German warehouses,' *Reuters*, April 15, 2019, <https://www.reuters.com/article/us-amazon-com-germany/amazon-workers-strike-at-four-german-warehouses-idUSKCN1RR13D>.

468. Agencies, 'Amazon staff go on strike in Germany,' *The Guardian*, May 14, 2013, <https://www.theguardian.com/world/2013/may/14/amazon-strike-germany>.

469. Our Correspondents, 'Striking Amazon workers in Germany support call for international cooperation,' News, May 27, 2017, <https://www.wsws.org/en/articles/2017/05/27/amzn-m27.html>.

470. DW, 'Amazon staff in Germany strike at two sites,' News, June 17, 2013, <https://www.dw.com/en/amazon-staff-in-germany-strike-at-two-sites/a-16886502>.

471. Sarah Sloat, 'Amazon Workers in Germany Extend Strike Action,' *The Wall Street Journal*, June 2, 2014, <https://www.wsj.com/articles/amazon-workers-in-germany-extend-strike-action-1401725008>.

472. Marianne Arens, 'Amazon workers in Germany strike against lack of coronavirus protection,' News, June 30, 2020, <https://www.wsws.org/en/articles/2020/06/30/amaz-j01.html>. See also Amazon Workers International, 'Yes, you have heard correctly. Finally, in 6 #Amazon warehouses in Germany are the workers on strike for 48 hours. We wish them the best after they had to work in dangerous conditions for so long!' Twitter, June 29, 2020, <https://twitter.com/AmazonWorkersIn/status/1277548940477554688>.

	2013	2014	2015	2016	2017	2018	2019	2020
Jul						6 fulfilment centres ⁴⁷³	Werne, Rheinberg, Leipzig, Graben, Koblenz, and Bad Hersfeld ⁴⁷⁴	
Sep		Leipzig, Bad Hersfeld, Graben, and Rheinberg ⁴⁷⁵	Bad Hersfeld, Leipzig, Rheinberg, Werne, Graben, and Pforzheim ⁴⁷⁶	5 fulfilment centres (1 day) ⁴⁷⁷				
Oct				5 fulfilment centres (1 day) ⁴⁷⁸				
Nov	Bad Hersfeld and Leipzig ⁴⁷⁹			5 fulfilment centres (1 day) ⁴⁸⁰ Rheinberg and Werne (3 days) ⁴⁸¹	6 fulfilment centres ⁴⁸²			
Dec	Bad Hersfeld, Leipzig and Graben ⁴⁸³	Leipzig, Graben, Rheinberg, Werne and Bad Hersfeld (3 days) ⁴⁸⁴	6 fulfilment centres ⁴⁸⁵			Leipzig and Werne ⁴⁸⁶	Bad Hersfeld, Koblenz and Leipzig ⁴⁸⁷	

Ta

Table 10: Work Stoppages, Germany, 2013-2020 (continued)

Italy

Amazon production workers in Italy have also engaged in strike action at various fulfilment centres in the period from 2017 to 2020;⁴⁸⁸ limited details of those strikes which have been reported in the English media are presented in Table 11. Like the workers in the United States and Germany, the workers in Italy are in dispute with Amazon over conditions of employment, including working conditions; and, as in other countries, the strike action that took place in March 2020, at the Castel San Giovanni fulfilment centre near Milan, was in relation to a dispute over health and safety at work (that is, failure to protect workers from transmission of the coronavirus).

473. Reuters Staff, 'Amazon workers strike in Germany, joining action in Spain and Poland,' News, July 16, 2018, https://www.reuters.com/article/us-amazon-com-germany-strike/amazon-workers-strike-in-germany-joining-action-in-spain-and-poland-idUSKBN1K61OY?utm_source=teknoskop.

474. Reuters Staff, 'Amazon workers in Germany strike over pay, Verdi union says,' News, July 14, 2019, https://www.reuters.com/article/us-amazon-germany-strike-idUSKCN1U90NZ?utm_campaign=trueAnthem:+Trending+Content&utm_content=5d2c39a70ca7240001cb6644&utm_medium=trueAnthem&utm_source=twitter.

475. BBC, 'Amazon workers in Germany go on strike over pay,' News, September 22, 2014, <https://www.bbc.co.uk/news/business-29310630>.

476. DW, 'Amazon workers go on strike in Germany,' News, September 21, 2015, <https://www.dw.com/en/amazon-workers-go-on-strike-in-germany/a-18727993>.

477. Birgit Kraemer, 'Germany: Union–Amazon conflict escalates in run-up to Christmas,' December 15, 2016, <https://www.eurofound.europa.eu/publications/article/2016/germany-union-amazon-conflict-escalates-in-run-up-to-christmas>.

478. Birgit Kraemer, 'Germany: Union–Amazon conflict escalates in run-up to Christmas,' December 15, 2016, <https://www.eurofound.europa.eu/publications/article/2016/germany-union-amazon-conflict-escalates-in-run-up-to-christmas>.

479. Josie Le Blond, 'German Amazon workers strike in long-running dispute over pay,' *The Guardian*, November 25, 2013, <https://www.theguardian.com/business/2013/nov/25/german-amazon-employees-strike-pay>.

480. Birgit Kraemer, 'Germany: Union–Amazon conflict escalates in run-up to Christmas,' December 15, 2016, <https://www.eurofound.europa.eu/publications/article/2016/germany-union-amazon-conflict-escalates-in-run-up-to-christmas>.

481. Ibid.

482. DW, 'Amazon faces "Black Friday Strikes in Germany, Italy,' News, November 24, 2017, <https://www.dw.com/en/amazon-faces-black-friday-strikes-in-germany-italy/a-41511084>.

483. BBC, 'Amazon workers strike in Germany over pay,' News, December 16, 2013, <https://www.bbc.co.uk/news/business-25397316>.

484. DW, 'Amazon workers to stage pre-Christmas strike,' News, December 12, 2014, <https://www.dw.com/en/amazon-workers-to-stage-pre-christmas-strike/a-18125704>.

485. Reuters Staff, 'Strikes at Amazon German warehouses up to Christmas,' News, December 21, 2015, <https://www.reuters.com/article/us-amazon-com-germany/strikes-at-amazon-german-warehouses-up-to-christmas-idUSKBN0U40SY20151221>.

486. DW, 'German Amazon workers take pre-Christmas strike action,' News, December 17, 2018, <https://www.dw.com/en/german-amazon-workers-take-pre-christmas-strike-action/a-46770628>.

487. Reuters Staff, 'German union calls more pre-Christmas Amazon strikes,' News, December 17, 2019, <https://www.reuters.com/article/us-amazon-germany-strike/german-union-calls-more-pre-christmas-amazon-strikes-idUSKBN1YL1QK>; Reuters Staff, 'German union extends strike at Amazon's Leipzig warehouse until December 24,' News, December 20, 2019, <https://www.reuters.com/article/us-amazon-germany-strike/german-union-extends-strike-at-amazons-leipzig-warehouse-until-december-24-idUSKBN1YO1KI>

488. On the struggle of the Amazon workers in Italy, see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 41-2.

	2017	2018	2019	2020
Mar				Castel San Giovanni ⁴⁸⁹
Nov	Piacenza ⁴⁹⁰	Vercelli ⁴⁹¹	Brandizzo and Marene ⁴⁹²	

Table 11: Work Stoppages, Italy, 2017-2020

France⁴⁹³

In the period from 2014 to 2020, Amazon production workers in France have also organised strike action at the fulfilment centres in Saran and Lauwin-Planque, in a dispute over conditions of employment; limited details of these strikes are presented in Table 12, below. The work stoppages that are reported to have taken place at four fulfilment centres in March 2020 were in reaction to the spread of the coronavirus across France.

	2014	2018	2020
Mar		Lauwin-Planque ⁴⁹⁴	Saran, Montélimar, Sevrey, and Lauwin-Planque ⁴⁹⁵
Jun	Saran ⁴⁹⁶		
Nov		Lauwin-Planque ⁴⁹⁷	
Dec	Saran ⁴⁹⁸		

Table 12: Work Stoppages, France, 2014-2020

Spain⁴⁹⁹

In Spain, Amazon production workers have also engaged in strike action, in 2018 and 2019, at the fulfilment centre in Madrid. Limited details of this action are presented in Table 13.

489. In addition, workers announced a state of agitation at the fulfilment centres in Piedmont and Passo Corese (near Rome). UNI Global Union, 'Global alliance of unions demands Amazon take urgent measures to address COVID-19,' News, March 1, 2020, <https://uniglobalunion.org/news/global-alliance-unions-demands-amazon-take-urgent-measures-address-covid-19>, and Melissa Heikkilä, "'This is crazy:' Rage boils over at Amazon sites over coronavirus risks,' *Politico*, March 20, 2020, <https://www.politico.eu/article/coronavirus-amazon-employees-rage/>.

490. *The Local*, 'Amazon Italy workers call Black Friday strike,' News, November 23, 2017, <https://www.thelocal.it/2017/11/23/amazon-italy-black-friday-strike>; *The Local*, 'Amazon workers in Italy strike for second time in a month,' News, December 20, 2017, <https://www.thelocal.it/2017/12/20/amazon-italy-second-strike>. The strike action in November 2017 at the fulfilment centre in Piacenza was the first time that workers in Italy had acted against Amazon. The action was called by the three largest trade unions in Italy, the Italian General Confederation of Labour (CGIL), the Italian Confederation of Workers' Trade Unions (CISL), and the Italian Labour Union (UIL), in a dispute over conditions of employment. See Rossana Cillo and Lucia Pradella, 'Strike Friday at Amazon.it,' *Jacobin*, November 29, 2017, <https://www.jacobinmag.com/2017/11/strike-friday-amazon-italy-unions-logistics>.

491. Chavie Lieber, 'Amazon warehouse workers in Europe spent Black Friday protesting,' *Vox*, November 27, 2018, <https://www.vox.com/the-goods/2018/11/27/18114735/amazon-warehouse-workers-europe-protests-black-friday>.

492. ANSA, 'Amazon workers to strike on Black Friday,' News, November 26, 2019, https://www.ansa.it/english/news/business/2019/11/26/amazon-workers-to-strike-on-black-friday_9d144234-a440-4a53-bfa4-570c6ada109e.html.

493. On the struggle of the Amazon workers in France, see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 35-37.

494. Workers at the fulfilment centre in Lille walked off the job, with the support of the CGT trade union and in solidarity with Amazon workers in Madrid who were also on strike; see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 35.

495. Cole Stangler, 'How French Workers Took on Amazon in the Middle of a Pandemic and Won,' *The New York Times*, April 29, 2020, <https://www.nytimes.com/2020/04/29/opinion/amazon-france-coronavirus.html>; Alexandre Piquard, 'Coronavirus : Amazon sous pression du gouvernement et de salariés,' *Le Monde*, March 19, 2020, https://www.lemonde.fr/economie/article/2020/03/19/coronavirus-amazon-sous-pression-du-gouvernement-et-de-salaries_6033724_3234.html.

496. Over 250 workers at the fulfilment centre in Saran engaged in strike action that was coordinated with Amazon workers in Germany and that was supported by the CGT, FO, and SUD trade unions; see Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 34-5. The trade unions called for Amazon workers in France to engage in further strike action on 20 June 2014; see UNI Global Union, 'French unions call for second strike following breakdown in negotiations,' News, June 11, 2014, <https://www.uniglobalunion.org/news/french-unions-call-second-strike-following-breakdown-negotiations>.

497. Isobel Asher Hamilton, "'We are not robots': Thousands of Amazon workers across Europe are striking on Black Friday over warehouse working conditions,' *Business Insider*, July 25, 2018, <https://www.businessinsider.com/black-friday-amazon-workers-protest-poor-working-conditions-2018-11?r=US&IR=T>. According to the World Socialist Web Site, the strike action in France, which took place at the fulfilment centre in Lauwin-Planque, was called by the CGT and SUD trade unions; see Our Reporters, 'Black Friday Strikes hit Amazon in Europe,' News, November 24, 2018, <https://www.wsws.org/en/articles/2018/11/24/amaz-n24.html>.

498. CGT members engaged in strike action at the fulfilment centre in Saran in the ongoing dispute about conditions of employment. See Jörn Boewe and Johannes Schulten, *The Long Struggle of the Amazon Employees* (Brussels: Rosa-Luxemburg-Stiftung, 2019), 35, and *The Local*, 'France's Amazon strike puts pressure on Santa,' News, December 22, 2014, <https://www.thelocal.fr/2014/12/22/france-amazon-strike-warehouse-christmas-wages>.

	2018	2019
Jan		San Fernando de Henares ⁵⁰⁰
Mar	San Fernando de Henares (2 days) ⁵⁰¹	
Jul	San Fernando de Henares (3 days) ⁵⁰²	
Nov	San Fernando de Henares ⁵⁰³	
Dec	San Fernando de Henares ⁵⁰⁴	

Table 13: Work Stoppages, Spain, 2018-2019

5.1.3 Work Slowdowns

In countries where there are legal restrictions on organising strike action, workers have implemented work slowdowns. For example, in July 2018 Amazon workers in Poland decided to carry out ‘a series of slowdowns to coincide with ongoing strikes in Germany.’⁵⁰⁵ This was not the first occasion that Amazon workers in Poland had initiated a work slowdown. In June 2015, workers on the night shift in Amazon’s fulfilment centre in Poznań protested against the imposition of overtime through a work slowdown. Management imposed the overtime in response to strike action by Amazon workers in Germany; but the workers in Poznań, who wanted to demonstrate solidarity with the workers in Germany, who were aggrieved about their conditions of employment and who had been organising themselves with the help of the militant trade union Inicjatywa Pracownicza (Workers’ Initiative), responded, in turn, by interfering with the operation of the mechanical conveyors and thus disrupting the fulfilment of orders.⁵⁰⁶

5.1.4 Petitions

In addition to organising demonstrations, work stoppages, and work slowdowns, Amazon workers have delivered petitions to management. For example,

- in early 2021, a coalition of four organisations of Amazon workers in the United States set up a petition, in relation to the new ‘megacycle’ shift system, demanding
 - ‘[s]hift schedule accommodations (non-medical & medical) for associates who can only work a part of the shift’
 - a ‘\$2 per hour shift differential for working the megacycle shift (e.g. 1:20am-11:50am)’
 - ‘Lyft rides to and from work’ because it is ‘impossible or unsafe to travel via

500. Andrea Germanos, ‘An Example for Mistreated “Workers Across the Globe”, Spanish Amazon Employees on Strike,’ *Common Dreams*, January 4, 2019 <https://www.commondreams.org/news/2019/01/04/example-mistreated-workers-across-globe-spanish-amazon-employees-strike>.

501. The workers were in dispute with Amazon over a new collective agreement. This was the first work stoppage to take place at a fulfilment centre in Spain. See Javier Salvatierra, ‘Unions hail success of strike at Amazon warehouse in Madrid,’ *El Pais*, March 21, 2018, https://english.elpais.com/elpais/2018/03/21/inenglish/1521632646_173135.html.

502. Bryan Menegus, ‘Amazon Workers in Europe Strike During Prime Day Crunch,’ *Gizmodo*, July 16, 2018, <https://gizmodo.com/amazon-workers-in-europe-strike-during-prime-day-crunch-1827629787#.ga=2.37283744.1605618373.1531577003-1076331486.1502759282>.

503. Reuters Staff, ‘Amazon workers strike in Germany, Spain on Black Friday,’ *News*, November 23, 2018, <https://www.reuters.com/article/us-amazon-com-strikes-germany/amazon-workers-strike-in-germany-spain-on-black-friday-idUSKCN1NS1AU?il=0>.

504. UNI Global Union, ‘Amazon workers in Spain and Germany take further strike action over gross violation of worker rights,’ *News*, December 7, 2018, <https://uniglobalunion.org/news/amazon-workers-spain-and-germany-take-further-strike-action-over-gross-violation-worker-rights>.

505. See also Notes from Poland, ‘Polish law imposes restrictive bar on strikes but Polish @Amazon workers have carried out a series of slowdowns to coincide with ongoing strikes in Germany,’ *Twitter*, July 29, 2018, <https://twitter.com/notesfrompoland/status/1023503309456400386>. The work slowdowns in Poland are also mentioned by Rebecca Burns in her article on the coordinated European action against Amazon; see Rebecca Burns, ‘How European Workers Coordinated This Month’s Massive Amazon Strike—And What Comes Next,’ *In These Times*, July 26, 2018, <https://inthesetimes.com/article/amazon-strike-jeff-bezos-germany-spain-poland-workers-labor>.

506. See Ralf Ruckus, ‘Confronting Amazon,’ *Jacobin*, March 31, 2016, <https://www.jacobinmag.com/2016/03/amazon-poland-poznan-strikes-workers>. Ruckus tells us that managers responded to the work slowdown ‘by interrogating workers who had taken part in the action, suspending five workers and later firing two.’ See also Amazon Workers and Supporters, ‘Stop Treating Us Like Dogs! Workers Organizing Resistance at Amazon in Poland,’ in *Choke Points: Logistics Workers Disrupting the Global Supply Chain*, ed. Jake Alimahomed-Wilson and Immanuel Ness (London: Pluto Press, 2018) and the section on the struggle in Poland in the article by Angry Workers of the World, ‘Welcome to the Jungle – Working and Struggling in Amazon Warehouses,’ *International*, December 20, 2015, <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>.

public transportation past midnight’

- ‘20 minute paid breaks’, which Amazon had already promised for ‘all facilities during the pandemic’;⁵⁰⁷
- in March 2020, workers at the Staten Island fulfilment centre, who had organised themselves under the banner of Amazonians United NYC, published a letter to Jeff Bezos, calling on him to
 - improve safety measures in the warehouse during the coronavirus pandemic
 - increase the paid sick leave entitlement
 - pay for childcare
 - offer hazard pay
 - relax productivity targets
 - close down facilities in which workers have contracted the coronavirus;⁵⁰⁸
- in March 2020, workers at the Eastvale fulfilment centre in southern California launched a petition demanding (amongst other things) that
 - Amazon close the warehouse temporarily to allow for sterilization to take place
 - workers be given paid leave for the period of the temporary shutdown
 - workers be given access to coronavirus testing free of charge;⁵⁰⁹
- in November 2019, 600 workers at the fulfilment centre in Staten Island, New York City, ‘signed and delivered a petition to management calling on Amazon to improve working conditions’;⁵¹⁰
- in September 2019, a group of workers at the Sacramento delivery station in California, who had organised themselves under the banner of Amazonians United Sacramento, delivered a petition to management in response to the firing of a worker who, following a family bereavement, had breached the rules about time off by one hour;⁵¹¹

507. Lauren Kaori Gurley, ‘Amazon Is Forcing Its Warehouse Workers Into Brutal “Megacycle” Shifts,’ *Vice*, February 4, 2021, <https://www.vice.com/en/article/y3gk3w/amazon-is-forcing-its-warehouse-workers-into-brutal-megacycle-shifts>.

508. The open letter has been signed by over 5,000 workers; see Amazonians United NYC, ‘We, Amazon Workers, Demand Coronavirus Protections!’ Medium, March 1, 2020, <https://medium.com/@amazoniansunitednyc/we-amazon-workers-demand-coronavirus-protections-16f28ad8b15f>. There is also a petition: ‘Sign the Petition: We, Amazon Workers, Demand Coronavirus Protections!’ Petition, Amazonians United NYC, <https://docs.google.com/forms/d/e/1FAIpQLSfNxiRiOtKkPDoCi3iUe6XPYm0rzYzXezaSc4soA-3jX9SGpOw/viewform>. Amazon Employees for Climate Justice sent an email to Amazon’s corporate workers asking them to sign the open letter; see Amazon Employees for Climate Justice, ‘Coronavirus & Amazon logistics workers,’ Medium, April 1, 2020, <https://medium.com/@amazonemployeesclimatejustice/coronavirus-amazon-log-cfdc9a6f4437>. A similar petition was launched by Amazonians of the Inland Empire (a region of southern California): ‘Amazonians of the Inland Empire Demand STRONG COVID-19 Protections,’ Petition, Amazonians of the Inland Empire, https://docs.google.com/forms/d/e/1FAIpQLSe5CaTGEK7ZbGcMGOhNP-EKZYGfryYFu8CpfubeDvQfM2bUNg/viewform?fbclid=IwAR35kEfa_RnUobQrFqDtBP7eR5xv2zeGqy4P4qYFFx7eS_N54Gm_py5xBLM.

509. ‘Amazon LGB3 – Close, Clean and Paid Leave!’ Petition, IE Amazonians Unite, https://docs.google.com/forms/d/e/1FAIpQLScBtWjPTEsXO3CkBVEst-a_HS6k2FtzQfeb85ldJDOa0QLougl/viewform. 550 Eastvale workers signed the petition, which they submitted to the California Division of the OSHA. These workers also submitted a health and safety complaint to the California Division and to the Riverside County Department of Public Health; see IE Amazonians Unite, ‘Health and Safety Complaint at Amazon LGB3,’ <https://amazoniansunite.org/lgb3>. See also Will Evans, ‘Inside one of Amazon’s hardest-hit warehouses: “Why aren’t we closing the building?”,’ *Reveal*, May 20, 2020, <https://www.revealnews.org/article/inside-one-of-amazons-hardest-hit-warehouses-why-arent-we-closing-the-building/>.

510. Michael Sainato, ‘“I’m not a robot”: Amazon workers condemn unsafe, grueling conditions at warehouse,’ *The Guardian*, February 5, 2020, <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>; Lauren Kaori Gurley, ‘Amazon Workers Are Protesting for Better Conditions Ahead of a Gruelling Season,’ *Vice*, November 25, 2019, https://www.vice.com/en_uk/article/qvgymp/amazon-workers-are-protesting-for-better-conditions-ahead-of-a-gruelling-season; Lisa Fickenscher, ‘Workers at Amazon’s Staten Island warehouse hold rally over high injury rates,’ *The New York Post*, November 25, 2019, <https://nypost.com/2019/11/25/workers-at-amazons-staten-island-warehouse-to-hold-rally-over-high-injury-rates/>.

511. After the petition had been delivered, the worker was rehired by Amazon and was given back pay; see Josh Dzieza, ‘Amazon Workers in Sacramento are Protesting the Company’s Strict Time-off Rules,’ *The Verge*, October 1, 2019, <https://www.theverge.com/2019/10/1/20892693/amazon-protest-time-off-part-time-workers-sacramento-fired>.

- in July 2019, 30 workers at the delivery station in Chicago, who had organised themselves under the banner of DCH1 Amazonians United, submitted a petition to management demanding that they be provided with higher pay during peak periods, health insurance, and air conditioning.⁵¹²

5.1.5 Interest Group Coalitions

In 2020, a new international coalition was launched, under the banner 'Make Amazon Pay', that brings together international trade unions, international workers networks, environmental activist groups, and political, research and campaigning organisations. The aim of the coalition is to challenge 'the world's richest man and the multinational corporation behind him.' In the view of the organisers, the spread of the coronavirus across the world 'has exposed how Amazon places profits ahead of workers, society, and our planet.' The coalition concludes: 'Amazon takes too much and gives back too little.'⁵¹³

5.2 Individual Resistance

Finally, it should be noted that, in addition to the forms of collective resistance described above, Amazon fulfilment centre workers have also tried to resist management's demands *individually*. These forms of resistance include

- committing acts of sabotage;⁵¹⁴
- cheating Amazon's computer system;⁵¹⁵
- speaking to managers about specific issues;^{516, 517, 518}
- making confidential disclosures about working conditions to government agencies;⁵¹⁹
- submitting complaints to Amazon human resources and to government

512. Caroline O'Donovan, 'Amazon Worker Protests Have Spread To Chicago As Temperatures Rise,' *BuzzFeed News*, July 22, 2019, <https://www.buzzfeednews.com/article/carolineodonovan/amazon-worker-protests-chicago-heat-wave>. The workers posted their demands in a public petition: 'Amazon Management: Meet with DCH1 Amazonians United now!' Petition, DCH1 Amazonians United, https://www.coworker.org/petitions/amazon-management-meet-with-dch1-amazonians-united-now?fbclid=IwAR0DPPdcvPfkYyBlvBmOaOHznBM-KA81EOA8fCLw90E3BO-5fmJbKA_55w.

513. A set of 'Common Demands' can be downloaded from the coalition's website; see 'Make Amazon Pay: Common Demands,' *Make Amazon Pay*, <https://cloud.progressive.international/s/W9Td3D592F5NY4x/download>.

514. James Bloodworth reveals that he carried out 'small rebellions against authority' in response to the oppressive working environment of the Rugeley fulfilment centre. He writes: 'The first time you were accused of idling you felt a burning sense of injustice. The second or third time it happened you would be annoyed only because you had been caught. You would soon find yourself carrying out small rebellions against authority: a misplaced item you would once have picked up, you now left on the floor. You would snack in the warehouse and defile the floor with the empty wrapper, or deliver a satisfying boot to the spines of a row of tightly packed books or DVDs.' See James Bloodworth, *Hired: Six Months Undercover in Low-Wage Britain* (London: Atlantic Books, 2019), 49.

515. In an online forum, a fulfilment centre worker revealed how it was possible for him to boost his productivity rate 'artificially' by 'leaving a count loaded in his scanner', while other workers revealed that they could boost their rate 'by rapidly scanning several bins of small items'. See Sam Adler-Bell, 'Surviving Amazon,' *Logic*, August 3, 2019, <https://logicmag.io/bodies/surviving-amazon/>.

516. In his blog, John Burgett discloses that he challenged a manager who 'reprimanded' him 'for being one minute late', when he was working as a packer in the fulfilment centre in Jeffersonville. He writes: 'The manager who reprimanded me for being one minute late in AFE got an earful. I told him it is bad policy for a manager to hassle solid employees ... who show up day after day and do their jobs well, over such trivial matters. He walked away shaking his head, saying "OK, sorry man."' See John Burgett, 'Scan to Scan, Pick to Pick,' *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/scan-to-scan-pick-to-pick>.

517. In June 2011, while working in excessive heat, Karen Salasky became unwell and told managers that they cared only about reaching productivity targets. Of course, after this incident, Amazon fired Salasky, accusing her of swearing on the day that she became unwell – an accusation that Salasky denies. See Spencer Soper, 'Inside Amazon's Warehouse,' *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

518. In September 2021, workers at DIL3, a delivery station in Chicago, demanded that managers resolve a problem with staffing. When the warehouse managers attempted to dismiss their demands, the workers stood their ground and forced their managers to resolve the problem. See Amazonians United Chicagoland, 'Management at DIL3 in Gage Park has been understaffing key positions for weeks,' *Facebook*, September 14, 2021, <https://www.facebook.com/AUChicagoland>.

519. In June 2011, a worker at one of Amazon's fulfilment centres in Breinigsville reported dangerous working conditions (excessive heat) to the OSHA, which subsequently inspected the warehouse. See Spencer Soper, 'Inside Amazon's Warehouse,' *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

agencies,^{520, 521}

- taking legal action against Amazon,⁵²²
- resigning from Amazon.⁵²³

520. In March 2011, Karen Salasky wrote a letter of complaint to the human resources manager at the fulfilment centre in which she worked, in Breinigsville, after she received a letter from managers warning her that she had been unproductive for a few minutes during one of her shifts. See Spencer Soper, 'Inside Amazon's Warehouse,' *ZNET*, September 24, 2011, <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

521. In April 2020, at least three workers at the Amazon delivery station in Chicago, one of whom is Samir Quasir, submitted complaints about retaliation to the National Labor Relations Board, following their participation in a protest, at the end of March, about lack of protection from the spread of the coronavirus. See Caroline O'Donovan, 'The NLRB Is Looking Into Claims That Amazon Violated Employees' Rights During The Coronavirus Pandemic,' *BuzzFeed News*, April 18, 2020, <https://www.buzzfeednews.com/article/carolineodonovan/federal-labor-regulators-are-looking-into-claims-that>.

522. There are many examples of Amazon fulfilment centre workers taking legal action against Amazon, including three Amazon workers at the Staten Island facility, who, along with members of their households, filed a lawsuit alleging that, by not properly tracking and preventing the spread of the coronavirus within its warehouses, Amazon had 'failed to follow proper guidelines provided by public health agencies such as the Centers for Disease Control and Prevention'. See Annie Palmer, 'Amazon warehouse workers file lawsuit claiming "sloppy contact tracing",' *News*, June 6, 2020, <https://www.cnn.com/2020/06/06/amazon-warehouse-workers-lawsuit-alleges-sloppy-contact-tracing.html>. Further details of the lawsuit are given in the press release by Public Justice; see Public Justice, 'Amazon Workers and Their Family Members File Suit for Workplace Policy Changes to Stop Community Spread of COVID-19,' Press Release, June 3, 2020, <https://www.publicjustice.net/wp-content/uploads/2020/06/Amazon-JFK8-Lawsuit-Press-Release-FINAL.pdf>.

523. Charlie, an Amazon fulfilment centre worker in Northampton County, Pennsylvania, told *Logic* that the most common form of worker resistance is quitting one's job. In the same article, a 'warehouse organizer in Illinois' reveals that 'employees who have been around for at least six months are considered "old guard."' See Sam Adler-Bell, 'Surviving Amazon,' *Logic*, August 3, 2019, <https://logicmag.io/bodies/surviving-amazon/>.

Conclusion

6.1 Questions raised by this review

The findings of this evidence review call into question the extent to which Amazon's current business model, for its e-commerce operations, is compatible with the maintenance of the wellbeing of the workers on which the process of fulfilment depends. There is consistent evidence, across multiple sources, that the demands placed on workers, both physically and mentally, may prevent fulfilment centre workers' human needs from being fulfilled and create risks of harm. These questions urgently need to be addressed through further research, as part of the future development of the e-commerce and logistics sectors.

Below, we summarise the particular findings that we presented in each section of the report and that support this overall conclusion.

6.1.1 Work Process

In the second section of this report, the nature of the process of work within Amazon's fulfilment centres was analysed. Evidence suggests that, inside these warehouses, a complex system of work is in operation that is designed to fulfil customer orders as quickly as possible, and at minimum cost, and that is constituted by

- a line of production that is organised into a series of distinct, yet connected, work roles that carry the same level of authority and status;
- a line of management that is organised into a series of distinct, yet connected, work roles that carry successively higher levels of authority and status.

Workers in the line of production are responsible for fulfilling customer orders, by means of the exercise of labour power and by the use of tools and raw materials.

Workers in the line of management are responsible for recruiting, training, monitoring, and disciplining workers in the line of production, by means of the exercise of labour power and by the use of tools and raw materials.

The level of mechanisation (that is, the extent to which labour power has been replaced by mechanical power and human control by mechanical control) varies across fulfilment centres: with a tendency for the older design of the fulfilment centre to have a lower the level of mechanisation; the newer the design of the fulfilment centre, the higher the level of mechanisation.

Moreover, digitisation plays an important role in the process of fulfilment. It is by means of digitisation that Amazon can, amongst other things,

- record the properties of items of merchandise, as they enter the fulfilment centre;
- determine where items of merchandise can be stored safely;
- track the movement of items of merchandise, as customer orders are fulfilled;
- track the movement of workers, within the fulfilment centre;

- monitor the performance of workers, as they fulfil customer orders;
- issue instructions to workers, regarding the fulfilment of customer orders;
- check that the correct item of merchandise has been packaged, before it leaves the fulfilment centre;
- determine the minimum amount of packaging that needs to be used, to reduce waste;
- integrate automatic machine tools (such as robots) into the work process.

6.1.2 Nature of Employment

In the third section of this report, the nature of the employment of workers in Amazon's fulfilment centres, which included both the conditions of their employment and the character or quality of their employment, was explored. Evidence from fulfilment centre workers about the conditions of their employment suggests that the quality of their employment is best described as precarious, a description supported by the evidence on workforce turnover.

6.1.3 Working Conditions

In the fourth section of this report, the nature of the working conditions inside Amazon's fulfilment centres was discussed.

Evidence from published reports of Amazon workers' experiences suggests that the physical demands on them arise from the frequency, duration, extension, and ambient temperature and humidity of the process of fulfilment – specifically,

- the continual increase in the rate of production (the units per hour);
- the length of the working day and the length of the working week, which are extended when overtime is imposed;
- the distance that workers must move, across the floor of the warehouse, to complete certain tasks;
- the changes in the temperature and humidity of the air on the floor of the warehouse.

Evidence surveyed regarding the rate at which Amazon's fulfilment centre production workers are injured, the frequency of ambulance call-outs for them, and the results of safety inspections of Amazon's warehouses suggest that the physical demands of the process of fulfilment put workers at significant risk of suffering physical harm. The evidence suggests, in particular, that

- fulfilment centre production workers are at greater risk of suffering physical harm than production workers typically are in (a) other parts of the warehousing sector and (b) other, privately-owned industries;
- the risk to fulfilment centre production workers of suffering physical harm is highest during the weeks of Black Friday, Cyber Monday, and Prime Day, periods of peak demand deliberately created by Amazon in order to boost sales;

- production workers in robotic fulfilment centres appear to be at greater risk of suffering physical harm than production workers in non-robotic fulfilment centres.

Evidence that some fulfilment centre production workers have provided through their responses to surveys and through their disclosures to media organisations suggests that the mental demands on them arise from

- a lack of *control*, on the part of production workers, over the process of fulfilment;
- a lack of *trust* that some production workers have in some managers;
- a lack of *accommodation of the physiological needs* of production workers, by some managers;
- a lack of *value* that some workers feel they are accorded by some managers for their work;
- a lack of *opportunities for personal development*.

Evidence from surveys of fulfilment centre workers, emergency services call logs, and individual worker disclosures to the media suggests that the mental demands of the process of fulfilment put production workers at significant risk of suffering mental harm – that is, of suffering disorders of anxiety, mood, and stress.

6.1.4 Workers' Responses to Physical and Mental Demands

In the fifth section of this report, fulfilment centre workers' resistance to their working conditions were discussed.

Published reports indicate that, fulfilment centre workers across the world are taking action to assert their needs, and that this is taking a variety of forms,

- *collectively*, such as through demonstrations (UK, France, Spain, Italy, Poland, USA), work stoppages (USA, Germany, Italy, France, Spain), work slowdowns (Poland), petitions to management (USA), and international coalitions;
- *individually*, such as through challenging managers, sabotaging the working environment, reporting Amazon to safety authorities, submitting complaints to government agencies, taking legal action, and resigning.

We should note that these reports show that Amazon fulfilment centre workers are starting to coordinate forms of collective resistance, internationally, to try to counteract Amazon's ability to re-direct customer orders across national borders, from a fulfilment centre where production is impeded (for example, in Germany) to a fulfilment centre where production is unimpeded (for example, in Poland).⁵²⁴ However, it seems that, at present, it is only a minority of the workforce of fulfilment centres that is participating in industrial action, which means that it continues to be possible for managers to redistribute workers across departments to mitigate the effects of industrial action on production.⁵²⁵

524. The transnational meeting of Amazon workers in Leipzig, in October 2019, declared the need for united strike action by Amazon workers across national borders; see 'Final Declaration of the Transnational Meeting of Amazon Workers in Leipzig,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 73-4, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

525. On the difficulties that the trade unions have encountered, when attempting to disrupt the process of production, see Georg Barthel, 'Against the Logistics of Amazon: Challenges to Build[ing] Effective Power,' in *Strike the Giant! Transnational Organization against Amazon, Fall 2019 journal*, ed. Transnational Social Strike Platform (Transnational Social Strike Platform, 2019), 64-72, https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

6.2 Considerations for managers, trade unions and policy

In light of the evidence reviewed here concerning the process of fulfilment, the working conditions inside Amazon's fulfilment centres and the conditions of employment of fulfilment centre workers, we raised the following questions for consideration by Amazon's senior managers, trade unions, and government.

6.2.1 Amazon's Senior Managers

To consider ways to reduce the demands of the process of fulfilment in order to safeguard workers' wellbeing, for example by:

Task Demands

- Reducing the rate of production (the units per hour).
- Reviewing the design of work stations to minimise postural stress and ensuring that heavy loads are always lifted by at least two workers.
- Reducing the length of a shift so that workers do not feel exhausted, when they return home.
- Increasing the length of scheduled breaks in the work process, to allow for the time that workers must spend walking to the break room and going through the security process.
- Increasing the allowance of time off task, to allow for the time that workers must spend finding a bathroom or a water dispenser that is operational.
- Allowing workers to take additional breaks, when they are suffering from fatigue, and without sanction or reduction in pay.
- Increasing the allowance of Paid Time Off, for workers who are injured or unwell and need to rest.
- Ensuring that the temperature and humidity of the warehouse is stable so that workers are not exposed to extreme changes of temperature and humidity.
- Making reasonable adjustments to the work process, for workers who are temporarily or permanently disabled.

Training and Development

- Ensuring that all workers are properly trained for the tasks they are expected to complete.
- Ensuring that all workers have the opportunity to transfer to a different role, after two months, so that workers can have variety and develop new skills and experience.
- Offering production workers the opportunity for promotion, in recognition of their achievements, and the skills, knowledge, and experience that they have gained, while working in the fulfilment centre.

Security of Employment and Remuneration

- Giving workers the opportunity to sign a permanent contract of employment, on

expiry of their temporary contract.

- Ensuring that all employed workers, whatever the type of contract, are paid at a level that enables them to meet their human needs.

Medical Care

- Ensuring that workers are provided with adequate medical treatment, if they are injured or become unwell, and that serious health conditions are assessed, immediately, by an independent physician.
- Providing workers with copies of the medical treatment protocol.

Health and Safety

- Allowing workers to elect representatives to a health and safety committee, provide these representatives with training in matters of health and safety, and implement any recommendations for change that the committee makes.
- Ensuring that all injuries and illnesses are recorded, whether or not there is a legal requirement to do this.
- Ensuring that injury and illness records include information about the different types of ergonomic hazard and their causes, referrals to Amcare or other agencies, and the nature and impact of the remedial interventions made.
- Publishing the health and safety performance of individual fulfilment centres in annual reports.
- Responding, promptly, to issues of health and safety that individual workers raise, and without sanction.

Worker Representation

- Allowing workers to organise themselves within a trade union, without sanction.

Discipline

- Ensuring that the disciplinary process is fair; that is, ensure that it is not applied on the basis of unreasonable demands and is not abused (for example, to achieve victimisation).

6.2.2 Trade Unions

Given the difficulties of organising workers inside the fulfilment centre, which are the consequence of high turnover, the use of agency labour, alleged workplace surveillance, and fear of retaliation by managers, trade unions should consider ways of recruiting and organising workers outside the boundaries of the fulfilment centre, as the workers at the Shakopee fulfilment centre in Minnesota have done. We would encourage trade unions should continue to monitor, through surveys of their members, and publish, information about working conditions inside fulfilment centres, to help build public understanding of the experiences of fulfilment centre workers and public support for effective solutions to these problems.

6.2.3 Government

As noted earlier in this report, Amazon fulfilment centres operate in many different national jurisdictions, whose current legislation varies. In some countries, some of the measures we highlight below are already in place. We put forward the following for governments' consideration, to review and where necessary consider strengthening their national legislation, in at least three areas of responsibility.

Health and Safety

To ensure that information about working conditions can be scrutinized by the public, there may be value in legislating, where this is not already the case, to make annual publication of workplace health and safety records a legal requirement.

To raise public awareness and understanding of the mental hazards of the workplace, the findings of this review highlight the importance of health and safety legislation giving equal consideration to the physical and mental demands and risks of the work process and ensuring that enforcement of this legislation is adequately resourced. In particular, these findings suggest there is value in ensuring a legal requirement

- for those in authority, to record and report any type of harm that a worker experiences, whether physical or mental;
- for inspectors, to assess the mental, as well as the physical, risks of the work process and to ensure that the working environment meets the human needs of workers;
- for companies to be legally required to recognise a trade union and allocate time to elected officials to contribute to the independent monitoring of physical and mental risks within the work process.

Employment

To establish fair treatment at work, these findings highlight the importance of government legislating to ensure that

- part-time workers, workers on temporary contracts, and indirectly-hired workers are not treated less favourably than full-time workers, workers on permanent contracts, and directly-hired workers – for example, with respect to pay, benefits, training opportunities, time off from work, selection for promotion or redundancy, etc.;
- work-related bullying, harassment, and discrimination are prohibited, separately and equally, and that work-related bullying is defined to include intimidation and retaliation (for example, for whistleblowing);
- all workers have free access to employment tribunals or other legal processes that they can use to address mistreatment;
- all workers are protected from unfair dismissal, from the start of their contract of employment;
- employed workers are remunerated at a level that is sufficient to meet their human

needs;

- employed workers are remunerated for the time that they are expected to be at work, including any time spent in 'preliminary', 'postliminary', and break activities.

Social Security

- The findings of this review further highlight that, to ensure that workers are not forced to enter a workplace when they are unwell, the importance of legislation and resources for sick pay and hazard pay, the latter to ensure that workers are not forced to enter a workplace that poses a risk to their health or safety, whether the risk is physical or mental.

Bibliography

Adler-Bell, Sam. "Surviving Amazon." *Logic*, August 3, 2019. <https://logicmag.io/bodies/surviving-amazon/>.

Agencies. "Amazon staff go on strike in Germany." *The Guardian*, 14 May 2013. <https://www.theguardian.com/world/2013/may/14/amazon-strike-germany>.

Ajunwa, Ifeoma, Kate Crawford, and Jason Schultz. "Limitless Worker Surveillance." *California Law Review* 105, no. 3 (2017): 735-76. <https://lawcat.berkeley.edu/record/1127979?ln=en>.

Alimahomed-Wilson, J. and Ellen Reese, eds. *The Cost of Free Shipping: Amazon in the Global Economy*. London: Pluto Press, 2020.

Alimahomed-Wilson, J. and Immanuel Ness, eds. *Choke Points: Logistics Workers Disrupting the Global Supply Chain*. London: Pluto Press, 2018.

Amazon press release, 'From Body Mechanics to Mindfulness, Amazon Launches Employee-Designed Health and Safety Program called WorkingWell Across U.S. Operations', 17 May 2021, <https://press.aboutamazon.com/news-releases/news-release-details/body-mechanics-mindfulness-amazon-launches-employee-designed>.

Amazon. "Amazon's Economic Impact Across the UK." Accessed March 4, 2021. <https://www.aboutamazon.co.uk/investing-in-the-uk-economy>.

Amazon. "Amazon Raises Minimum Wage to \$15 for all U.S. Employees." News. October 2, 2018. <https://www.aboutamazon.com/news/workplace/amazon-raises-minimum-wage-to-15-for-all-u-s-employees>.

Amazon. "Amazon to Create 10,000 New Permanent Jobs Across the UK in 2020." Press Release. September 3, 2020. <https://amazonuk.gcs-web.com/news-releases/news-release-details/amazon-create-10000-new-permanent-jobs-across-uk-2020>.

Amazon. "Amazon to Create Over 1,000 New Permanent Jobs with the Opening of new state-of-the-art Fulfilment Centre in Darlington, County Durham." Press Release. December 19, 2019. <https://amazonuk.gcs-web.com/news-releases/news-release-details/amazon-create-over-1000-new-permanent-jobs-opening-new-state-art>.

Amazon. "Amazon's newest robots mean new jobs." Video. June 5, 2019, <https://www.youtube.com/watch?v=4MH7LSLK8Dk>.

Amazon. "Bots by the Numbers: Facts and Figures About Robotics at Amazon." News. December 18, 2018. <https://www.aboutamazon.com/news/innovation-at-amazon/bots-by-the-numbers-facts-and-figures-about-robotics-at-amazon>.

Amazon. "Fulfilment in our Buildings." Accessed March 4, 2021. <https://www.aboutamazon.co.uk/amazon-fulfilment/fulfilment-in-our-buildings>.

Amazon. "How Amazon Receives Your Inventory." Video. December 23, 2013. <https://www.youtube.com/watch?v=dAXdeqcHBp4>.

Amazon. "Investing in the UK economy." Accessed March 31, 2021. <https://www.aboutamazon.co.uk/investing-in-the-uk-economy>.

Amazon. "Our Facilities." Accessed March 4, 2021. <https://www.aboutamazon.com/workplace/facilities>.

Amazon. "Own your success." Accessed September 3, 2021. <https://logistics.amazon.co.uk/marketing>.

Amazon. "What Robots Do (and Don't Do) at Amazon Fulfillment Centers." Accessed March 4, 2021. <https://www.aboutamazon.co.uk/amazon-fulfilment/what-robots-do-and-dont-do-at-amazon-fulfilment-centres>.

Amazon. "What We Do." Accessed March 4, 2021. <https://www.aboutamazon.com/what-we-do>.

Amazon. "2019: Amazon's Economic Impact in the UK." Blog. Last modified September 8, 2020. <https://blog.aboutamazon.co.uk/jobs-and-investment/2019-amazons-economic-impact-in-the-uk>.

Amazon Employees for Climate Justice. "Coronavirus & Amazon logistics workers." *Medium*, April 1, 2020. <https://medium.com/@amazonemployeesclimatejustice/coronavirus-amazon-log-cfdc9a6f4437>.

Amazon Jobs. "Benefits Overview for U.S. Amazon Employees excluding CT, IL, IN, MD, NC, PA, UT, & WI." Accessed March 5, 2021. https://www.amazon.jobs/en/landing_pages/benefitoverview-us.

Amazon Jobs. "Chesterfield, UNITED KINGDOM." Accessed November 14, 2020. <https://www.amazon.jobs/en/locations/Chesterfield-UK>.

Amazon Jobs. "Director Plant Operations." Accessed November 14, 2020. <https://www.amazon.jobs/en/jobs/1340714/director-plant-operations>.

Amazon Jobs. "Operations Manager." Accessed November 14, 2020. <https://www.amazon.jobs/en/jobs/1308830/operations-manager>.

Amazon Jobs. "Paid Time Off for U.S. Amazon Employees." Accessed March 5, 2021. https://www.amazon.jobs/en/landing_pages/pto-overview-us.

Amazon Jobs. "Senior Operations Manager." Accessed November 14, 2020. <https://www.amazon.jobs/en/jobs/1275986/senior-operations-manager>.

Amazon Workers International. "Yes, you have heard correctly. Finally, in 6 #Amazon warehouses in Germany are the workers on strike for 48 hours. We wish them the best after they had to work in dangerous conditions for so long!" *Twitter*, June 29, 2020. <https://twitter.com/AmazonWorkersIn/status/1277548940477554688>.

Amazonians of the Inland Empire. "Amazonians of the Inland Empire Demand STRONG COVID-19 Protections." Petition. Accessed March 31, 2021. https://docs.google.com/forms/d/e/1FAIpQLSe5CaTGEK7ZbGcMGOhNP-EKZYGfryYFu8CpfubeDvQfM2bUNg/viewform?fbclid=IwAR35kEFa_RnUJobOrFqDtBP7eR5xv2zeGqy4P4qYFFx7eS_N54Gm_py5xBLM.

Amazonians United Chicagoland. "Management at DIL3 in Gage Park has been understaffing key positions for weeks." *Facebook*, September 14, 2021. <https://www.facebook.com/AUChicagoland>.

Amazonians United NYC. "Sign the Petition: We, Amazon Workers, Demand Coronavirus Protections!" Petition. Accessed March 31, 2021. <https://docs.google.com/forms/d/e/1FAIpQLSfNxBRiOtKkPD0Ci3iUe6XPYm0rzYzXezaSc4soA-3jX9SGpOw/viewform>.

Amazonians United NYC. "We, Amazon Workers, Demand Coronavirus Protections!" *Medium*, March 17, 2020. <https://medium.com/@amazoniansunitednyc/we-amazon-workers-demand-coronavirus-protections-16f28ad8b15f>.

Amazonians United Sacramento. "Amazonians United Sacramento." *Facebook*, September 29, 2019. <https://www.facebook.com/AUS916/>.

Aneesh, A. "Global Labor: Algocratic Modes of Organization." *Sociological Theory* 27, no. 4 (December 2009): 347-70. <https://journals.sagepub.com/doi/abs/10.1111/j.1467-9558.2009.01352.x>.

Angry Workers of the World. "Amazon in India – The E-Commerce Jungle and Workers' Reality." *International*. November 11, 2015. <https://www.angryworkers.org/2015/11/11/amazon-in-india-the-e-commerce-jungle-and-workers-reality/>.

Angry Workers of the World. "Welcome to the Jungle – Working and Struggling in Amazon Warehouses." *International*. December 20, 2015. <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>.

Anonymous. "'A sweatshop firing on all cylinders': what it's like to work at Amazon at Christmas." *The Guardian*, December 19, 2018. <https://www.theguardian.com/us-news/2018/dec/19/how-your-holiday-shopping-drives-us-amazon-workers-to-exhaustion>.

Anonymous. "Hate lugging cat litter? Don't make us Amazon warehouse workers do it." *The Guardian*, December 5, 2018. <https://www.theguardian.com/us-news/2018/dec/05/hate-lugging-cat-litter-dont-make-us-amazon-warehouse-workers-do-it>.

Anonymous. "Our new column from inside Amazon: 'They treat us as disposable.'" *The Guardian*, November 21, 2018. <https://www.theguardian.com/us-news/2018/nov/21/our-new-column-from-inside-amazon-they-treat-us-as-disposable>.

ANSA. "Amazon workers to strike on Black Friday." *News*. November 26, 2019. https://www.ansa.it/english/news/business/2019/11/26/amazon-workers-to-strike-on-black-friday_9d144234-a440-4a53-bfa4-570c6ada109e.html.

Appelbaum, Stuart. "Amazon needs to improve much more than just wages." *Amsterdam News*, October 18, 2018. <http://amsterdamnews.com/news/2018/oct/18/amazon-needs-improve-much-more-just-wages/>.

Appelbaum, Stuart. "Why we stood up to Amazon." *Amsterdam News*, February 28, 2019. <http://amsterdamnews.com/news/2019/feb/28/why-we-stood-amazon/>.

Appelbaum, Stuart. "You can't call yourself pro-worker or pro-union if you ignore Amazon's behaviour." *Amsterdam News*, January 3, 2019. [http://amsterdamnews.com/news/2019/jan/03/you-cant-call-yourself-pro-worker-or-pro-union-if/](http://amsterdamnews.com/news/2019/jan/03/you-cant-call-yourself-pro-worker-or-pro-union-if-/).

Arantani, Lauren. "New Jersey urged to enforce 'code of conduct' for Amazon workers." *The Guardian*, December 12, 2018. <https://www.theguardian.com/technology/2018/dec/12/amazon-new-jersey-warehouse-workers-conditions>.

Arens, Marianne. "Amazon workers in Germany strike against lack of coronavirus protection." News. June 30, 2020. <https://www.wsws.org/en/articles/2020/06/30/amaz-j01.html>.

Arthur, W. Brian. "The second economy." *McKinsey Quarterly* (October 2011). <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-second-economy#>.

Associated Press. "Amazon Warehouse Workers Say They Have Been Working Without Air Conditioning, Experiencing Exhaustion and Dehydration." *Money*, June 6, 2018. <https://money.com/amazon-minnesota-workplace/>.

Athena Coalition. *Packaging Pain: Workplace Injuries in Amazon's Empire*. Athena Coalition, 2019. <https://www.amazonpackagingpain.org/the-report>.

Baker, Elly. "What working for Amazon really does to your health: the truth is starting to come out." Blog. April 15, 2015. <https://strongerunions.org/2015/04/15/what-working-for-amazon-really-does-to-your-health-the-truth-is-starting-to-come-out/>.

Bales, Katie, Alan Bogg, and Tonia Novitz. "'Voice' and 'Choice' in Modern Working Practices: Problems With the Taylor Review." *Industrial Law Journal* 47, no. 1 (March 2018): 46-75. <https://academic.oup.com/ilj/article-abstract/47/1/46/4829347?redirectedFrom=fulltext>.

Ball, Kirstie. "Workplace surveillance: an overview." *Labor History* 51, no. 1 (April 2010): 87-106. <https://www.tandfonline.com/doi/abs/10.1080/00236561003654776>.

Barrios, Emilio. "We do a lot of work for Amazon at my warehouse." Testimonial. March 21, 2019. <http://warehouseworkersstandup.org/we-do-a-lot-of-work-for-amazon-at-my-warehouse/>.

BBC. "Amazon's Rugeley site 'one of most dangerous in Britain'." News. September 6, 2018. <https://www.bbc.co.uk/news/uk-england-stoke-staffordshire-45424412>.

BBC. "Amazon workers face 'increased risk of mental illness'." News. November 24, 2013. <https://www.bbc.co.uk/news/business-25034598>.

BBC. "Amazon workers in Germany go on strike over pay." News. September 22, 2014. <https://www.bbc.co.uk/news/business-29310630>.

BBC. "Amazon workers strike in Germany over pay." News. December 16, 2013. <https://www.bbc.co.uk/news/business-25397316>.

BBC. "Black Friday backlash: Protests against Amazon erupt across France." News. November 29, 2019. <https://www.bbc.co.uk/news/world-europe-50598575>.

BBC. "Black Friday protests at Amazon warehouses in England." News. November 29, 2019. <https://www.bbc.co.uk/news/uk-england-50603875>.

BBC. "The Truth Behind the Click." *Panorama*, November 25, 2013. <https://www.bbc.co.uk/programmes/b03k5kzp>.

Bellafante, Gina. "'We Didn't Sign Up for This': Amazon Workers on the Front Lines." *The New York Times*, April 3, 2020. <https://www.nytimes.com/2020/04/03/nyregion/coronavirus-nyc-chris-smalls-amazon.html>.

Bent, Lloyd. "Parliamentary inquiry demanded into 'hellish' working conditions at Amazon." *The Star*, February 18, 2020. <https://www.thestar.co.uk/news/uk-news/parliamentary-inquiry-demanded-hellish-working-conditions-amazon-1849131>.

Bernton, Hal and Susan Kelleher. "Amazon warehouse jobs push workers to physical limit." *The Seattle Times*, April 3, 2012. <https://www.seattletimes.com/business/amazon-warehouse-jobs-push-workers-to-physical-limit/>.

BFAWU for Amazon Workers. "Photos from Amazon Dunstable." *Facebook*, July 14, 2017. <https://www.facebook.com/BFAWUforAMAZONworkers/posts/photos-from-amazon-dunstablethe-bakers-union-launches-important-campaign-at-amaz/1894508160874197/>.

Bhaskar, Roy. *Dialectic: The Pulse of Freedom*. London: Routledge, 2008.

Blest, Paul. "Amazon Fired the Warehouse Worker Who Organized a Walkout Over Coronavirus." *Vice*, March 31, 2020. <https://www.vice.com/en/article/5dmea3/amazon-fired-the-warehouse-worker-who-organized-a-walkout-over-coronavirus>.

Blest, Paul. "Leaked Amazon Memo Details Plan to Smear Fired Warehouse Organizer: 'He's Not Smart or Articulate.'" *Vice*, April 2, 2020. <https://www.vice.com/en/article/5dm8bx/leaked-amazon-memo-details-plan-to-smear-fired-warehouse-organizer-hes-not-smart-or-articulate>.

Bloodworth, James. *Hired: Six Months Undercover in Low-Wage Britain*. London: Atlantic Books, 2019.

Bloodworth, James. "If we truly cared about poor people, low-wage Britain wouldn't exist." *The Guardian*, March 15, 2018. <https://www.theguardian.com/commentisfree/2018/mar/15/poor-people-low-wage-britain-work-exploitation>.

Bloodworth, James. "I worked in an Amazon warehouse. Bernie Sanders is right to target them." *The Guardian*, September 17, 2018. <https://www.theguardian.com/commentisfree/2018/sep/17/amazon-warehouse-bernie-sanders>.

Boewe, Jörn. "A movement will defeat Amazon." *Brave New Europe*, February 27, 2021. <https://braveneweuropa.com/jorn-boewe-a-movement-will-defeat-amazon>.

Boewe, Jörn and Johannes Schulten. "In the Belly of the Beast." *Jacobin*, June 19, 2017. <https://www.jacobinmag.com/2017/06/amazon-germany-union-strikes-works-councils>.

Boewe, Jörn and Johannes Schulten. *The Long Struggle of the Amazon Employees*. Brussels: Rosa Luxemburg Stiftung, 2019. https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Ausland/Europa-Nordamerika/The_long_struggle_of_the_Amazon_employees.pdf.

Boland, Hannah and Joseph Archer. "Amazon raises wages for US and UK workers following widespread criticism." *The Telegraph*, October 2, 2018. <https://www.telegraph.co.uk/technology/2018/10/02/amazon-hikes-pay-us-uk-workers-following-criticism/>.

Bonazzo, John. "Report: Amazon Workers Have to Process 300 Packages an Hour and Pee in Bottles." *The Observer*, April 16, 2018. <https://observer.com/2018/04/amazon-britain-harsh-working-conditions/>.

Boreham, Paul, Rachel Parker, Paul Thompson, and Richard Hall. *New Technology @ Work*. London: Routledge, 2008.

Bowles, Ruth. "Organized Chaos: Behind The Scenes of Amazon's Inventory Management System." Blog. Last updated February 3, 2021. <https://www.logiwa.com/blog/amazon-inventory-management-system>.

Braverman, Harry. *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press, 1998.

Briken, Kendra. "Welcome in the machine: Human-machine relations and knowledge capture." *Capital & Class* 44, no. 2 (June 2020): 159-71. <https://journals.sagepub.com/doi/full/10.1177/0309816819899418>.

Briken, Kendra and Phil Taylor. "Fulfilling the 'British way': beyond constrained choice – Amazon workers' lived experiences of workfare." *Industrial Relations Journal* 49, no. 5-6 (November 2018): 453-53. <https://onlinelibrary.wiley.com/doi/abs/10.1111/irj.12232>.

Briziarelli, Marco and Emiliana Armano. "The social production of radical space: Machinic labor struggles against digital spatial abstraction." *Capital & Class* 44, no. 2 (June 2020): 173-89. <https://journals.sagepub.com/doi/full/10.1177/0309816819899414>.

Brown, H. Claire. "Employees rely on food stamps, new data shows." *The Intercept*, April 19, 2018. <https://theintercept.com/2018/04/19/amazon-snap-subsidies-warehousing-wages/>.

Brown, H. Claire. "How Amazon's On-Site Emergency Care Endangers the Warehouse Workers It's Supposed to Protect." *The Intercept*, December 2, 2019. <https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>.

Brown, Sherrod. "Brown, Sanders, Baldwin Demand Answers from Amazon as Work-Related Injuries Continue to Rise." Press Release. February 10, 2020. <https://www.brown.senate.gov/newsroom/press/release/brown-sanders-baldwin-demand-answers-from-amazon-as-work-related-injuries-continue-to-rise->.

Burgett, John. "AFE (Amazon Fulfillment Engine)." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/afe-amazon-fulfillment-engine>.

Burgett, John. "April 2015 All Hands, 'Letter to Matt'." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/matt-letter-to-matt>.

Burgett, John. "Bathroom Breaks." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/bathroom-breaks>.

Burgett, John. "February 2016 All hands." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/february-2016-all-hands-meeting>.

Burgett, John. "Internal Marketing Campaign, Tag Lines." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/internal-marketing-campaign-tag-lines>.

Burgett, John. "Labor Commodity, Negotiate." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/labor-commodity-negotiate>.

Burgett, John. "October 2015 Mass Exodus." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/october-2015-mass-exodus>.

Burgett, John. "Open Door Policy." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/open-door-policy>.

Burgett, John. "Physical Environment, Size." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/physical-environment-size>.

Burgett, John. "Pick Paths." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/pick-paths>.

Burgett, John. "Safety." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/safety>.

Burgett, John. "Scan to Scan, Pick to Pick." *Amazon Emancipatory*, 2016, <http://amazonemancipatory.com/scan-to-scan-pick-to-pick>.

Burgett, John. "'The Offer'." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/the-offer>.

Burgett, John. "'Time to Pick' Countdown Timer." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/time-to-pick-countdown-timer>.

Burgett, John. "Union Fight." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/union-fight>.

Burgett, John, "UPT, VCP." *Amazon Emancipatory*, 2016. <https://amazonemancipatory.com/upt-vcp>.

Burgett, John. "Wrap It Up." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/wrap-it-up>.

Burgett, John. "Young Men Managers." *Amazon Emancipatory*, 2016. <http://amazonemancipatory.com/young-men-managers>.

Burns, Rebecca. "Angry About Low Pay and Sweltering Heat, These Amazon Warehouse Workers Are Organizing." *In These Times*, July 19, 2019. <https://inthesetimes.com/article/amazon-workers-chicago-prime-day-jeff-bezos-organize>.

Burns, Rebecca. "How European Workers Coordinated This Month's Massive Amazon Strike – And What Comes Next." *In These Times*, July 25, 2018. <https://inthesetimes.com/article/amazon-strike-jeff-bezos-germany-spain-poland-workers-labor>.

Butler, Sarah. "Amazon accused of treating UK warehouse staff like robots." *The Guardian*, May 31, 2018. <https://www.theguardian.com/business/2018/may/31/amazon-accused-of-treating-uk-warehouse-staff-like-robots>.

Butler, Sarah. "Amazon offsetting pay rise by removing bonuses, union says." *The Guardian*, October 3, 2018. <https://www.theguardian.com/technology/2018/oct/03/amazon-offsetting-pay-rise-by-removing-bonuses-union-says>.

Cadwalladr, Carole. "My week as an Amazon insider." *The Observer*, December 1, 2013. <https://www.theguardian.com/technology/2013/dec/01/week-amazon-insider-feature-treatment-employees-work>.

Campbell, Alexia Fernández. "Amazon is raising its minimum wage to \$15 for US workers." *Vox*, October 2, 2018. <https://www.vox.com/2018/10/2/17927686/amazon-raises-minimum-wage-workers>.

Campbell, Alexia Fernández. "Amazon workers in New York just announced their plan to unionize." *Vox*, December 12, 2018. <https://www.vox.com/2018/12/12/18137604/amazon-workers-new-york-unionize>.

Campbell, Alexia Fernández. "The problem with Amazon's speedy shipping, in one graphic." *Vox*, October 18, 2019. <https://www.vox.com/identities/2019/10/18/20920717/amazon-shipping-workers-injuries>.

Carey, Crystal S. "Case No. 05-CA-224856." Philadelphia, PA: Morgan Lewis, September 4, 2018. https://cdn.vox-cdn.com/uploads/chorus_asset/file/16190209/amazon_terminations_documents.pdf.

Cattero, Bruno and Marta D'Onofrio. "Organizing and Collective Bargaining in the Digitized 'Tertiary Factories' of Amazon: A Comparison Between Germany and Italy." In *Working in Digital and Smart Organizations: Legal, Economic and Organizational Perspectives on the Digitalization of Labour Relations*, edited by Edoardo Ales, Ylenia Curzi, Tommaso Fabbri, Olga Rymkevich, Iacopo Senatori, and Giovanni Solinas, 141-64. Cham: Palgrave Macmillan, 2018.

CBS Minnesota. "Striking Workers Reach Agreement With Egan Amazon Over Parking Conditions." News. August 8, 2019. <https://minnesota.cbslocal.com/2019/08/08/striking-workers-reach-agreement-with-management-at-egan-amazon-over-parking-conditions/>.

Chainon, Jean Yves and Kaitlyn Mullin. "Robots and Humans Team Up at Amazon." *The New York Times*, September 10, 2017. <https://www.nytimes.com/video/technology/100000005396963/robots-humans-team-up-amazon-warehouses.html>.

Cillo, Rossana and Lucia Pradella. "Strike Friday at Amazon.it." *Jacobin*, November 29, 2017. <https://www.jacobinmag.com/2017/11/strike-friday-amazon-italy-unions-logistics>.

Clay, Tamara. "I worked at non-union & union warehouses. Yes to the union!" Testimonial. March 21, 2019. <http://warehouseworkersstandup.org/i-worked-at-non-union-union-warehouses-yes-to-the-union/>.

CMC Machinery. "CMC CARTONWRAP." Accessed March 31, 2021. <https://www.cmcmechanery.com/?portfolio=ecommerce1-cmc-cartonwrap>.

CNBC. "How Amazon Delivers On One-Day Shipping." Video. July 15, 2019. <https://www.youtube.com/watch?v=Yiafb0-gqF4>.

CNBC. "What it's like inside an Amazon warehouse during the Covid-19 pandemic." Video. April 22, 2020. <https://www.cnb.com/video/2020/04/22/amazon-warehouse-in-covid-19-pandemic-an-inside-look.html>.

Cohen, Rachel. "Amazon Retaliated Against Chicago Workers Following Spring Covid-19 Protests, NLRB Finds." *The Intercept*, March 17, 2021. <https://theintercept.com/2021/03/17/amazon-covid-chicago-nlr-strike/>.

Construction Map. "LBA4_IP9 Amazon." Accessed March 31, 2021. <https://www.constructionmap.info/site/116465/lba4-ip9-amazon>.

Coyle, Meg. "New Robots, New Jobs." News. June 5, 2019. <https://www.aboutamazon.com/news/operations/new-robots-new-jobs>.

Cox, Joseph. "Senators Demand Amazon Stop Spying on Workers." *Vice*, September 17, 2020. <https://www.vice.com/en/article/bv8emz/senators-demand-amazon-stop-spying-on-workers-flex-drivers>.

Cunningham-Parmeter, Keith. "From Amazon to Uber: Defining Employment in the Modern Economy." *Boston University Law Review* 96, no. 5 (October 2016): 1673-1728. <https://www.bu.edu/bulawreview/files/2016/10/CUNNINGHAM-PARMETER.pdf>.

Danaher, John. "The Threat of Algocracy: Reality, Resistance and Accommodation." *Philosophy & Technology* 29, no. 3 (September 2016): 245-68. <https://link.springer.com/article/10.1007/s13347-015-0211-1>.

Dastin, Jeffrey. "Exclusive: Amazon rolls out machines that pack orders and replace jobs." News. May 13, 2019. <https://www.reuters.com/article/us-amazon-com-automation-exclusive-idUSKCN1SJ0X1>.

Davidson, Kate. "Amazon Workers Describe Heat And Noise At Portland Warehouse." News. July 13, 2019. <https://www.opb.org/news/article/amazon-flex-portland-warehouse-working-conditions/>.

Davies, Rob. "Concerns over safety at Amazon warehouses as accident reports rise." *The Guardian*, February 17, 2020. <https://www.theguardian.com/technology/2020/feb/17/concerns-over-safety-at-amazon-warehouses-as-number-of-incidents-rise>.

Davis, Mary-Patton S. "Behind Amazon's Well-Oiled Machine: How the 'Everything Store' Ships Everything." *MP is for Mary-Patton*, October 27, 2014. <http://mpisformarypatton.com/2014/10/behind-amazons-well-oiled-machine-how-the-everything-store-ships-everything/>.

DCH1 Amazonians United. "Amazon Management: Meet with DCH1 Amazonians United now!" Petition. Accessed March 31, 2021. <https://www.coworker.org/petitions/amazon-management-meet-with-dch1-amazonians-united-now>.

DCH1 Amazonians United. "DCH1 Amazonians United." Facebook. Accessed March 31, 2021. <https://www.facebook.com/DCH1United/>.

DCH1 Amazonians United. "DCH1 Amazonians United Petition for Coronavirus Protections." Petition. Accessed March 31, 2021. <https://docs.google.com/forms/d/e/1FAIpQLSdo3wwVB9e-5pQK5jKjtcPsvGQ5JGlySFetQmuNe9koGy99dA/viewform>.

Deci, Edward L. and Richard M. Ryan. "The 'What' and 'Why' of Goal Pursuits: Human Needs and the Self-Determination of Behaviour." *Psychological Inquiry* 11, no. 4 (2000): 227-68. <https://www.jstor.org/stable/1449618>.

De Lara, Juan. *Inland Shift: Race, Space, and Capital in Southern California*. Oakland, CA: University of California Press, 2018.

Delfanti, Alessandro. "Amazon is the New FIAT." *The Worker and the Union*, no. 3 (April 2018). <https://notesfrombelow.org/article/amazon-is-the-new-fiat>.

Delfanti, Alessandro. "Machinic Dispossession and Augmented Despotism: Digital Work in an Amazon Warehouse." *New Media & Society* 23, no. 1 (January 2019): 39-55. <https://journals.sagepub.com/doi/10.1177/1461444819891613>.

Del Rey, Jason. "Amazon fired 3 employee activists who criticized its warehouse safety measures." *Vox*, April 14, 2020. <https://www.vox.com/recode/2020/4/14/21220899/amazon-fired-activist-employees-warehouse-conditions-emily-cunningham-bashir-mohamed-maren-costa>.

Del Rey, Jason and Shirin Ghaffary. "Leaked: Confidential Amazon memo reveals new software to track unions." *Vox*, October 6, 2020. <https://www.vox.com/recode/2020/10/6/21502639/amazon-union-busting-tracking-memo-spoc>.

Demanelle-Hall, Joe. "Book Review: The Cost of Free Shipping: Amazon in the Global Economy." *Labor Notes*, September 29, 2020. <https://labornotes.org/2020/09/book-review-cost-free-shipping-amazon-global-economy>.

Demanelle-Hall, Joe. "That's Strike One, Amazon." *Jacobin*, March 26, 2019. <https://www.jacobinmag.com/2019/03/minnesota-strike-amazon-somali-awood>.

Dixon-Roderick, Paula. "Citation and Notification of Penalty." Marlton, NJ: OSHA, U.S. Department of Labor, December 21, 2015. https://www.osha.gov/ooc/citations/Amazon_1074833_Citation.pdf.

Dixon-Roderick, Paula. "Hazard Alert Letter." Marlton, NJ: OSHA, U.S. Department of Labor, January 6, 2016. https://www.osha.gov/ooc/citations/Amazon_1074833_HAL.pdf.

Dixon-Roderick, Paula. "Hazard Alert Letter." Marlton, NJ: OSHA, U.S. Department of Labor, December 30, 2015. https://www.osha.gov/ooc/citations/Amazon_1074833_eHAL.pdf.

Donnelly, Maureen. "Amazon warehouses are 'cult-like' sweatshops run by robots: ex-employee." *The New York Post*, November 30, 2019. <https://nypost.com/2019/11/30/amazon-warehouses-are-cult-like-sweatshops-run-by-robots-ex-employee/>.

Duhigg, Charles. "Is Amazon Unstoppable?" *The New Yorker*, October 21, 2019. <https://www.newyorker.com/magazine/2019/10/21/is-amazon-unstoppable>.

Durkin, Erin. "New York labor leaders: Amazon has 'record of routinely mistreating workers'." *The Guardian*, November 28, 2018. <https://www.theguardian.com/technology/2018/nov/28/new-york-labor-leaders-amazon-workers>.

DW. "Amazon faces Black Friday Strikes in Germany, Italy." News. November 24, 2017. <https://www.dw.com/en/amazon-faces-black-friday-strikes-in-germany-italy/a-41511084>.

DW. "Amazon staff in Germany strike at two sites." News. June 17, 2013. <https://www.dw.com/en/amazon-staff-in-germany-strike-at-two-sites/a-16886502>.

DW. "Amazon workers go on strike in Germany." News. September 21, 2015. <https://www.dw.com/en/amazon-workers-go-on-strike-in-germany/a-18727993>.

DW. "Amazon workers to stage pre-Christmas strike." News. December 12, 2014. <https://www.dw.com/en/amazon-workers-to-stage-pre-christmas-strike/a-18125704>.

DW. "German Amazon workers take pre-Christmas strike action." News, December 17, 2018. <https://www.dw.com/en/german-amazon-workers-take-pre-christmas-strike-action/a-46770628>.

Dvoskin, Elizabeth and Jay Greene. "'An atmosphere of fear': Amazon warehouse workers demand better conditions and shorter hours amid coronavirus." *The Independent*, March 18, 2020. <https://www.independent.co.uk/news/world/americas/coronavirus-amazon-warehouse-working-conditions-long-hours-apple-nike-patagonia-a9408936.html>.

Dyer-Witthford, Nick. *Cyber-Proletariat: Global Labour in the Digital Vortex*. London: Pluto Press, 2015.

Dzieza, Josh. "Amazon workers in Minnesota walk out in protest over part-time work." *The Verge*, October 3, 2019. <https://www.theverge.com/2019/10/3/20897119/amazon-workers-walk-out-protest-part-time-work-minnesota>.

Dzieza, Josh. "Amazon Workers in Sacramento are Protesting the Company's Strict Time-off Rules." *The Verge*, October 1, 2019. <https://www.vice.com/en/article/qvgymp/amazon-workers-are-protesting-for-better-conditions-ahead-of-a-grueling-season>.

Dzieza, Josh. "'Beat the Machine': Amazon Warehouse Workers Strike to Protest Inhumane Conditions." *The Verge*, July 16, 2019. <https://www.theverge.com/2019/7/16/20696154/amazon-prime-day-2019-strike-warehouse-workers-inhumane-conditions-the-rate-productivity>.

Einstein, Ben. "Meet the Drone That Already Delivers Your Packages." *Bolt*, January 14, 2016. <https://blog.bolt.io/meet-kiva/#.xw9y1auug>.

Engler, Mark. "Act Against Amazon!" *New Internationalist*, November 1, 2015. <https://newint.org/columns/mark-engler/2015/11/01/workers-rights-amazon>.

Evans, Will. "Amazon Response to Warren Markey Kennedy Letter." Accessed March 31, 2021. <https://www.documentcloud.org/documents/7215123-Amazon-Response-to-Warren-Markey-Kennedy-Letter.html>.

Evans, Will. "Amazon Robbinsville OSHA Letter 081919." Accessed March 31, 2021. <https://www.documentcloud.org/documents/6584275-Amazon-Robbinsville-OSHA-Letter-081919.html>.

Evans, Will. "Amazon Safety Response 02 21 2020." Accessed March 31, 2021. <https://www.documentcloud.org/documents/6786669-Amazon-Safety-Response-02-21-2020.html>.

Evans, Will. "Behind the Smiles: Amazon's Internal Injury Records expose the true toll of its relentless drive for speed." *Reveal*, November 25, 2019. <https://revealnews.org/article/behind-the-smiles/>.

Evans, Will. "How Amazon hid its safety crisis." *Reveal*, September 29, 2020. <https://revealnews.org/article/how-amazon-hid-its-safety-crisis/>.

Evans, Will. "Inside one of Amazon's hardest-hit warehouses: 'Why aren't we closing the building?'" *Reveal*, May 20, 2020. <https://revealnews.org/article/inside-one-of-amazons-hardest-hit-warehouses-why-arent-we-closing-the-building/>.

Evelyn, Kenya. "Amazon fires New York worker who led strike over coronavirus concerns." *The Guardian*, March 31, 2020. <https://www.theguardian.com/us-news/2020/mar/31/amazon-strike-worker-fired-organizing-walkout-chris-smallls>.

Evelyn, Kenya. "Amazon workers walk out over lack of protective gear amid coronavirus." *The Guardian*, March 31, 2020. <https://www.theguardian.com/technology/2020/mar/30/amazon-workers-strike-coronavirus>.

Ferguson, Donna. "The Amazon worker paid £18,000 a year to shift 250 items an hour." *The Guardian*, January 20, 2018. <https://www.theguardian.com/money/2018/jan/20/amazon-worker-warehouse>.

Fickenscher, Lisa. "Workers at Amazon's Staten Island warehouse hold rally over high injury rates." *The New York Post*, November 25, 2019. <https://nypost.com/2019/11/25/workers-at-amazons-staten-island-warehouse-to-hold-rally-over-high-injury-rates/>.

Fight For \$15. "About Us." Accessed March 5, 2021. <https://fightfor15.org/about-us/>.

Fisher, Eran and Christian Fuchs, eds. *Reconsidering Value and Labour in the Digital Age*. Basingstoke: Palgrave Macmillan, 2015.

Fox 13 Tampa Bay. "Behind the scenes of an Amazon warehouse." Video. November 26, 2015. https://www.youtube.com/watch?v=Y-IBv16u_hw.

Franceschi-Bicchierai, Lorenzo. "Amazon Is Hiring an Intelligence Analyst to Track 'Labor Organizing Threats.'" *Vice*, September 1, 2020. <https://www.vice.com/en/article/qj4aqw/amazon-hiring-intelligence-analyst-to-track-labor-organizing-threats>.

Fuchs, Christian. *Digital Labour and Karl Marx*. London: Routledge, 2014.

Fuchs, Christian and Sebastian Sevignani. "What is Digital Labour? What is Digital Work? What's their Difference? And Why Do These Questions Matter for Understanding Social Media?" *triple C: Communication, Capitalism & Critique* 11, no. 2 (June 2013): 237-93. <https://www.triple-c.at/index.php/tripleC/article/view/461>.

fuldainfo. "Wieder Streik bei Amazon Bad Hersfeld." News. April 18, 2017. <https://www.fuldainfo.de/wieder-streik-bei-amazon-bad-hersfeld/>.

Fulkerson, Emily Esposito. "Ever wonder how people and robots team up on your Amazon order?" News. April 6, 2019. <https://www.aboutamazon.com/news/operations/ever-wonder-how-people-and-robots-team-up-on-your-amazon-order>.

Galetti, Beth. "COVID-19 Update: More ways Amazon is supporting employees and contractors." News. March 11, 2020. <https://www.aboutamazon.com/news/workplace/covid-19-update-more-ways-amazon-is-supporting-employees-and-contractors>.

Geissler, Heike. *Seasonal Associate*. Cambridge, MA: Semiotext(e), 2018.

Germanos, Andrea. "An Example for Mistreated 'Workers Across the Globe,' Spanish Amazon Employees on Strike." *Common Dreams*, January 4, 2019. <https://www.commondreams.org/news/2019/01/04/example-mistreated-workers-across-globe-spanish-amazon-employees-strike>.

Ghaffary, Shirin. "Amazon warehouse workers doing 'back-breaking' work walked off the job in protest." *Vox*, December 23, 2019. <https://www.theverge.com/2019/10/3/20897119/amazon-workers-walk-out-protest-part-time-work-minnesota>.

Ghaffary, Shirin and Jason Del Rey. "Amazon employees fear HR is targeting minority and activism groups in email monitoring program." *Vox*, September 24, 2020. <https://www.vox.com/recode/2020/9/24/21455196/amazon-employees-listservs-minorities-underrepresented-groups-worker-dissent-unionization>.

Ghaffary, Shirin and Jason Del Rey. "Amazon is cracking down on internal communication after a surge in worker activism." *Vox*, April 29, 2020. <https://www.vox.com/recode/2020/4/29/21240049/amazon-internal-corporate-employee-backlash-email-listservs-worker-activism-coronavirus>.

Ghaffary, Shirin and Jason Del Rey. "The real cost of Amazon." *Vox*, June 29, 2020. <https://www.vox.com/recode/2020/6/29/21303643/amazon-coronavirus-warehouse-workers-protest-jeff-bezos-chris-smalls-boycott-pandemic>.

Ghosh, Shona. "Peeing in trash cans, constant surveillance, and asthma attacks on the job: Amazon workers tell us their warehouse horror stories." *Business Insider*, May 5, 2018. <https://www.businessinsider.com/amazon-warehouse-workers-share-their-horror-stories-2018-4?r=US&IR=T>.

Ghosh, Shona. "The undercover author who discovered Amazon warehouse workers were peeing in bottles tells us the culture was like a 'prison'." *Business Insider*, April 18, 2018. <https://www.businessinsider.com/amazon-warehouse-like-prison-where-workers-used-pee-bottle-2018-4?r=UK>.

Ghosh, Shona. "Undercover author finds Amazon warehouse workers in UK 'peed in bottles' over fears of being punished for taking a break." *Business Insider*, April 16, 2018. <https://www.businessinsider.com/amazon-warehouse-workers-have-to-pee-into-bottles-2018-4?r=UK>.

GMB Campaigns. "Amazon.co.uk: Work with GMB to get temp workers a decent job." Petition. Accessed March 31, 2021. <https://campaign.goingtowork.org.uk/petitions/amazon-co-uk-work-with-gmb-to-give-temp-workers-a-decent-job>.

GMB Union. "Amazon Black Friday Protests Across UK." News. November 22, 2018. <https://www.gmb.org.uk/news/amazon-black-friday-protests-staged-across-uk>.

GMB Union. "Amazon Black Friday protests staged across UK." News. November 29, 2019. <https://www.gmb.org.uk/news/amazon-black-friday-protests-staged-across-uk>.

GMB Union. "Amazon health & safety lies exposed by GMB at Labour conference." News. September 23, 2019. <https://www.gmb.org.uk/news/amazon-health-safety-lies-exposed-gmb-labour-conference>.

GMB Union. "Black Friday protests at Amazon." News. November 21, 2018. <https://www.gmb.org.uk/news/black-friday-protests-amazon>.

GMB Union. "GMB calls for parliamentary inquiry into Amazon as conditions for workers worsen." News. February 17, 2020. <https://www.gmb.org.uk/news/gmb-calls-parliamentary-inquiry-amazon-conditions-workers-worsen>.

GMB Union. "GMB Response to the Low Pay Commission General Consultation on National Minimum Wage 2014." GMB Policy Passed at Congress 2014. Accessed March 31, 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/425236/LPC_consultation_response_GMB_2014-15.pdf.

GMB Union. *GMB Union Report On Amazon, 2018*. London: GMB Union, 2018. https://www.etui.org/sites/default/files/ez_import/working-in-a-modern-day-amazon-fulfilment-centres-in-the-uk.pdf.

GMB Union. "More than 600 serious incidents at Amazon." News. November 13, 2018. <https://www.gmb.org.uk/news/more-600-serious-incidents-amazon>.

GMB Union. "'Petrified' Amazon workers left in '300 Strong Crowds'." News. March 24, 2020. <https://www.gmb.org.uk/news/petrified-amazon-workers-left-300-strong-crowds>.

GMB Union. "UK-wide Amazon Prime Day protests." News. July 15, 2019. <https://www.gmb.org.uk/news/uk-wide-amazon-prime-day-protests>.

Golledge, Rob. "Protest at Amazon Rugeley over 'hellish' working conditions." *Express & Star*, December 14, 2017. <https://www.expressandstar.com/news/local-hubs/staffordshire/rugeley/2017/12/14/protest-at-amazons-rugeley-warehouse-over-hellish-working-conditions/>.

Graham, Stephen and David Wood. "Digitizing surveillance: categorization, space, inequality." *Critical Social Policy* 23, no. 2 (May 2003): 227-48. <https://journals.sagepub.com/doi/10.1177/0261018303023002006>.

Greenhouse, Steven. "Amazon.com Is Using the Web to Block Unions' Effort to Organize." *The New York Times*, November 29, 2000. <https://www.nytimes.com/2000/11/29/business/amazoncom-is-using-the-web-to-block-unions-effort-to-organize.html>.

Grierson, Jamie. "Amazon 'regime' making British staff physically and mentally ill, says union." *The Guardian*, August 18, 2015. <https://www.theguardian.com/technology/2015/aug/18/amazon-regime-making-british-staff-physically-and-mentally-ill-says-union>.

Guendelsberger, Emily. "I Worked at an Amazon Fulfillment Center; They Treat Workers Like Robots." *Time*, July 18, 2019. <https://time.com/5629233/amazon-warehouse-employee-treatment-robots/>.

Guendelsberger, Emily. "'The most physically painful experience of my life': one month working in an Amazon warehouse|Book Excerpt." *The Inquirer*, July 11, 2019. <https://www.inquirer.com/opinion/commentary/amazon-warehouse-on-the-clock-emily-guendelsberger-book-excerpt-20190711.html>.

Gurley, Lauren Kaori. "Amazon Illegally Interrogated Worker Who Led First COVID-19 Strikes, NLRB Says." *Vice*, March 22, 2021. <https://www.vice.com/en/article/dy8ngk/amazon-interrogated-worker-who-led-first-covid-19-strikes-nlrbsays>.

Gurley, Lauren Kaori. "Amazon Is Forcing Its Warehouse Workers Into Brutal 'Megacycle' Shifts." *Vice*, February 4, 2021. <https://www.vice.com/en/article/y3gk3w/amazon-is-forcing-its-warehouse-workers-into-brutal-megacycle-shifts>.

Gurley, Lauren Kaori. "Amazon Launches Anti-Union Website to Derail Alabama Union Drive." *Vice*, January 15, 2021. <https://www.vice.com/en/article/5dpkad/amazon-launches-anti-union-website-to-derail-alabama-union-drive>.

Gurley, Lauren Kaori. "Amazon, Whole Foods, Instacart Workers Organize a Historic Mass Strike." *Vice*, April 29, 2020. <https://www.vice.com/en/article/n7j8zw/amazon-whole-foods-instacart-workers-organize-a-historic-mass-strike>.

Gurley, Lauren Kaori. "Amazon Workers Are Protesting for Better Conditions Ahead of a Gruelling Season." *Vice*, November 25, 2019. <https://www.vice.com/en/article/qvgymp/amazon-workers-are-protesting-for-better-conditions-ahead-of-a-gruelling-season>.

Gurley, Lauren Kaori. "Amazon Workers in Chicago Strike Over Ruthless 'Megacycle' Shifts." *Vice*, July 4, 2021. <https://www.vice.com/en/article/g5gxp/amazon-workers-in-chicago-strike-over-ruthless-megacycle-shifts>.

Gurley, Lauren Kaori. "Secret Amazon Reports Expose the Company's Surveillance of Labor and Environmental Groups." *Vice*, November 23, 2020. <https://www.vice.com/en/article/5dp3yn/amazon-leaked-reports-expose-spying-warehouse-workers-labor-union-environmental-groups-social-movements>.

Gurley, Lauren Kaori. "60 Amazon Workers Walked Out Over Warehouse Working Conditions." *Vice*, October 3, 2019. <https://www.vice.com/en/article/pa7qny/60-amazon-workers-walked-out-over-warehouse-working-conditions>.

Gurley, Lauren Kaori and Janus Rose. "Amazon Employee Warns Internal Groups They're Being Monitored For Labor Organizing." *Vice*, September 24, 2020. <https://www.vice.com/en/article/m7jz7b/amazon-employee-warns-internal-groups-theyre-being-monitored-for-labor-organizing>.

Gurley, Lauren Kaori and Joseph Cox. "Inside Amazon's Secret Program to Spy On Workers' Private Facebook Groups." *Vice*, September 1, 2020. <https://www.vice.com/en/article/3azegw/amazon-is-spying-on-its-workers-in-closed-facebook-groups-internal-reports-show>.

Hall, Tom. "Amazon hired private detectives to spy on injured worker." News. December 22, 2018. <https://www.wsws.org/en/articles/2018/12/22/amaz-d22.html>.

Hamilton, Isobel Asher. "Amazon will drop its \$2 pay raise for warehouse staff after May, and workers say it's too soon." *Business Insider*, March 14, 2020. <https://www.businessinsider.com/amazon-dropping-covid-19-hazard-pay-warehouse-workers-may-2020-5?r=US&IR=T>.

Hamilton, Isobel Asher. "Thousands of people across Europe are protesting and striking against Amazon on Black Friday." *Business Insider*, November 29, 2019. <https://www.businessinsider.com/amazon-strikes-and-protests-sweep-across-europe-on-black-friday-2019-11?r=US&IR=T>.

Hamilton, Isobel Asher. "'We are not robots': Thousands of Amazon workers across Europe are striking on Black Friday over warehouse working conditions." *Business Insider*, July 25, 2018. <https://www.businessinsider.com/black-friday-amazon-workers-protest-poor-working-conditions-2018-11?r=US&IR=T>.

Hamilton, Isobel Asher and Áine Cain. "Amazon warehouse employees speak out about the 'brutal' reality of working during the holidays, when 60-hour weeks are mandatory and ambulance calls are common." *Business Insider*, February 19, 2019. <https://www.businessinsider.com/amazon-employees-describe-peak-2019-2?r=US&IR=T>.

Hamilton, Isobel Asher and Jake Kanter. "Amazon's minimum-wage hike barely made a dent in its operating costs, and it may explain why some workers say they're actually earning less." *Business Insider*, February 1, 2019. <https://www.businessinsider.com/amazon-minimum-wage-hike-barely-made-a-dent-in-its-operating-costs-2019-2>.

Hanley, Daniel A. and Sally Hubbard. *Eyes Everywhere: Amazon's Infrastructure and Revitalizing Worker Power*. Washington, DC: Open Markets Institute, 2020. <https://www.openmarketsinstitute.org/publications/eyes-everywhere-amazons-surveillance-infrastructure-and-revitalizing-worker-power>.

Harris, John. "How Amazon became a pandemic giant – and why that could be a threat to us all." *The Guardian*, November 1, 2020. <https://www.theguardian.com/technology/2020/nov/18/how-amazon-became-a-pandemic-giant-and-why-that-could-be-a-threat-to-us-all>.

Harvey, Martin. "A Union at Amazon?" *The Worker and the Union*, no. 3 (August 2018). <https://notesfrombelow.org/article/a-union-at-amazon>.

Health and Safety Executive. "RIDDOR - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013." Accessed April 2, 2021. <https://www.hse.gov.uk/riddor/>.

Heater, Brian. "Amazon debuts a pair of new warehouse robots." *TechCrunch*, June 5, 2019. <https://techcrunch.com/2019/06/05/amazon-debuts-a-pair-of-new-warehouse-robots/>.

Heater, Brian. "Amazon says it has deployed more than 200,000 robotic drives globally." *TechCrunch*, June 5, 2019. <https://techcrunch.com/2019/06/05/amazon-says-it-has-deployed-more-than-200000-robotic-drives-globally/>.

Heater, Brian. "These are the robots that help you get your Amazon packages on time." *TechCrunch*, March 17, 2019. <https://techcrunch.com/2019/03/17/these-are-the-robots-that-help-you-get-your-amazon-packages-on-time/>.

Heikkilä, Melissa. "'This is crazy:' Rage boils over at Amazon sites over coronavirus risks." *Politico*, March 20, 2020. <https://www.politico.eu/article/coronavirus-amazon-employees-rage/>.

Herrera, Sebastian. "Fired Amazon Warehouse Workers Accuse Company of Retaliation, Which It Denies." *The Wall Street Journal*, April 14, 2020. <https://www.wsj.com/articles/fired-amazon-warehouse-workers-accuse-company-of-retaliation-which-it-denies-11586891334>.

Hipwell, Deidre. "Amazon staff 'face sack for sick leave and missing targets'." *The Times*, December 12, 2016. <https://www.thetimes.co.uk/edition/news/amazon-workers-face-sack-for-sick-leave-and-missing-targets-mdv1w9qfh>.

Hiscott, Graham. "Inside huge Amazon warehouse that is replacing beloved UK high streets." *The Mirror*, November 26, 2019. <https://www.mirror.co.uk/news/uk-news/inside-huge-amazon-warehouse-replacing-20967779>.

Holland, John. "Amazon Inquiry." *Notes From Below*, October 7, 2020. <https://notesfrombelow.org/article/amazon-inquiry>.

IE Amazonians Unite. "Amazon LGB3 – Close, Clean and Paid Leave!" Petition. Accessed March 31, 2021. https://docs.google.com/forms/d/e/1FAIpQLScBtWjPTeXO3CkBVEst_a_HS6k2FtzQfeb85ldJDOa0QLoulg/viewform.

IE Amazonians Unite. "Health and Safety Complaint at Amazon LGB3." Accessed March 31, 2021. <https://amazoniansunite.org/lgb3>.

Integrity Staffing Solutions. *Integrity Jobs @ AMAZON VOL. 1*. Accessed March 5, 2021. <https://corp-www.s3.amazonaws.com/files/834380494665329136-amazon-booklet.pdf>.

Iossa, Andrea. "Work according to Amazon." *Equal Times*, (February 2018). <https://www.equaltimes.org/work-according-to-amazon?lang=en#.YEpUIVX7TIX>.

ITUC. "Amazon's Jeff Bezos Wins ITUC's World's Worst Boss Poll." News. May 22, 2014. <https://www.ituc-csi.org/amazon-s-jeff-bezos-wins-ituc-s>.

ITUC. "Amazon responds to union pressure with wage increase, but still denies workers' rights." News. October 2, 2018. <https://www.ituc-csi.org/amazon-responds-to-union-pressure>.

ITUC. *Symposium on the unchecked power of Amazon in today's economy and society*. Brussels: ITUC, 2 December 2019. https://www.ituc-csi.org/IMG/pdf/uni_amazonsymposium_report_final_en_digital.pdf.

ITV. "Amazon workers 'breaking bones' and 'being knocked unconscious' in 'appalling' work conditions according to union." News. December 11, 2019. <https://www.itv.com/news/wales/2019-12-11/amazon-workers-breaking-bones-and-being-knocked-unconscious-in-appalling-work-conditions-according-to-union>.

ITV. "Union stages protest on Black Friday over 'inhuman' working conditions at Amazon." News. November 23, 2018. <https://www.itv.com/news/wales/2018-11-23/amazon-workers-stage-protest-on-black-friday-over-inhuman-working-conditions>.

Jabsky, Maria and Charlene Obernauer. *Time Off Task: Pressure, Pain, and Productivity*. New York City, NY: New York Committee for Occupational Safety and Health, 2019. <https://nycosh.org/resource/amazon-workers-report/>.

Jamieson, Dave. "The Life and Death of an Amazon Warehouse Temp: What the future of low-wage work really looks like." *HuffPost*, October 21, 2015. <https://highline.huffingtonpost.com/articles/en/life-and-death-amazon-temp/>.

Jeske, Debora and Alecia M. Santuzzi. "Monitoring what and how: psychological implications of electronic performance monitoring." *New Technology, Work and Employment* 30, no. 1 (March 2015): 62-78. <https://onlinelibrary.wiley.com/doi/abs/10.1111/ntwe.12039>.

Johnson, Stephon. "Amazon: We'll fight any attempt to unionize." *Amsterdam News*, February 7, 2019. <http://amsterdamnews.com/news/2019/feb/07/amazon-well-fight-any-attempt-unionize/>.

Jones Brown. "What To Do if Written-Up at Work – Employment Law." Accessed March 26, 2021. <https://jonesbrownlaw.com/2018/06/what-to-do-if-written-up-at-work/>.

Kantor, Jodi and David Streitfeld. "Inside Amazon: Wrestling Big Ideas in a Bruising Workplace." *The New York Times*, August 15, 2015. <https://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html>.

Kantor, Jodi, Karen Weise and Grace Ashford. "The Amazon That Customers Don't See." *The New York Times*, June 15, 2021. <https://www.nytimes.com/interactive/2021/06/15/us/amazon-workers.html>.

Kelly, Lorraine. "Amazombies: Seven seconds to find an item, every move filmed and blistering 12-hours shifts with timed toilet breaks ... what YOUR Christmas order does to your 'worker elves'." *The Daily Mail*, December 3, 2016. <https://www.dailymail.co.uk/news/article-3997864/Amazombies-Seven-seconds-item-filmed-blistering-12-hours-shifts-timed-toilet-breaks-Christmas-order-does-worker-elves.html>.

Kenward, Michael. "Inside Amazon's Technology Test-Bed." *The Engineer*, February 18, 2019. <https://www.theengineer.co.uk/inside-amazons-technology-test-bed/>.

Kenway, Emily. "An unwelcome delivery for Amazon.co.uk." Blog. March 3, 2014. <https://strongerunions.org/2014/03/03/an-unwelcome-delivery-for-amazon-co-uk/>.

Kessler, Sarah. "Random Stow." *Quartz*, March 19, 2018. <https://qz.com/emails/quartz-obsession/1232247/>.

Khazan, Olga. "Exclusive: Amazon Confirms First Known Coronavirus Case in an American Warehouse." *The Atlantic*, March 19, 2020. <https://www.theatlantic.com/health/archive/2020/03/amazon-warehouse-employee-has-coronavirus/608341/>.

Knights, David and Hugh Willmott, eds. *Labour Process Theory*. London: The Macmillan Press Ltd, 1990.

Kopp, Emily. "Amazon workers tally virus cases, voice alarms about risks." *Roll Call*, April 29, 2020. <https://www.rollcall.com/2020/04/29/amazon-workers-tally-virus-cases-voice-alarms-about-risks/>.

Kopytoff, Verne. "How Amazon Crushed the Union Movement." *Time*, January 16, 2014. <https://time.com/956/how-amazon-crushed-the-union-movement/>.

Kraemer, Birgit. "Germany: Union-Amazon conflict escalates in run-up to Christmas." December 15, 2016. <https://www.eurofound.europa.eu/publications/article/2016/germany-union-amazon-conflict-escalates-in-run-up-to-christmas>.

LaVecchia, Olivia and Stacy Mitchell. *Amazon's Stranglehold: How the Company's Tightening Grip Is Stifling Competition, Eroding Jobs, and Threatening Communities*. Washington, DC: Institute for Local Self-Reliance, 2016.

Leask, David. "Amazon temporary staff 'better off on the dole'." *Glasgow Times*, December 17, 2012. <https://www.glasgowtimes.co.uk/news/13245496.amazon-temporary-staff-better-off-on-the-dole/>.

Lebel, Valerie, Marie Alderson, and Marilyn Aita. "Physiological Stability: A Concept Analysis." *Journal of Advanced Nursing* 70, no. 9 (September 2014): 1995-2004. <https://onlinelibrary.wiley.com/doi/abs/10.1111/jan.12391>.

Le Blond, Josie. "German Amazon workers strike in long-running dispute over pay." *The Guardian*, November 25, 2013. <https://www.theguardian.com/business/2013/nov/25/german-amazon-employees-strike-pay>.

LeCavalier, Jesse. *The Rule of Logistics: Walmart and the Architecture of Fulfillment*. Minneapolis: University of Minnesota Press, 2016.

Lecher, Colin. "Amazon is raising some workers' pay further after controversy." *The Verge*, October 10, 2018. <https://www.theverge.com/2018/10/10/17961794/amazon-worker-raises-bonuses-controversy>.

Lecher, Colin. "How Amazon automatically tracks and fires warehouse workers for 'productivity'." *The Verge*, April 25, 2019. <https://www.theverge.com/2019/4/25/18516004/amazon-warehouse-fulfillment-centers-productivity-firing-terminations>.

Lee, Dami. "Amazon eliminates monthly bonuses and stock grants after minimum wage increase." *The Verge*, October 3, 2018. <https://www.theverge.com/2018/10/3/17934194/amazon-minimum-wage-raise-stock-options-bonus-warehouse>.

Lee, Min Kyung, Daniel Kusbit, Evan Metsky, and Laura Dabbish. "Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers." *CHI '15: Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (April 2015): 1603-12. <https://dl.acm.org/doi/abs/10.1145/2702123.2702548>.

Lee, Timothy B. "Amazon workers in Minnesota walk off the job over parking issues." *Ars Technica*, August 9, 2019. <https://arstechnica.com/tech-policy/2019/08/amazon-faces-growing-labor-unrest-with-minnesota-warehouse-protest>.

Leipziger Internet Zeitung. "Erneuter Streik bei Amazon in Leipzig – Beschäftigte lassen nicht locker." *Leipziger Internet Zeitung*, April 18, 2017. <https://www.l-iz.de/melder/wortmelder/2017/04/Erneuter-Streik-bei-Amazon-in-Leipzig-%E2%80%93-Beschaefigte-lassen-nicht-locker-174762>.

Le Mauricien. "The Negative Effects of CCTV Workplace Surveillance." *Le Mauricien*, April 24, 2015.

Leon, Luis Feliz. "A Worldwide Workers' Revolt Against Amazon Has Begun." *In These Times*, April 15, 2021. <https://inthesetimes.com/article/workers-world-unite-amazon-union-busting-organizing-labor-rights>.

Lerman, Rachel and Nitasha Tiku. "Amazon, Instacart workers launch May Day strike to protest treatment during the coronavirus pandemic." *The Washington Post*, May 1, 2020. <https://www.washingtonpost.com/technology/2020/05/01/amazon-instacart-workers-strike/>.

Levin, Sam. "Revealed: Amazon told workers paid sick leave law doesn't cover warehouses." *The Guardian*, May 7, 2020. <https://www.theguardian.com/technology/2020/may/07/amazon-warehouse-workers-coronavirus-time-off-california>.

Lichtenstein, Nelson. "Making History at Amazon." *Dissent*, February 12, 2020. https://www.dissentmagazine.org/online_articles/making-history-at-amazon.

Lieber, Chavie. "Amazon employees are using Prime Day to push for better working conditions." *Vox*, July 16, 2018. <https://www.vox.com/2018/7/16/17577614/amazon-prime-day-strike-boycotts>.

Lieber, Chavie. "Amazon warehouse workers in Europe spent Black Friday protesting." *Vox*, November 27, 2018. <https://www.vox.com/the-goods/2018/11/27/18114735/amazon-warehouse-workers-europe-protests-black-friday>.

Lieber, Chavie. "Muslim Amazon workers say they don't have enough time to pray. Now they're fighting for their rights." *Vox*, December 17, 2018. <https://www.vox.com/the-goods/2018/12/14/18141291/amazon-fulfillment-center-east-africa-workers-minneapolis>.

Lieber, Chavie. "The human costs of Black Friday, explained by a former Amazon warehouse manager." *Vox*, November 20, 2018. <https://www.vox.com/the-goods/2018/11/20/18103516/black-friday-cyber-monday-amazon-fulfillment-center>.

Little, Andrew and Pedro Palandrani. "Theme Lab: A Look Inside An Amazon Fulfillment Center." *Global X*, March 4, 2020. <https://www.globalxetfs.com/theme-lab-a-look-inside-an-amazon-fulfillment-center/>.

Liversedge, Belinda. "Inside Amazon." *Safety Management*, November 4, 2019. <https://www.britsafe.org/publications/safety-management-magazine/safety-management-magazine/2019/inside-amazon/>.

Make Amazon Pay. "Make Amazon Pay: Common Demands." Accessed March 9, 2021. <https://cloud.progressive.international/s/W9Td3D592F5NY4x/download>.

Make the Road New York and New York Communities for Change. *Amazon's Dangerous Jobs*. New York City, NY: Make the Road New York and New York Communities for Change, 2019. <https://maketheroadny.org/wp-content/uploads/2019/11/Amazons-Dangerous-Jobs-Report.pdf>.

Malhotra, Aastha. "How Amazon Leverages Last-mile Delivery for its Logistics?" *Jungleworks*, February 22, 2021. <https://jungleworks.com/how-amazon-leverages-last-mile-delivery-for-its-logistics/>.

Marks, Abigail, Kendra Briken, Shiona Chillas, and Martin Krzywdzinski, eds. *The New Digital Workplace: How New Technologies Revolutionise Work*. London: Palgrave, 2017.

Marston, Rebecca. "Amazon raises wages amid criticism." *News*. October 2, 2018. <https://www.bbc.co.uk/news/business-45717768>.

Marx, Karl. *Capital: A Critique of Political Economy. Volume One*. Moscow: Progress Publishers, 1887. <https://www.marxists.org/archive/marx/works/1867-c1/ch07.htm>.

Marvit, Moshe. "SCOTUS Rules Workers Don't Need To Be Paid for All Their Time Working." *In These Times*, December 10, 2014. <https://inthesetimes.com/article/supreme-court-amazon>.

Maslow, Abraham H. *Motivation and Personality*. New York: Harper & Row, 1954.

McAfee, Andrew and Erik Brynjolfsson. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. New York: W. W. Norton & Company, 2014.

Menegus, Bryan. "Amazon's Aggressive Anti-Union Tactics Revealed in Leaked 45-Minute Video." *Gizmodo*, September 26, 2018. <https://gizmodo.com/amazons-aggressive-anti-union-tactics-revealed-in-leake-1829305201>.

Menegus, Bryan. "Amazon Workers in Europe Strike During Prime Day Crunch." *Gizmodo*, July 16, 2018. <https://gizmodo.com/amazon-workers-in-europe-strike-during-prime-day-crunch-1827629787>.

- Menegus, Bryan. "A Worrying Number of Amazon's Warehouse Workers Are Reportedly Living Off Food Stamps." *Gizmodo*, April 19, 2018. <https://gizmodo.com/a-worrying-number-of-amazon-s-warehouse-workers-are-rep-1825387691>.
- Menegus, Bryan. "Exclusive: Amazon's Own Numbers Reveal Staggering Injury Rates at Staten Island Warehouse." *Gizmodo*, November 25, 2019. <https://gizmodo.com/exclusive-amazons-own-numbers-reveal-staggering-injury-1840025032>.
- Menegus, Bryan. "Hundreds March on Amazon Fulfillment Center in Minnesota." *Gizmodo*, December 14, 2018. <https://gizmodo.com/hundreds-march-on-amazon-fulfillment-center-in-minnesot-1831113246>.
- Menegus, Bryan. "On Amazon's Time." *Gizmodo*, June 13, 2018. <https://gizmodo.com/on-amazon-s-time-1826570882>.
- Mengay, Adrian. "Digitalization of work and heteronomy." *Capital & Class* 44, no. 2 (2020 June): 273-85. <https://journals.sagepub.com/doi/full/10.1177/0309816820904032>.
- Moore, Phoebe V. *The Quantified Self in Precarity: Work, Technology and What Counts*. London: Routledge, 2018.
- Moore, Phoebe V. and Andrew Robinson. "The quantified self: What counts in the neoliberal workplace." *New Media & Society* 18, no. 11 (December 2016): 2774-92. <https://journals.sagepub.com/doi/full/10.1177/1461444815604328>.
- Moore, Phoebe V., Kendra Briken, and Frank Engster. "Machines and measure." *Capital & Class* 44, no. 2 (June 2020): 139-44. <https://journals.sagepub.com/doi/full/10.1177/0309816820902016>.
- Moore, Phoebe V., Martin Upchurch, and Xanthe Whittaker, eds. *Humans and Machines at Work: Monitoring, Surveillance and Automation in Contemporary Capitalism*. Cham: Palgrave Macmillan, 2018.
- Mulholland, Kate and Paul Stewart. "Workers in Food Distribution: Global Commodity Chains and Lean Logistics." *New Political Economy* 19, no.4 (2014): 534-58. <https://www.tandfonline.com/doi/abs/10.1080/13563467.2013.829431>.
- Mullen, Enda. "Huge new Amazon booze warehouse creates 400 jobs." *The Coventry Telegraph*, June 12, 2019. <https://www.coventrytelegraph.net/news/coventry-news/coventry-news-amazon-alcohol-warehouse-16414646>.
- Muñoz, José. "My experience as a temp worker." Testimonial. March 21, 2019. <http://warehouseworkersstandup.org/my-experience-as-a-temp-worker/>.
- M1 Werx. "Amazon: A Day in the Life of Sortation." Video. August 23, 2019. <https://www.youtube.com/watch?v=2r2LckIFpfo>.
- National Council for Occupational Safety and Health. "About Us." Accessed March 31, 2021. <https://nationalcosh.org/about-us>.

National Council for Occupational Safety and Health. *The Dirty Dozen 2018: Employers Who Put Workers and Communities at Risk*. National Council for Occupational Safety and Health, 2018. [https://coshnetwork.org/sites/default/files/Dirty%20Dozen%202018,%204-25-18+FINAL\(1\).pdf](https://coshnetwork.org/sites/default/files/Dirty%20Dozen%202018,%204-25-18+FINAL(1).pdf).

National Council for Occupational Safety and Health. *The Dirty Dozen 2019: Employers Who Put Workers and Communities at Risk*. National Council for Occupational Safety and Health, 2019. https://nationalcosh.org/sites/default/files/uploads/2019_Dirty_Dozen.pdf.

Newsome, Kirsty, Paul Thompson, and Johanna Commander. "'You monitor performance at every hour': labour and the management of performance in the supermarket supply chain." *New Technology, Work and Employment* 28, no. 1 (March 2013): 1-15. <https://onlinelibrary.wiley.com/doi/10.1111/ntwe.12000>.

NFZ Productions. "All Possible Amazon Warehouse Jobs Inside a Delivery Station." Video. December 26, 2020. <https://www.youtube.com/watch?v=FozqVa1YaZU>.

NFZ Productions. "Interview with an Amazon warehouse L3 Process Assistant." Video. September 10, 2020. <https://www.youtube.com/watch?v=vxbrVarDo8g>.

Nolan, Hamilton. "A Few More True Stories from Amazon Workers." *Gawker*, August 6, 2013. <https://gawker.com/a-few-more-true-stories-from-amazon-workers-1043216113>.

Nolan, Hamilton. "Amazon Insiders Tell the Good, the Bad, and the Ugly." *Gawker*, May 2, 2014. <https://gawker.com/amazon-insiders-tell-the-good-the-bad-and-the-ugly-1570866439>.

Nolan, Hamilton. "Amazon Warehouse Workers Are 'Treated Like a Child, a Dumb Child'." *Gawker*, October 27, 2014. <https://gawker.com/amazon-warehouse-workers-are-treated-like-a-child-a-d-1651376061>.

Nolan, Hamilton. "As Amazon Struggles, More Insiders Speak." *Gawker*, July 25, 2014. <https://gawker.com/as-amazon-struggles-more-insiders-speak-1610812487>.

Nolan, Hamilton. "Inside an Amazon Warehouse, the Relentless Need to 'Make Rate'." *Gawker*, June 6, 2016. <https://gawker.com/inside-an-amazon-warehouse-the-relentless-need-to-mak-1780800336>.

Nolan, Hamilton. "True Stories of Life as an Amazon Worker." *Gawker*, February 8, 2013. <https://gawker.com/true-stories-of-life-as-an-amazon-worker-1002568208>.

Nolan, Hamilton. "What Is Life Like For an Amazon Worker?" *Gawker*, July 29, 2013. <https://gawker.com/what-is-life-like-for-an-amazon-worker-949664345>.

Notes from Poland. "Polish law imposes restrictive bar on strikes but Polish @Amazon workers have carried out a series of slowdowns to coincide with ongoing strikes in Germany." *Twitter*, July 29, 2018. <https://twitter.com/notesfrompoland/status/1023503309456400386>.

NTU. "Work Futures Research Group." Accessed August 28, 2021. <https://www.ntu.ac.uk/research/groups-and-centres/groups/work-futures-research-group>.

- O'Connor, Mary. "Sick Amazon 'Elves' Face Sack." *The Times*, December 11, 2016. <https://www.thetimes.co.uk/article/sick-amazon-elves-face-sack-plp32qwtz>.
- O'Connor, Sarah. "Amazon Unpacked." *The Financial Times*, February 8, 2013. <https://www.ft.com/content/ed6a985c-70bd-11e2-85d0-00144feab49a>.
- O'Donovan, Caroline. "Amazon Fired An Employee Involved In Workplace Organizing In Minnesota, Sources Say." *BuzzFeed News*, April 14, 2020. <https://www.buzzfeednews.com/article/carolineodonovan/amazon-fired-employee-involved-in-workplace-organizing-in>.
- O'Donovan, Caroline. "Amazon Worker Protests Have Spread To Chicago As Temperatures Rise." *BuzzFeed News*, July 22, 2019. <https://www.buzzfeednews.com/article/carolineodonovan/amazon-worker-protests-chicago-heat-wave>.
- O'Donovan, Caroline. "As More Amazon Employees Contract The Coronavirus, Workers Are Walking Off The Job." *BuzzFeed News*, April 14, 2020. <https://www.buzzfeednews.com/article/carolineodonovan/amazon-employees-coronavirus-walkout>.
- O'Donovan, Caroline. "The NLRB Is Looking Into Claims That Amazon Violated Employees' Rights During The Coronavirus Pandemic." *BuzzFeed News*, April 18, 2020. <https://www.buzzfeednews.com/article/carolineodonovan/federal-labor-regulators-are-looking-into-claims-that>.
- O'Neill, Christopher. "Taylorism, the European Science of Work, and the Quantified Self at Work." *Science, Technology & Human Values* 42, no. 4 (July 2017): 600-21. <https://journals.sagepub.com/doi/full/10.1177/0162243916677083>.
- Organise. *Amazon: What's It Like Where You Work?* Organise, 2018. <https://static1.squarespace.com/static/5a3af3e22aeba594ad56d8cb/t/5ad098b3562fa7b8c90d5e1b/1523620020369/Amazon+Warehouse+Staff+Survey+Results.pdf>.
- Organise. "Jeff Bezos: Don't cut Amazon workers' pay during the pandemic." Petition. Accessed March 31, 2021. <https://platform.organise.org.uk/campaigns/amazon-pay-cut-coronavirus>.
- Organise. "Victory: Amazon Workers Win Bonus for Working through the Pandemic." Blog. June 30, 2020. <https://www.organise.org.uk/blog/2020/6/30/victory-amazon-workers-win-bonus-for-working-through-the-pandemic>.
- Organise. "What's It Like Working in an Amazon Warehouse? The Results." Blog. February 9, 2018. <https://www.organise.org.uk/blog/2018/2/9/whats-it-like-working-in-an-amazon-warehouse-the-results>
- Osborne, Hilary. "Amazon accused of 'intolerable conditions' at Scottish warehouse." *The Guardian*, December 12, 2016. <https://www.theguardian.com/technology/2016/dec/11/amazon-accused-of-intolerable-conditions-at-scottish-warehouse>.

Our Correspondents. "Striking Amazon workers in Germany support call for international cooperation." News. May 27, 2017. <https://www.wsws.org/en/articles/2017/05/27/amzn-m27.html>.

Our Reporters. "Black Friday Strikes hit Amazon in Europe." News. November 24, 2018. <https://www.wsws.org/en/articles/2018/11/24/amaz-n24.html>.

Ovide, Shira. "How Amazon's Growing Size and Power Is Forcing It to Boost Worker Pay." *Time*, October 2, 2018. <https://time.com/5412487/amazon-minimum-wage/>.

OZZIP. "Strike alert! – Message of solidarity to all striking and protesting Amazon workers in the world during the Prime Day 2019." News. July 14, 2019. <https://www.ozzip.pl/english-news/item/2502-strike-alert-message-of-solidarity-to-all-striking-and-protesting-amazon-workers-in-the-world-during-the-prime-day-2019>.

Palmer, Annie. "Amazon fires warehouse worker who led Staten Island strike for more coronavirus protection." News. March 30, 2020. <https://www.cnbc.com/2020/03/30/amazon-fires-staten-island-coronavirus-strike-leader-chris-smalls.html>.

Palmer, Annie. "Amazon gives front-line workers a \$500 coronavirus bonus." News. June 29, 2020. <https://www.cnbc.com/2020/06/29/amazon-gives-front-line-workers-a-500-coronavirus-bonus.html>.

Palmer, Annie. "Amazon is tracking warehouse workers and says it could fire them for violating social distancing rules." News. April 6, 2020. <https://www.cnbc.com/2020/04/06/amazon-says-workers-could-be-fired-for-violating-social-distancing-rules.html>.

Palmer, Annie. "Amazon memo reveals Covid-19 was more prevalent in Minnesota warehouse than surrounding areas." News. June 30, 2020. <https://www.cnbc.com/2020/06/30/amazon-minnesota-warehouse-workers-infected-with-coronavirus-at-higher-rate.html>.

Palmer, Annie. "Amazon warehouse worker says she was written up in July for taking too many breaks from work." News. July 17, 2020. <https://www.cnbc.com/2020/07/17/amazon-worker-claims-company-wrote-her-up-for-tot-policy-in-july.html>.

Palmer, Annie. "Amazon warehouse workers file lawsuit claiming 'sloppy contact tracing'." News. June 6, 2020. <https://www.cnbc.com/2020/06/06/amazon-warehouse-workers-lawsuit-alleges-sloppy-contact-tracing.html>.

Palmer, Annie. "Amazon workers plan strike at Staten Island warehouse to demand coronavirus protections." News. March 29, 2020. <https://www.cnbc.com/2020/03/29/amazon-workers-in-staten-island-plan-strike-over-coronavirus-safety.html>.

Palmer, Annie. "Amazon workers protest at Michigan warehouse, calling for coronavirus protections." News. April 1, 2020. <https://www.cnbc.com/2020/04/01/amazon-workers-plan-strike-at-michigan-warehouse-for-covid-19-protections.html>.

Palmer, Annie. "How Amazon fought the union drive in Alabama." News. April 16, 2021. <https://www.cnbc.com/2021/04/16/how-amazon-fought-the-union-drive-in-alabama.html>.

Palmer, Annie. "'They're putting us all at risk': What it's like working in Amazon's warehouses during the coronavirus outbreak'." News. March 26, 2020. <https://www.cnbc.com/2020/03/26/amazon-warehouse-employees-grapple-with-coronavirus-risks.html>.

Partington, Richard. "Amazon raises minimum wage for US and UK employees." *The Guardian*, October 2, 2018. <https://www.theguardian.com/technology/2018/oct/02/amazon-raises-minimum-wage-us-uk-employees>.

Peaucelle, Jean-Louis. "From Taylorism to post-Taylorism: Simultaneously pursuing several management objectives." *Journal of Organizational Change Management* 13, no. 5 (October 2000): 452-67. <https://www.emerald.com/insight/content/doi/10.1108/09534810010377426/full/html>.

Perez, Sarah. "Amazon sells over 175M items during Prime Day 2019, more than Black Friday & Cyber Monday combined." *TechCrunch*, July 17, 2019. <https://techcrunch.com/2019/07/17/amazon-sells-over-175m-items-during-prime-day-2019-more-than-black-friday-cyber-monday-combined/>.

Perez, Veronica. "I was fired in July 2018 while pregnant." Testimonial. March 21, 2019. <http://warehouseworkersstandup.org/i-was-fired-in-july-2018-while-pregnant/>.

Piquard, Alexandre. "Coronavirus: Amazon sous pression du gouvernement et de salariés." *Le Monde*, March 19, 2020. https://www.lemonde.fr/economie/article/2020/03/19/coronavirus-amazon-sous-pression-du-gouvernement-et-de-salaries_6033724_3234.html.

Pollard, Chris. "P*SS THE PARCEL: Rushed Amazon warehouse staff pee into bottles as they're afraid of 'time-wasting'." *The Sun*, April 15, 2018. <https://www.thesun.co.uk/news/6055021/rushed-amazon-warehouse-staff-time-wasting/>.

Porter, Jon. "Amazon dodged workplace safety regulators for years, investigation shows." *The Verge*, November 26, 2019. <https://www.theverge.com/2019/11/26/20983452/amazon-workplace-safety-report-injuries-osha-investigation>.

Porter, Jon. "Amazon raises minimum wage to £15 for all 350,000 US workers following criticism." *The Verge*, October 2, 2018. <https://www.theverge.com/2018/10/2/17927478/amazon-minimum-wage-15-dollars-increase-bernie-sanders>.

Pradella, Lucia. "The working poor in Western Europe: Labour, poverty and global capitalism." *Comparative European Politics* 13, no. 5 (September 2015): 596-613. <https://link.springer.com/article/10.1057%2Fcep.2015.17#citeas>.

Press, Alex. "Amazon and Jeff Bezos's Worst Enemy Is Chris Smalls." *Jacobin*, July 12, 2021. <https://jacobinmag.com/2021/07/amazon-staten-island-jfk8-chris-smalls-jeff-bezos-union-organizing-working-class>.

Press, Alex. "Amazon Is Creating Company Towns Across the United States." *Jacobin*, July 24, 2021. <https://jacobinmag.com/2021/07/amazon-warehouse-communities-towns-geography-warehouse-fulfillment-jfk8-cajon-inland-empire>.

Press, Alex. "Amazon Prime Day Is a Nightmare for Amazon Workers." *Jacobin*, June 21, 2021. <https://jacobinmag.com/2021/06/amazon-prime-day-workplace-safety-warehouse-osh-injuries-comp-amcare>.

Press, Alex. (2021) "Amazon Wages a Brutal Anti-Union Campaign. Unsurprisingly, They Won." *Jacobin*, April 9, 2021. <https://theintercept.com/2021/03/17/amazon-covid-chicago-nlrb-strike/>.

Press, Alex. "First look inside huge new Amazon distribution centre." *The Bristol Post*, April 29, 2019. <https://www.bristolpost.co.uk/news/bristol-news/first-look-inside-huge-new-2806422>.

Press, Alex. "No space to be human: work on the Amazon assembly line." *The Nation*, December 20, 2018. <https://www.thenation.com/article/archive/heike-geissler-seasonal-associate-amazon/>.

Press, Alex. "'They Don't Think Our Lives Matter as Much as Theirs': An Interview with Terry Miller." *Jacobin*, April 3, 2020. <https://jacobinmag.com/2020/04/chicago-amazon-warehouse-walkout-coronavirus-pandemic>.

Public Justice. "Amazon Workers and Their Family Members File Suit for Workplace Policy Changes to Stop Community Spread of COVID-19." Press Release. June 3, 2020. <https://www.publicjustice.net/wp-content/uploads/2020/06/Amazon-JFK8-Lawsuit-Press-Release-FINAL.pdf>.

Rawlins, Jack. "Photos of new Redditch warehouse linked to Amazon." *The Redditch & Alcester Advertiser*, September 22, 2020, <https://www.redditchadvertiser.co.uk/news/18738289.photos-new-redditch-warehouse-linked-amazon/>.

Retail, Wholesale, and Department Store Union. *What's wrong with amazon?* New York City, NY: Retail, Wholesale, and Department Store Union, November 28, 2018. https://www.rwdsu.info/new_report_what_s_wrong_with_amazon.

Reuters in Berlin. "Amazon employees hold strike over pay." *The Guardian*, March 22, 2016. <https://www.theguardian.com/technology/2016/mar/22/amazon-workers-go-on-strike-over-pay>.

Reuters Staff. "Amazon workers strike at four German warehouses." News. April 15, 2019. <https://www.reuters.com/article/us-amazon-com-germany-idUSKCN1RR13D>.

Reuters Staff. "Amazon workers strike in Germany, joining action in Spain and Poland." News. July 16, 2018. <https://www.reuters.com/article/us-amazon-com-germany-strike-idINKBN1K61OY>.

Reuters Staff. "Amazon workers strike in Germany, Spain on Black Friday." News. November 23, 2018. <https://www.reuters.com/article/us-amazon-com-strikes-germany-idUSKCN1NS1AU>.

Reuters Staff. "Amazon workers in Germany strike over pay, Verdi union says." News. July 14, 2019. <https://www.reuters.com/article/us-amazon-germany-strike-idUSKCN1U90NZ>.

Reuters Staff. "German union calls more pre-Christmas Amazon strikes." News. December 17, 2019. <https://www.reuters.com/article/us-amazon-germany-strike-idUSKBN1YL1QK>.

Reuters Staff. "German union extends strike at Amazon's Leipzig warehouse until December 24." News. December 20, 2019. <https://www.reuters.com/article/us-amazon-germany-strike-idUSKBN1YO1KI>.

Reuters Staff. "Strikes at Amazon German warehouses up to Christmas." News. December 21, 2015. <https://www.reuters.com/article/us-amazon-com-germany-idUKKBN0U40SY20151221?edition-redirect=uk>.

Riley, Tonya. "'She Injured Herself Working at Amazon. Then The Real Nightmare Began.'" *Mother Jones*, March 19, 2019. <https://www.motherjones.com/politics/2019/03/amazon-workers-compensation-amcare-clinic-warehouse/>.

Rittenhouse, Lindsay. "Amazon Warehouse Employees' Message to Jeff Bezos – We Are Not Robots." *The Street*, September 29, 2017. <https://www.thestreet.com/investing/stocks/amazon-warehouse-employees-discuss-grueling-work-14312539>.

Roberts, Jeff John. "Why You Should Be Worried About Tech's Love Affair With NDAs." *Fortune*, April 29, 2019. <https://fortune.com/2019/04/29/silicon-valley-nda/>.

Roberts, Michael. "Can robots usher in a socialist utopia or only a capitalist dystopia?" *Socialist Review* 415 (July/August 2016). <http://socialistreview.org.uk/415/can-robots-usher-socialist-utopia-or-only-capitalist-dystopia>.

Rosenblat, Alex, Tamara Kreese, and Danah Boyd. *Workplace Surveillance*. New York City, NY: Data & Society Research Institute, 2014. <https://datasociety.net/wp-content/uploads/2014/10/WorkplaceSurveillance.pdf>.

Roser, Christoph. "The Amazon Robotics Family: Kiva, Pegasus, Xanthus, and more ..." *All About Lean*, March 31, 2020. <https://www.allaboutlean.com/amazon-robotics-family/>.

Roser, Christoph. "The Inner Workings of Amazon Fulfillment Centers – Part 1." *All About Lean*, October 22, 2019. <https://www.allaboutlean.com/amazon-fulfillment-1/>.

Roser, Christoph. "The Inner Workings of Amazon Fulfillment Centers – Part 2." *All About Lean*, October 29, 2019. <https://www.allaboutlean.com/amazon-fulfillment-2/>.

Roser, Christoph. "The Inner Workings of Amazon Fulfillment Centers – Part 3." *All About Lean*, November 5, 2019. <https://www.allaboutlean.com/amazon-fulfillment-3/>.

Roser, Christoph. "The Inner Workings of Amazon Fulfillment Centers – Part 4." *All About Lean*, November 12, 2019. <https://www.allaboutlean.com/amazon-fulfillment-4/>.

Roser, Christoph. "The Inner Workings of Amazon Fulfillment Centers – Part 5." *All About Lean*, November 19, 2019. <https://www.allaboutlean.com/amazon-fulfillment-5/>.

Roser, Christoph. "The Inner Workings of Amazon Fulfillment Centers – Part 6." *All About Lean*, November 26, 2019. <https://www.allaboutlean.com/amazon-fulfillment-6/>.

Ruckus, Ralf. "Confronting Amazon." *Jacobin*, March 31, 2016. <https://www.jacobinmag.com/2016/03/amazon-poland-poznan-strikes-workers>.

Rushe, Dominic. "Critic fear Amazon's minimum wage hike will distract from its other issues." *The Guardian*, October 6, 2018. <https://www.theguardian.com/us-news/2018/oct/06/critics-fear-amazons-minimum-wage-hike-will-distract-from-its-other-issues>.

Ryan, Richard M. and Edward L. Deci. "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being." *American Psychologist* 55, no. 1 (January 2000): 68-78. <https://psycnet.apa.org/doiLanding?doi=10.1037%2F0003-066X.55.1.68>.

Sainato, Michael. "Accidents at Amazon: workers left to suffer after warehouse injuries." *The Guardian*, July 30, 2018. <https://www.theguardian.com/technology/2018/jul/30/accidents-at-amazon-workers-left-to-suffer-after-warehouse-injuries>.

Sainato, Michael. "Amazon is cracking down on protesters and organizing, workers say." *The Guardian*, May 5, 2020. <https://www.theguardian.com/technology/2020/may/05/amazon-protests-union-organizing-cracking-down-workers>.

Sainato, Michael. "Exploited Amazon workers need a union. When will they get one?" *The Guardian*, July 8, 2018. <https://www.theguardian.com/commentisfree/2018/jul/08/amazon-jeff-bezos-unionize-working-conditions>.

Sainato, Michael. "'Go back to work': outcry over deaths on Amazon's warehouse floor." *The Guardian*, October 18, 2019. <https://www.theguardian.com/technology/2019/oct/17/amazon-warehouse-worker-deaths>.

Sainato, Michael. "'I'm not a robot': Amazon workers condemn unsafe, gruelling conditions at warehouse." *The Guardian*, February 5, 2020. <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-gruelling-conditions-warehouse>.

Sainato, Michael. "Retail workers at Amazon and Whole Foods coordinate sick-out to protest Covid-19 conditions." *The Guardian*, May 1, 2020. <https://www.theguardian.com/world/2020/may/01/retail-workers-at-amazon-and-whole-foods-coordinate-sick-out-to-protest-covid-19-conditions>.

Sainato, Michael. "Revealed: Amazon employees are left to suffer after workplace injuries." *The Guardian*, April 2, 2019. <https://www.theguardian.com/technology/2019/apr/02/revealed-amazon-employees-suffer-after-workplace-injuries>.

Sainato, Michael. "Revealed: Amazon touts high wages while ignoring issues in its warehouses." *The Guardian*, August 7, 2019. <https://www.theguardian.com/technology/2019/aug/06/amazon-workers-minimum-wage-injuries-working-conditions>.

Sainato, Michael. "Revealed: Amazon touts high wages while ignoring issues in its warehouses." *The Guardian*, August 7, 2019. <https://www.theguardian.com/technology/2019/aug/06/amazon-workers-minimum-wage-injuries-working-conditions>.

Sainato, Michael. "'They don't care about safety': Amazon workers struggle with pandemic demand." *The Guardian*, March 18, 2020. <https://www.theguardian.com/technology/2020/mar/18/amazon-whole-foods-workers-stores-warehouses-coronavirus>.

Sainato, Michael. "'We are not robots': Amazon warehouse employees push to unionize." *The Guardian*, January 1, 2019. <https://www.theguardian.com/technology/2019/jan/01/amazon-fulfillment-center-warehouse-employees-union-new-york-minnesota>.

Salvatierra, Javier. "Unions hail success of strike at Amazon warehouse in Madrid." *El País*, March 21, 2018. https://english.elpais.com/elpais/2018/03/21/inenglish/1521632646_173135.html.

Sanders, Bernie. "If the economy is 'roaring', why are so many Americans still struggling?" *The Guardian*, July 16, 2018. <https://www.theguardian.com/commentisfree/2018/jul/16/bernie-sanders-town-hall-low-wages-amazon-mcdonalds-walmart>.

Sapong, Emma. "East African workers demand safer working conditions at Amazon's Egan warehouse." *News*. June 4, 2018. <https://www.mprnews.org/story/2018/06/04/east-african-workers-demand-safer-working-conditions-at-amazons-egan-warehouse>.

SCDigest Editorial Staff. "Supply Chain News: Amazon is Adding to its FC Robot Portfolio." *Supply Chain Digest*, June 10, 2019. <http://www.scdigest.com/ontarget/19-06-10-2.php?cid=15559>.

Scheiber, Noam. "Inside an Amazon Warehouse, Robots' Ways Rub Off on Humans." *The New York Times*, July 3, 2019. <https://www.nytimes.com/2019/07/03/business/economy/amazon-warehouse-labor-robots.html>.

Schiller, Zach. "More Ohio Amazon workers relying on food aid." Press Release. January 5, 2018. <https://www.policymattersohio.org/files/news/1518amazonpr.pdf>.

Schmula Contributor. "What is the Role of the Water Spider in Lean Manufacturing?" Last modified March 25, 2017. <https://www.shmula.com/what-is-the-role-of-the-waterspider-in-lean-manufacturing>.

Schumacher, Susan. "What Employees Should Know About Electronic Performance Monitoring." *ESSA*/vol. 8, art. 3 (January 2010). <https://dc.cod.edu/cgi/viewcontent.cgi?article=1332&context=essai>.

Scott, Jim. "Amazon's first fulfilment centre in the North East officially opens in Darlington." *The Northern Echo*, May 11, 2020. <https://www.thenorthernecho.co.uk/news/18440030.amazons-first-fulfilment-centre-north-east-officially-opens-darlington/>.

Scott, Jim. "First look inside Amazon's newest warehouse at Bowburn in Durham." *The Northern Echo*, November 13, 2020. <https://www.thenorthernecho.co.uk/news/18867753.first-look-inside-amazons-newest-warehouse-bowburn-durham/>.

Selby, Alan. "Timed Toilet Breaks, Impossible Targets and Workers Falling Asleep on Feet: Brutal Life Working in Amazon Warehouse." *The Mirror*, November 25, 2017.

<https://www.mirror.co.uk/news/uk-news/timed-toilet-breaks-impossible-targets-11587888>.

Semuels, Alana. "What Amazon Does to Poor Cities." *The Atlantic*, February 1, 2018.

<https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

Sewell, Graham and Barry Wilkinson. "'Someone to Watch Over Me': Surveillance, Discipline and the Just-in-Time Labour Process." *Sociology* 26, no. 2 (May 1992): 271-89. <https://journals.sagepub.com/doi/abs/10.1177/0038038592026002009>.

Sloat, Sarah. "Amazon Workers in Germany Extend Strike Action." *The Wall Street Journal*, June 2, 2014. <https://www.wsj.com/articles/amazon-workers-in-germany-extend-strike-action-1401725008>.

Sloat, Sarah. "Amazon Workers in Germany Strike Again, Union Says." *The Wall Street Journal*, April 17, 2014. <https://www.wsj.com/articles/SB10001424052702304626304579506770443938010>.

Smalls, Christian. "Dear Jeff Bezos, instead of firing me, protect your workers from coronavirus." *The Guardian*, April 2, 2020. <https://www.theguardian.com/commentisfree/2020/apr/02/dear-jeff-bezos-amazon-instead-of-firing-me-protect-your-workers-from-coronavirus>.

SmartPac. "Complete packaging lines." Accessed March 31, 2021. <https://www.smartpac-dresden.com/en/packaging-machines/packaging-lines.html>.

Smith, Chris and Paul Thompson. "Re-Evaluating the Labour Process Debate." *Economic and Industrial Democracy* 19, no. 4 (November 1998): 551-77. <https://journals.sagepub.com/doi/pdf/10.1177/0143831X98194002>.

Smith, Martin. "Amazon need to make work pay before they expand further in UK." Blog. February 26, 2014. <https://strongerunions.org/2014/02/26/amazon-need-to-make-work-pay-before-they-expand-further-in-uk/>.

Soper, Spencer. "Amazon Pledges to Compensate Its Warehouse Workers More Following Criticism." *Time*, October 10, 2018. <https://time.com/5421061/amazon-warehouse-workers-more-pay/>.

Soper, Spencer. "Amazon workers cool after company took heat for hot warehouses." *The Seattle Times*. June 6, 2012. <https://www.seattletimes.com/business/amazon-workers-cool-after-company-took-heat-for-hot-warehouses/>.

Soper, Spencer. "Inside Amazon's Warehouse." ZNET, September 24, 2011. <https://zcomm.org/znetarticle/inside-amazons-warehouse-by-spencer-soper/>.

Spatari, Marcel. *E-Commerce: Recent Trends and Impact on Labour*. Nyon: UNI Global Union, October 2019. https://www.uniglobalunion.org/sites/default/files/files/news/e-commerce_report_syndex_october_2019_en.pdf.

Spencer, David. "Fear and hope in an age of mass automation: debating the future of work." *New Technology, Work and Employment* 33, no. 1 (March 2018): 1-12. <https://onlinelibrary.wiley.com/doi/10.1111/ntwe.12105>.

Spicer, André. "Amazon's 'worker cage' has been dropped, but its staff are not free." *The Guardian*, September 14, 2018. <https://www.theguardian.com/commentisfree/2018/sep/14/amazon-worker-cage-staff>.

Spitznagel, Eric. "Inside the hellish workday of an Amazon warehouse employee." *The New York Post*, July 13, 2019. <https://nypost.com/2019/07/13/inside-the-hellish-workday-of-an-amazon-warehouse-employee/>.

Stangler, Cole. "How French Workers Took on Amazon in the Middle of a Pandemic and Won." *The New York Times*, April 29, 2020. <https://www.nytimes.com/2020/04/29/opinion/amazon-france-coronavirus.html>.

Statt, Nick. "Amazon Says Fully Automated Shipping Warehouses Are at least a Decade Away." *The Verge*, May 1, 2019. <https://www.theverge.com/2019/5/1/18526092/amazon-warehouse-robotics-automation-ai-10-years-away>.

Statt, Nick. "Amazon's New York City warehouse is reportedly a dangerous place to work." *The Verge*, November 25, 2019. <https://www.theverge.com/2019/11/25/20982112/amazon-warehouse-jfk8-staten-island-new-york-city-high-injury-rate>.

Statt, Nick. "Amazon warehouse workers are striking across Europe on Prime Day." *The Verge*, July 16, 2018. <https://www.theverge.com/2018/7/16/17577348/amazon-warehouse-worker-strike-europe-prime-day>.

Stevens, Ben. "Amazon workers forced to use 'plastic bottles to urinate' according to union." *Charged*, July 22, 2019. <https://www.chargedretail.co.uk/2019/07/22/amazon-workers-forced-to-use-plastic-bottles-to-urinate-according-to-union/>.

Stevens, Ben. "Behind the scenes at Amazon's robotic fulfilment centre." *Charged*, October 18, 2019. <https://www.chargedretail.co.uk/2019/10/18/behind-the-scenes-at-amazons-robotic-fulfilment-centre/>.

Stevens, Ben. "GMB: Amazon 'wasting millions' on advertising instead of addressing 'incredibly dangerous' working conditions." *Charged*, October 28, 2019. <https://www.chargedretail.co.uk/2019/10/28/gmb-amazon-wasting-millions-on-advertising-instead-of-addressing-incredibly-dangerous-working-conditions/>.

Stevens, Dom. "Amazon to create 200 new permanent jobs with the opening of a new fulfilment centre in Chesterfield." *News*. March 2, 2019. <https://www.chesterfield.co.uk/2019/03/amazon-to-create-200-new-permanent-jobs-with-the-opening-of-a-new-fulfillment-centre-in-chesterfield/>.

Stevens, Laura. "Amazon to Raise Its Minimum U.S. Wage to \$15 an Hour." *The Wall Street Journal*, October 2, 2018. <https://www.wsj.com/articles/amazon-to-raise-its-minimum-u-s-wage-to-15-an-hour-1538476027>.

Stevens, Laura. "How Amazon Gets Its Holiday Hires Up to Speed in Two Days." *The Wall Street Journal*, November 28, 2016. <https://www.wsj.com/articles/amazon-leans-on-technology-to-speed-training-of-holiday-workers-1480329005>.

Streams, Kimber. "Amazon warehouse work environment improved with air conditioning." *The Verge*, June 5, 2012. <https://www.theverge.com/2012/6/5/3065141/amazon-warehouse-work-environment-improved-air-conditioning>.

Streitfeld, David. "Amazon's Clashes With Labor: Days of Conflict and Control." *New York Times*, April 5, 2021. <https://www.nytimes.com/2021/04/05/technology/amazon-control-bathroom-breaks.html>.

Streitfeld, David. "How Amazon Crushes Unions." *The New York Times*, March 16, 2021. <https://www.nytimes.com/2021/03/16/technology/amazon-unions-virginia.html>.

Swansea Socialist Party. "For Workers' Rights at Amazon." News. September 28, 2013. <http://www.swanseasocialistparty.org.uk/view/news/2013-09-28/268-for-workers-rights-at-amazon.html>.

Sweney, Mark. "Amazon creates 1,200 jobs at warehouse equipped with advanced robotics." *The Guardian*, April 27, 2017. <https://www.theguardian.com/technology/2017/apr/27/amazon-uk-jobs-warrington-warehouse-staff-robot>.

Taylor, Phil. "A band aid on a gaping wound: Taylor and modern working practices." *New Technology, Work and Employment* 34, no. 2 (July 2019): 100-05. <https://onlinelibrary.wiley.com/doi/10.1111/ntwe.12129>.

The Economist. "What Amazon does to wages: Is the world's largest online retailer underpaying its employees?" *The Economist*, January 20, 2018. <https://www.economist.com/united-states/2018/01/20/what-amazon-does-to-wages>.

The Local. "Amazon Italy workers call Black Friday strike." News. November 23, 2017. <https://www.thelocal.it/20171123/amazon-italy-black-friday-strike/>.

The Local. "Amazon workers in Italy strike for second time on a month." News. December 20, 2017. <https://www.thelocal.it/20171220/amazon-italy-second-strike/>.

The Local. "France's Amazon strike puts pressure on Santa." News. December 22, 2014. <https://www.thelocal.fr/20141222/france-amazon-strike-warehouse-christmas-wages/>.

The Sugar Family. "Working at Amazon Warehouse: How much money can you truly make?" December 7, 2020. https://www.youtube.com/watch?v=KEY08afofOs&list=PL8Jadm83mgqj8B_cP4GtjMiRtn3k1nR9&index=5.

The Sugar Family. "Working at Amazon Warehouse: Training Day and Work Expectations." Video. November 13, 2020. https://www.youtube.com/watch?v=mfKctyhTi_Y.

The Sugar Family. "Working at Amazon Warehouse: Watch This Before You Apply." Video. December 15, 2020. https://www.youtube.com/watch?v=dSmVA3x8e8w&list=PL8Ja-dm83mgqj8B_cP4GtjMiRtn3k1nR9&index=6.

Thompson, Paul. "Dissent at work and the resistance debate: departures, directions, and dead ends." *Studies in Political Economy* 97, no. 2 (2016): 106-23. <https://www.tandfonline.com/doi/full/10.1080/07078552.2016.1207331>.

Thompson, Paul. "Labour Process Theory and Critical Management Studies." In *The Oxford Handbook of Critical Management Studies*, edited by Mats Alvesson, Todd Bridgman, and Hugh Willmott, 100-08. Oxford: Oxford University Press, 2009.

Thompson, Paul. "The capitalist labour process: Concepts and connections." *Capital & Class* 34, no. 1 (February 2010): 7-14. <https://journals.sagepub.com/doi/10.1177/0309816809353475>.

Thompson, Paul. *The Nature of Work: An Introduction to Debates on the Labour Process*. London: The Macmillan Press Ltd, 1983.

Thompson, Paul and Chris Smith. "Labour Power and Labour Process: Contesting the Marginality of the Sociology of Work." *Sociology* 43, no. 5 (October 2009): 913-30. <https://journals.sagepub.com/doi/abs/10.1177/0038038509340728>.

Thompson, Paul and Chris Smith, eds. *Working Life: Renewing Labour Process Analysis*. Basingstoke: Palgrave Macmillan, 2010.

Thompson, Paul and Kirsty Newsome. "Labour process theory, work and the employment relations." In *Theoretical Perspectives on Work and the Employment Relationship*, edited by Bruce E. Kaufman, 133-62. Champaign, IL: Industrial Relations Research Association/University of Illinois at Urbana-Champaign, 2004.

Toister, Jeff. "An Inside Look at Amazon's Fulfillment Center Operations." Blog. April 18, 2017. <https://www.toistersolutions.com/blog/2017/4/10/an-inside-look-at-amazons-fulfillment-center-operations>.

Topping, Andrew. "First look at Amazon's new Nottinghamshire hub in new behind-the-scenes pictures." *The Nottingham Post*, November 26, 2020. <https://www.nottinghampost.com/news/local-news/gallery/first-look-amazons-new-nottinghamshire-4736330>.

Tracy, Phillip. "Case study: Amazon embraces shipping automation, robotics." *RCR Wireless News*, July 8, 2016. <https://www.rcrwireless.com/20160708/internet-of-things/amazon-automation-tag31-tag99>.

Transnational Social Strike Platform. "Amazon Workers on Strike on Prime Day: No More Discounts on our Wage!" Blog. July 20, 2019. <https://www.transnational-strike.info/2019/07/20/amazon-workers-on-strike-on-prime-day-no-more-discounts-on-our-wage/>.

Transnational Social Strike Platform. "Call to all Amazon Workers in Europe. In July ... a European General Strike!" Blog. May 17, 2018. <https://www.transnational-strike.info/2018/05/17/call-to-all-amazon-workers-in-europe-in-july-a-european-general-strike/>.

Transnational Social Strike Platform. *Strike the Giant! Transnational Organization against Amazon, Fall 2019 Journal*. https://www.transnational-strike.info/app/uploads/2019/11/Strike-the-Giant_TSS-Journal.pdf.

TUC. "Amazon must improve working conditions, not just pay – says TUC." News. October 2, 2018. <https://www.tuc.org.uk/news/amazon-must-improve-working-conditions-not-just-pay-says-tuc>.

TUC. *Challenging Amazon: What can we do about Amazon's treatment of its workers?* London: TUC, 2020. <https://www.tuc.org.uk/sites/default/files/2020-10/Challenging%20Amazon%20%28final%29.pdf>.

TUC. "It's prime time for Amazon to treat their workers properly, says TUC." News. July 19, 2019. <https://www.tuc.org.uk/news/its-prime-time-amazon-treat-their-workers-properly-says-tuc>.

TUC. "Support Amazon workers." News. November 29, 2019. <https://www.tuc.org.uk/news/support-amazon-workers>.

Tung, Irene and Deborah Berkowitz. *Amazon's Disposable Workers: High Injury and Turnover Rates at Fulfillment Centers in California, Data Brief, March 2020*. New York City, NY: National Employment Law Project, 2020. <https://www.nelp.org/publication/amazons-disposable-workers-high-injury-turnover-rates-fulfillment-centers-california/>.

Turner, Robin. "Amazon hits back over Panorama claims about working conditions at Swansea warehouse." News. November 25, 2013. <https://www.walesonline.co.uk/news/wales-news/amazon-hits-back-over-panorama-6337773>.

Tynan, Dan. "Amazon's 'Ambassador' Workers Assure Twitter: We Can Go to the Toilet Any Time." *The Guardian*, August 24, 2018. <https://www.theguardian.com/technology/2018/aug/23/amazon-fc-ambassadors-twitter-working-conditions>.

UK Data Service. "UK Data Archive Study Number 8581 – Skills and Employment Survey, 2017." Accessed March 31, 2021. http://doc.ukdataservice.ac.uk/doc/8581/mrdoc/pdf/8581_sceli_eib_ses_questionnaires.pdf.

UNI Global Union. "A good employer looks different - Amazon wins the Big Brother Award 2015." News. April 17, 2015. <https://www.uniglobalunion.org/news/a-good-employer-looks-different-amazon-wins-big-brother-award-2015>.

UNI Global Union. "Amazon and Zalando workers inspire through organizing." News. June 15, 2017. <https://www.uniglobalunion.org/news/amazon-and-zalando-workers-inspire-through-organizing>.

UNI Global Union. "Amazon beware: UNI & ITF are watching you." News. August 15, 2014. <https://www.uniglobalunion.org/news/amazon-beware-uni-itf-are-watching-you>.

UNI Global Union. "Amazon.com Germany under fire on labour rights." News. May 27, 2013. <https://www.uniglobalunion.org/news/amazoncom-germany-under-fire-labour-rights>.

UNI Global Union. "Amazon Germany: strike wave in the Christmas season." News. December 15, 2014. <https://www.uniglobalunion.org/news/amazon-germany-strike-wave-christmas-season>.

UNI Global Union. "Amazon Germany workers on strike again." News. March 17, 2015. <https://www.uniglobalunion.org/news/amazon-germany-workers-strike-again>.

UNI Global Union. "Amazon Prime Day strikes sweep Europe, expose dire warehouse working conditions." July 17, 2018. <https://www.uniglobalunion.org/news/amazon-prime-day-strikes-sweep-europe-expose-dire-warehouse-working-conditions>.

UNI Global Union. "Amazon shuts down talks with Polish unions." News. July 4, 2019. <https://www.uniglobalunion.org/de/node/40032>.

UNI Global Union. "Amazon worker Matthias: 'We are humans, not robots'." News. November 8, 2013. <https://www.uniglobalunion.org/news/amazon-worker-matthias-we-are-humans-not-robots>.

UNI Global Union. "Amazon Workers Around the World Stand Up to Bezos." News. April 17, 2020. <https://www.uniglobalunion.org/news/amazon-workers-around-world-stand-bezos>.

UNI Global Union. "Amazon workers deliver success, on first day of strike in Germany." News. September 23, 2014. <https://www.uniglobalunion.org/news/amazon-workers-deliver-success-first-day-strike-germany>.

UNI Global Union. "Amazon workers in Germany and Poland in coordinated cross-border strikes." News. May 2, 2016. <https://www.uniglobalunion.org/news/amazon-workers-germany-and-poland-coordinated-cross-border-strikes>.

UNI Global Union. "Amazon workers in Germany expand strike during the Easter period." News. April 2, 2015. <https://www.uniglobalunion.org/news/amazon-workers-germany-expand-strike-during-easter-period>.

UNI Global Union. "Amazon workers in Germany strike over anti-union stance." News. August 7, 2013. <https://www.uniglobalunion.org/news/amazon-workers-germany-strike-over-anti-union-stance>.

UNI Global Union. "Amazon workers launch wave of Black Friday strikes and protests." News. November 23, 2018. <https://www.uniglobalunion.org/news/amazon-workers-launch-wave-black-friday-strikes-and-protests>.

UNI Global Union. "Amazon workers strike again in Germany." News. September 19, 2013. <https://www.uniglobalunion.org/news/amazon-workers-strike-again-germany>.

UNI Global Union. "Amazon workers strike as brazen Bezos soaks up an award." News. April 25, 2018. <https://www.uniglobalunion.org/news/amazon-workers-strike-brazen-bezos-soaks-award>.

UNI Global Union. "Amazon workers strike in Germany - your help needed." News. August 8, 2013. <https://www.uniglobalunion.org/news/amazon-workers-strike-germany-your-help-needed>.

UNI Global Union. "Amazon workers strike in Spain against abuse of temporary workforce and dependence on zero-hour contracts." News. May 18, 2018. <https://www.uniglobalunion.org/news/amazon-workers-strike-spain-against-abuse-temporary-workforce-and-dependence-zero-hour>.

UNI Global Union. "Amazon workers in Spain and Germany take further strike action over gross violation of worker rights." News. December 7, 2018. <https://uniglobalunion.org/news/amazon-workers-spain-and-germany-take-further-strike-action-over-gross-violation-worker-rights>.

UNI Global Union. "Another wave of Amazon strikes hits Germany." News. October 1, 2018. <https://www.uniglobalunion.org/news/another-wave-amazon-strikes-hits-germany>.

UNI Global Union. "Appalling working conditions sparks Amazon workers protest." News. May 15, 2018. <https://www.uniglobalunion.org/news/appalling-working-conditions-sparks-amazon-worker-protest>.

UNI Global Union. "BBC Investigation: Amazon workers treated like robots." News. November 25, 2013. <https://www.uniglobalunion.org/news/bbc-investigation-amazon-workers-treated-robots>.

UNI Global Union. "Black Friday: UNI tells morally bankrupt Walmart to change its ways." News. November 29, 2013. <https://www.uniglobalunion.org/news/black-friday-uni-tells-morally-bankrupt-walmart-change-its-ways>.

UNI Global Union. "Congratulations Amazon – 20 years of precarious work and low wages – shame on you!" News. July 15, 2015. <https://www.uniglobalunion.org/news/congratulations-amazon-20-years-precarious-work-and-low-wages-shame-you>.

UNI Global Union. "E-commerce report shows Amazon model is unsustainable." News. December 20, 2019. <https://www.uniglobalunion.org/news/e-commerce-report-shows-amazon-model-unsustainable>.

UNI Global Union. "First-ever agreement between Amazon and unions halts inhumane work hours in Italy." News. May 23, 2018. <https://www.uniglobalunion.org/news/first-ever-agreement-between-amazon-and-unions-halts-inhumane-work-hours-italy>.

UNI Global Union. "French unions call for second strike following breakdown in negotiations." News. June 11, 2014. <https://www.uniglobalunion.org/news/french-unions-call-second-strike-following-breakdown-negotiations>.

UNI Global Union. "German Amazon workers protest at U.S. headquarters." News. December 16, 2013. <https://www.uniglobalunion.org/news/german-amazon-workers-protest-us-headquarters>.

UNI Global Union. "Global alliance of unions demands Amazon take urgent measures to address COVID-19." News. March 17, 2020. <https://uniglobalunion.org/news/global-alliance-unions-demands-amazon-take-urgent-measures-address-covid-19>.

UNI Global Union. "Global support for German Amazon workers' strike action." News. May 3, 2019. <https://www.uniglobalunion.org/news/global-support-german-amazon-workers-strike-action>.

UNI Global Union. "Global Union Alliance: 'Amazon cannot fire its way out of this crisis'." News. April 22, 2020. <https://www.uniglobalunion.org/news/global-union-alliance-amazon-cannot-fire-its-way-our-crisis-0>.

UNI Global Union. "GMB Amazon investigation reveals 100s of ambulance call outs and workers in constant pain." News. June 1, 2018. <https://www.uniglobalunion.org/news/gmb-amazon-investigation-reveals-100s-ambulance-call-outs-and-workers-constant-pain>.

UNI Global Union. "Ignoring health and safety of workers part-and-parcel of Amazon's anti-union plan." News. October 9, 2017. <https://www.uniglobalunion.org/news/ignoring-health-and-safety-workers-part-and-parcel-amazons-anti-union-plan>.

UNI Global Union. "Polish Amazon workers escalate push for better wages, working conditions." News. May 10, 2019. <https://www.uniglobalunion.org/news/polish-amazon-workers-escalate-push-better-wages-working-conditions>.

UNI Global Union. "Polish Prime Day protests include a strike vote." News. July 18, 2019. <https://www.uniglobalunion.org/news/polish-prime-day-protests-include-a-strike-vote>.

UNI Global Union. "Polish workers to Amazon: We are not robots." News. December 3, 2015. <https://www.uniglobalunion.org/news/polish-workers-amazon-we-are-not-robots>.

UNI Global Union. "Resistance and Solidarity: Amazon workers demand a better deal this Prime Day." News. July 15, 2019. <https://www.uniglobalunion.org/news/resistance-and-solidarity-amazon-workers-demand-a-better-deal-prime-day>.

UNI Global Union. "Solidarnosc clinches historic agreement with Amazon in Poland." News. January 16, 2017. <https://www.uniglobalunion.org/news/solidarnosc-clinches-historic-agreement-amazon-poland>.

UNI Global Union. "Strikes at Amazon Germany to mark World Health Day." News. April 7, 2016. <https://www.uniglobalunion.org/news/strikes-amazon-germany-mark-world-health-day>.

UNI Global Union. "There is always a BUT with Amazon." News. June 28, 2016. <https://www.uniglobalunion.org/news/there-always-a-amazon>.

UNI Global Union. "Time for a collective agreement at Amazon Germany." News. January 29, 2015. <https://www.uniglobalunion.org/news/time-a-collective-agreement-amazon-germany>.

UNI Global Union. "UNI: 'Amazon needs to engage with the voice of its workers'." News. July 21, 2014. <https://www.uniglobalunion.org/news/uni-amazon-needs-engage-voice-its-workers>.

UNI Global Union. "UNI condemns violence against Spanish Amazon strikes." News. July 18, 2018. <https://www.uniglobalunion.org/news/uni-condemns-violence-against-spanish-amazon-strikers>.

UNI Global Union. "UNI Global Amazon Alliance – Victory in France, Strikes in Spain and Germany, Pressure in the U.S., and more." News. January 25, 2019. <https://www.uniglobalunion.org/news/uni-global-amazon-alliance-victory-france-strikes-spain-and-germany-pressure-us-and-more>.

UNI Global Union. "UNI Global Union and the ITUC show solidarity with Amazon climate activists." News. January 9, 2020. <https://www.uniglobalunion.org/news/uni-global-union-and-ituc-show-solidarity-amazon-climate-activists>.

UNI Global Union. "UNI Global Union in full solidarity with Italian and German Black Friday strikes." November 24, 2017. <https://www.uniglobalunion.org/news/uni-global-union-full-solidarity-italian-and-german-black-friday-strikes>.

UNI Global Union. "UNI shows Amazon the red card." News. June 19, 2018. <https://www.uniglobalunion.org/news/uni-shows-amazon-red-card>.

UNI Global Union. "UNI stands in solidarity with striking German, French and Polish Amazon workers." News. November 30, 2015. <https://www.uniglobalunion.org/news/uni-stands-solidarity-striking-german-french-and-polish-amazon-workers>.

UNI Global Union. "Unions vow to tackle Amazon's 'anti-worker culture'." News. July 1, 2014. <https://www.uniglobalunion.org/news/unions-vow-tackle-amazons-anti-worker-culture>.

UNI Global Union. "Verdi calls again for a strike at Amazon in Leipzig, Germany." News. March 31, 2014. <https://www.uniglobalunion.org/news/verdi-calls-again-a-strike-amazon-leipzig-germany>.

UNI Global Union. "Vote Amazon CEO Jeff Bezos as the Worst Boss in the World!" News. May 15, 2014. <https://www.uniglobalunion.org/news/vote-amazon-ceo-jeff-bezos-worst-boss-world>.

UNI Global Union. "Walk out strike action in Amazon, Rheinberg, Germany." News. March 22, 2017. <https://uniglobalunion.org/fr/node/38393>.

UNI Global Union. "Walmart Global Union Alliance Meeting in Bogota." News. October 1, 2015. <https://www.uniglobalunion.org/news/walmart-global-union-alliance-meeting-bogota>.

UNI Global Union. "Workers send out a clear signal: strike to continue at Amazon." News. September 24, 2014. <https://www.uniglobalunion.org/news/workers-send-out-a-clear-signal-strike-continue-amazon>.

UNI Global Union. "1500 Amazon workers hold rally in Germany for better working conditions." News. June 24, 2015. <https://www.uniglobalunion.org/news/1500-amazon-workers-hold-rally-germany-better-working-conditions>.

U.S. Bureau of Labor Statistics. "TABLE 1. Incidence rates of nonfatal occupational injuries and illnesses by industry and case types, 2018." Last updated November 7, 2019. https://www.bls.gov/iif/oshwc/osh/os/summ1_00_2018.htm.

Wakefield, Jane. "Amazon: What does 'peak season' mean for employees?" News. November 29, 2019. <https://www.bbc.co.uk/news/technology-50068421>.

Warehouse Workers Stand Up. "About Us." Accessed March 8, 2021. <http://warehouseworkersstandup.org/about-us/>.

Warehouse Workers Stand Up. *The Future of the Warehouse State: New Jersey Must Improve Job Quality in Warehouse Distribution Centers*. Warehouse Workers Stand Up, 2018. http://warehouseworkersstandup.org/wp-content/uploads/2018/12/The_Future_of_the_Warehouse_State.pdf.

Weise, Karen. "Amazon Earnings: Impatient Shoppers Help Lift Sales 20%." *The New York Times*, July 25, 2019. <https://www.nytimes.com/2019/07/25/technology/amazon-earnings-just-how-impatient-are-shoppers.html>.

Weise, Karen. "Somali Workers in Minnesota Force Amazon to Negotiate." *The New York Times*, November 20, 2018. <https://www.nytimes.com/2018/11/20/technology/amazon-somali-workers-minnesota.html>.

Weise, Karen. "Why Some Amazon Workers Are Fuming About Their Raise." *The New York Times*, October 9, 2018. <https://www.nytimes.com/2018/10/09/technology/amazon-workers-pay-raise.html>.

Weise, Karen and Noam Scheiber. "Why Amazon Workers Sided With the Company Over a Union." *The New York Times*, April 16, 2021. <https://www.nytimes.com/2021/04/16/technology/amazon-workers-against-union.html>.

Wells, Georgia, Rachel Feintzig, and Theo Francis. "Amazon's Typical Worker Is in a Warehouse Making \$28,446 a Year." *The Wall Street Journal*, April 22, 2018. <https://www.wsj.com/articles/amazons-typical-worker-is-in-a-warehouse-making-28-446-a-year-1524402003>.

Welsh Government. "First Minister praises Amazon for brining jobs to Wales." News. April 17, 2008. <https://www.wired-gov.net/wg/wg-news-1.nsf/0/C11BB265F0BE407E8025742E003A8905?OpenDocument>.

Wiggers, Kyle. "Amazon's Pegasus fulfillment center robot improves sorting accuracy by 50%." *VentureBeat*, June 5, 2019. <https://venturebeat.com/2019/06/05/amazon-says-its-new-pegasus-fulfillment-center-robot-improves-throughput-by-50/>.

Wilding, Mark. "Revealed: Ambulances Were Called to Amazon Warehouses 600 Times in Three Years." *Vice*, May 31, 2018. <https://www.vice.com/en/article/7xm4dy/ambulances-were-called-to-amazon-warehouses-600-times-in-three-years>.

Wimmer, Christopher. "The automatic revolution." *Capital & Class* 44, no. 2 (June 2020): 287-92. <https://journals.sagepub.com/doi/full/10.1177/0309816819899452>.

Wingfield, Nick. "Amazon Warehouses Prove Infertile Soil for Unions, So Far." *The New York Times*, May 16, 2016. <https://www.nytimes.com/2016/05/17/technology/amazon-proves-infertile-soil-for-unions-so-far.html>.

Wingfield, Nick. "As Amazon Pushes Forward With Robots, Workers Find New Roles." *The New York Times*, September 10, 2017. <https://www.nytimes.com/2017/09/10/technology/amazon-robots-workers.html>.

Wohlsen, Marcus. "A Rare Peek Inside Amazon's Massive Wish-Fulfilling Machine." *Wired*, June 16, 2014. <https://www.wired.com/2014/06/inside-amazon-warehouse/>.

Wolfe-Robinson, Maya. "Union stages final protest over 'horrific' Amazon work practices." *The Guardian*, July 22, 2019. <https://www.theguardian.com/technology/2019/jul/22/union-stages-final-protest-over-horrific-amazon-work-practices>.

Woo, Stu. "Welcome to Amazon Town." *The Wall Street Journal*, December 20, 2011. <https://www.wsj.com/articles/SB10001424052970204058404577108821485438232>.

Woodcock, Jamie. "I've been inside Amazon's new hi-tech warehouses – and I've seen how robots will change how we work." *The Independent*, July 27, 2019. <https://www.independent.co.uk/voices/amazon-fulfilment-centre-warehouse-worker-jeff-bezos-a9023516.html>.

Woodman, Spencer. "Exclusive: Amazon makes even temporary warehouse workers sign 18-month non-competes." *The Verge*, March 26, 2015. <https://www.theverge.com/2015/3/26/8280309/amazon-warehouse-jobs-exclusive-noncompete-contracts>.

Worksmart. "Free exploitation with every Amazon gift this Christmas." News. Accessed March 10, 2021. <https://worksmart.org.uk/news/free-exploitation-every-amazon-gift-christmas>.

Wu, Jasmine and Katie Schoolov. "Amazon workers in Minnesota walk out as Prime Day orders roll in." News. July 15, 2019. <https://www.cnbc.com/2019/07/15/amazon-workers-prime-day-strike-begins-in-minnesota.html>.

Young, Angelo. "Amazon.com's Workers Are Low-Paid Overworked And Unhappy; Is This The New Employee Model For The Internet Age?" *International Business Times*, December 19, 2013. <https://www.ibtimes.com/amazoncoms-workers-are-low-paid-overworked-unhappy-new-employee-model-internet-age-1514780>.

Zahn, Max and Sharif Paget. "'Colony of Hell': 911 Calls From Inside Amazon Warehouses." *The Daily Beast*, March 11, 2019. <https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouses>.

Appendix 1: Location of Amazon's Fulfilment Centres in the UK

At the time of writing (February 2021), Amazon's website indicates that 17 fulfilment centres are in operation in the UK.⁵²⁶ Details of the location of these fulfilment centres are shown in Table 14, below.

However, our review indicates that there are additional fulfilment centres, which have recently opened (or are about to open) in

- Yorkshire and the Humber (Doncaster IV);⁵²⁷
- East Midlands (Chesterfield, Kegworth, and Sutton-in-Ashfield);⁵²⁸

Region	Name	Location Code	Post Code
Yorkshire and the Humber	Doncaster I	LBA1	DN4 5JS
Yorkshire and the Humber	Doncaster II	LBA2	DN11 0BG
Yorkshire and the Humber	Doncaster III	LBA3	DN4 5JP
West Midlands	Rugeley	BHX1	WS15 1LX
East Midlands	Coalville	BHX2	LE67 1FB
East Midlands	Daventry	BHX3	NN11 8QL
North West of England	Manchester	MAN1	M90 5AA
North West of England	Warrington	MAN2	WA5 3XA
North West of England	Bolton	MAN3	BL5 1BT
East of England	Peterborough	EUK5	PE2 9EN
East of England	Dunstable	LTN4	LU5 4RW
South East of England	Milton Keynes	LTN1	MK43 0ZA
South East of England	Hemel Hempstead	LTN2	HP2 7LF
South East of England	Tilbury	LCY2	RM18 7AN
Wales	Swansea	CWL1	SA1 8QX
Scotland	Dunfermline	ED14	KY11 8ST
Scotland	Gourock	GLA1	PA1 1BQ

Table 14: Location of Amazon Fulfilment Centres, UK

526. 'Investing in the UK economy,' Amazon, <https://www.aboutamazon.co.uk/investing-in-the-uk-economy>; 'Amazon to Create Over 1,000 New Permanent Jobs with the Opening of new state-of-the-art Fulfilment Centre in Darlington, County Durham,' Press Release, Amazon, <https://amazonuk.gcs-web.com/news-releases/news-release-details/amazon-create-over-1000-new-permanent-jobs-opening-new-state-art>.

527. The construction period for LBA4 in Doncaster is published as April 29, 2019 to March 13, 2020; see 'LBA4_IP9 Amazon,' Construction Map, <https://www.constructionmap.info/site/116465/lba4-ip9-amazon>. It is not known whether or not LBA4 is in operation.

528. Chesterfield (MAN4) opened in 2019; see Dom Stevens, 'Amazon to create 200 new permanent jobs with the opening of a new fulfilment centre in Chesterfield,' News, March 2, 2019, <https://www.chesterfield.co.uk/2019/03/amazon-to-create-200-new-permanent-jobs-with-the-opening-of-a-new-fulfillment-centre-in-chesterfield/>. Kegworth (EMA1) opened in 2019; see Graham Hiscott, 'Inside huge Amazon warehouse that is replacing beloved UK high streets,' *The Mirror*, November 26, 2019, <https://www.mirror.co.uk/news/uk-news/inside-huge-amazon-warehouse-replacing-20967779>. Sutton-in-Ashfield (EMA2) opened in 2020; see Andrew Topping, 'First look at Amazon's new Nottinghamshire hub in new behind-the-scenes pictures,' *The Nottingham Post*, November 26, 2020, <https://www.nottinghampost.com/news/local-news/gallery/first-look-amazons-new-nottinghamshire-4736330>.

- West Midlands (Rugby and Redditch);⁵²⁹
- North East of England (Darlington and Durham);⁵³⁰
- South West of England (Bristol).⁵³¹

Appendix 2: Theoretical Framework

Within this report, the concepts of work, working conditions, labour, and employment are interpreted from the scientific perspective of Marxist political economy and the complementary philosophical perspectives of dialectical materialism and critical realism. Each concept is discussed in detail, below.

Work

The concept of work is an example of a 'duality'.⁵³² Thus,

- on the one hand, work refers to a particular process of acting, whose outcome is the *production* of a material or other kind of object;⁵³³
- on the other hand, work refers to the *product* or outcome of the process of work.

In this report, we focus on the process of work; and the particular type of work process that we analyse is the *fulfilment of customer orders*, the product of that process being a *fulfilled customer order*.

Work is a particular type of action; as such, it depends on the exercise of labour power, which can also be thought of as the capacity to produce and which is a general property of people. (It is emergent from the dialectical relation between people's physical and intellectual abilities.)

However, work depends, not only on the exercise of labour power but also on the use of raw materials and instruments of production, and the outcome of work is a material object or other outcome that satisfies a particular human need. Hence, work is a concrete process. For example, a shirt which has been produced using cotton yarn (the raw material) and a loom (the instrument of production) can be used to provide protection from the cold in the winter and the heat in the summer. Likewise, a package of shirts which has been produced by workers in an Amazon fulfilment centre using cardboard, paper, and tape (the raw materials), and machines such as computers, scanners, and conveyor belts (the instruments of production), can be delivered to a customer, securely, in fulfilment of the conditions of sale. In short, the capacity to work

529. Rugby (BHX5) opened in 2019; see Enda Mullen, 'Huge new Amazon booze warehouse creates 400 jobs,' *The Coventry Telegraph*, June 12, 2019, <https://www.coventrytelegraph.net/news/coventry-news/coventry-news-amazon-alcohol-warehouse-16414646>. Redditch (BHX6) may still be under construction; see Jack Rawlins, 'Photos of new Redditch warehouse linked to Amazon,' *The Redditch & Alcester Advertiser*, September 22, 2020, <https://www.redditchadvertiser.co.uk/news/18738289.photos-new-redditch-warehouse-linked-amazon/>. 530. Darlington (MME1) opened in 2020; see Jim Scott, 'Amazon's first fulfilment centre in the North East officially opens in Darlington,' *The Northern Echo*, May 11, 2020, <https://www.thenorthernecho.co.uk/news/18440030.amazons-first-fulfilment-centre-north-east-officially-opens-darlington/>. Durham (MME2) also opened in 2020; see Jim Scott, 'First look inside Amazon's newest warehouse at Bowburn in Durham,' *The Northern Echo*, November 13, 2020, <https://www.thenorthernecho.co.uk/news/18867753.first-look-inside-amazons-newest-warehouse-bowburn-durham/>.

531. Bristol (BRS1) opened in 2019; see Alex Press, 'First look inside huge new Amazon distribution centre,' *The Bristol Post*, April 29, 2019, <https://www.bristolpost.co.uk/news/bristol-news/first-look-inside-huge-new-2806422>.

532. Roy Bhaskar, *Dialectic: The Pulse of Freedom* (London: Routledge, 2008), 115.

533. Therefore, if action is the process of acting in general, work is a particular type of action.

depends on labour power and the availability of means of production (both raw materials and instruments of production). In the case of Amazon, the work that is undertaken inside the fulfilment centre – that is, the fulfilment of customer orders – is organised socially, in a type of production line; the sequence of constitutive work processes is a type of workflow; and the scale of that activity, as a whole, is a type of mass production. In other words, the work that is undertaken inside Amazon's fulfilment centres may be understood either as a whole or as a sequence of inter-related work processes, which are the parts of the whole (stowing, picking, sorting, packing, etc.).

A production line is one way of organising work socially; it is an example of homoarchical organisation – that is, a type of social structure in which the social positions of the structure carry the same level of authority and status. However, work may also be organised hierarchically. Many work roles, for example, involve completing work tasks for another person, who occupies a role that carries a higher level of authority and status and who is responsible for directing the work of the person in the subordinate role; hence, the existence of the higher-level role is dependent on the existence of the lower-level role. In a work hierarchy, therefore, work roles are distinct from, at the same time as they are connected to, each other, or dialectically related – just as the roles of a work homoarchy are.

Note also that the process of work may be organised both homoarchically and hierarchically at the same time. For example, work roles which constitute a production line and carry the same level of authority and status will intersect with the work roles which constitute the line of management and which carry successively higher levels of authority and status. In an Amazon fulfilment centre, each activity in the workflow is directed by a line manager, who is responsible for supervising the work of the team of people undertaking that activity. Each person in the work team occupies the same role in the production line and completes the same activity that is associated with that role; while each line manager reports to a more senior manager, who is responsible for supervising a larger section of the workflow, and so on.

To the extent that the process of work, as a whole, is structured both homoarchically and hierarchically, it becomes the way of working of a *social system of work*. When work is organised in this way, a type of social property emerges – the *power* to produce en masse. The magnitude of this power depends, not only on such factors as the way in which the process of work is organised (for example, the level of division of work processes), the amount of effort that each worker makes and their degree of skill, but also on the level of mechanisation – that is, on the extent to which tasks are completed by machines instead of by human beings. In some Amazon fulfilment centres, the practices of stowing and picking have been partially automated; that is, instead of the stower or picker pushing a cart along the aisles of the inventory, a robot

carries shelves of merchandise to the work station of the stower or picker. In this way, with multiple robots in operation simultaneously and their movements co-ordinated by a computer, the need for the exercise of labour power, to transport merchandise along the aisles of the warehouse, is eliminated and the speed of stowing and picking can be increased.

Similarly, by transporting merchandise through the space of the warehouse by mechanical conveyor or by robot, the need for the exercise of labour power, to transport merchandise from one area of the warehouse to another, is eliminated and the speed of the work process, as a whole, can be increased.

The introduction of machinery into a socially organised process of work presupposes the existence of relations, not only between work roles but also between the people who occupy these roles and the specific pieces of equipment that they use. How people relate to that equipment depends on the nature of the tasks that they must carry out. For example, a customer services assistant in an Amazon office may be required to use a computer to find a particular item of stock or to check a customer order; in this case, the person who occupies the role of customer services assistant is in control of the computer. By contrast, a picker in an Amazon warehouse must work at a speed that is determined by a software algorithm and that is communicated to the picker via a handheld device; in this case, the person who occupies the role of picker works under the control of the computer.

To the extent that there is a line of production intersecting with a line of management, the process of work, as a whole, will encompass, not only the processes constituting the line of production but also those constituting the line of management. Both sets of processes may be regarded as work because both are conditions for the production of a material object that satisfies a particular human need. However, the workers who occupy roles in the line of production and the workers who occupy roles in the line management relate to that object in different ways. The workers in the line of production are *directly* related to it because they are responsible for making the object, using the equipment and raw materials supplied to them. By contrast, workers in the line of management are *indirectly* related to it because they are responsible for supervising (a section of) the work process as a whole and are required to train, monitor, and discipline workers in the line of production (amongst other things).

Working Conditions

In this report, working conditions are defined as the physical and mental demands, and consequential risks to their wellbeing, that people experience in a context in which their work is organised through employment.

Employees understand the work-related demands that are imposed on them, and that

typically they experience as work-related pressures, as their employer's expectations regarding their working arrangements – such as the type, place, hours, pattern, and volume of work. They realise their employer's expectations, not only through engagement in a process of work but also through engagement in working relationships, by means of which the employer directs the work of the employee and ensures compliance with the rules of employment.

Therefore, the physical demands of employment are the demands on the human body that arise from the employee's engagement in the process of work, whereas the mental demands of employment are the demands on the human mind that arise from the employee's engagement in working relationships.

From this perspective, demands start to become excessive, when employees are expected to work in such a way that they cannot fulfil their human needs. In this situation, employees will experience strain and, if this situation persists, will become stressed, with the result that their wellbeing will deteriorate. Therefore, the risks to workers' wellbeing are the risks to their physical and mental health that are the consequence of the physical and mental demands of employment.

Labour

In this report, labour is defined as the exercise of labour power.⁵³⁴ Whereas the concept of work refers to a concrete activity, the concept of labour is an abstract understanding of this activity. Under capitalism, labour power is a commodity. The use of labour power is purchased by the class of capitalists and sold by the class of labourers. It is sold by the labourers to the capitalists because, having been deprived of access to the means of production in the transition from feudal to capitalist society, labourers have nothing else to sell but the use of their labour power, to survive; and their labour power is purchased by the capitalists because capitalists need to put labour power to use to produce commodities and make a profit to sustain themselves.

When labour power is in exercise, it generates exchange value, and the length of its exercise is a certain quantity of labour; hence, labour time is the measure of exchange value. The efficiency of production may vary, but the exchange value of a commodity is equal to the socially necessary labour time, on average, that is realised within it. Under capitalism, part of the labour that goes into the production of a commodity is necessary labour, or the quantity of labour which is necessary for the maintenance of the labourer. The value that is represented by this quantity of labour is necessary value, and the wage that the capitalist pays to a person for the use of their labour power is equal to it. In short, the wage is the price of labour power, or the monetary expression of the exchange value of labour power; and the exchange value of labour power is determined by the costs of its production (subsistence, education, training, etc.).

524. Karl Marx, 'Chapter Seven: The Labour-Process and the Process of Producing Surplus-Value,' in *Capital: A Critique of Political Economy, Volume One* (Moscow: Progress Publishers, 1887), <https://www.marxists.org/archive/marx/works/1867-c1/ch07.htm>.

However, another part of the labour that goes into the production of a commodity is surplus labour, the value of which is surplus value, and which is realised as profit by the capitalist, when the product of labour is sold.

By extending the length of time in which labour power is in exercise and by increasing the productive power of labour and thus reducing the quantity of necessary labour, the capitalist can generate a larger amount of surplus value, absolutely, in the former situation, and relatively, in the latter. It follows that wages and profits are inversely related, that the interests of capitalists and wage-labourers are opposed, and that capitalists and wage-labourers tend to be in conflict and struggle over the distribution of the product of labour. Hence, a capitalist state is required to oppress the class of wage-labourers, to prevent them from organising to resist the force of the capitalists and thus to ensure that there is always a supply of labour power ready for capitalists to exploit in their pursuit of profit.

Employment

In this report, the concept of employment refers to a particular way of organising work that involves wage labour – that is, the remuneration of work according to the value of the employee’s labour power, or capacity to work.

Employment is a distinguishing feature of the capitalist mode of production; other ways of organising work that have existed include serfdom, which is one of the distinguishing features of the feudal mode of production. Although employment is not the only way in which work can be organised under capitalism, because it is essential to capitalism, a capitalist society is a society that is dominated by employment relations.⁵³⁵

Employment is an emergent social entity: that is, it is constituted by the dialectical relation of employer to employee, and the distinctive properties (the rights and obligations) that pertain to these two roles, whether provided for by law or by mutual agreement between the parties. These rights and obligations are the *conditions of employment*.

Some conditions of employment are general and, as such, apply to all instances of employment, whereas others are specific and, as such, apply to particular instances of it. General conditions of employment are usually implicitly understood – for example, the requirement that

- the employee works under the control of the employer;
- the employer pays a wage or salary to the employee, while, in return, the employee provides services to the employer;
- the product of the work of the employee is the property of the employer.

By contrast, specific conditions of employment are usually explicitly stated because

⁵³⁵ In a capitalist society, work can be undertaken without employment. For example, childcare and housework are activities that are usually performed by members of the household, in the absence of employment.

they vary between jobs. These conditions include

- the length of the employment;
- the type, place, pattern, and hours of work;
- the line of responsibility;
- the period of notice of termination;
- the level of remuneration.

Note that employment determines a particular organisation of three distinct types of social structure: contract, social hierarchy, and private ownership. It is by virtue of their interconnection that the content of these social structures is modified:

- a contract, *in the abstract*, establishes a legally-binding agreement to exchange one thing for another; but, *in the context of employment*, a contract becomes an agreement, not only for the employer and employee to exchange money for work but also for the employee to work under the direction of the employer and for the employer to have exclusive possession of the work of the employee and the means of work of the employee – that is, it becomes a *contract of employment*;
- a social hierarchy, *in the abstract*, establishes the control of one person by another, on the basis of differences in authority and status; but, in the context of *employment*, a social hierarchy becomes the control by the employer of the work of the employee, where the employer has authority over, and higher status than, the employee – that is, it becomes a *social hierarchy of work*;
- private ownership, *in the abstract*, establishes exclusive possession of something; but, in the *context of employment*, private ownership becomes the exclusive possession, by the employer, of the work of the employee and the means of work of the employee (the tools, raw materials, etc.) – that is, it becomes *private ownership of the means of production*.

In short, each type of social structure co-determines the whole (the system of employment) while, at the same time, the particular organisation of the whole determines the content of each part (each type of social structure). This means that, in the context of employment, the social structures of contract, hierarchy, and private ownership are interdependent entities, as shown in Figure 3 below.

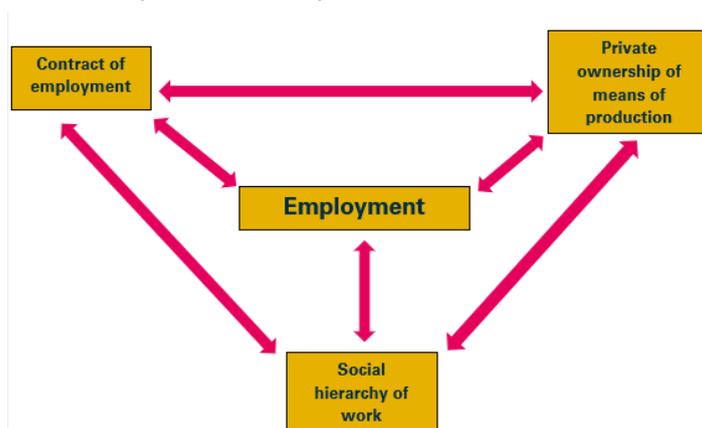


Figure 3: The Organisation of the Social System of Employment

If employment is a type of social system for the organisation of work, how does the dialectical relation of employer to employee relate to the process of work, when this process is organised both hierarchically and homoarchically – that is, when the social hierarchy of work is complex? The answer is that the system of employment is replicated at successive levels of the work hierarchy. What this means is that a person who, at one level, occupies a senior role in the work hierarchy is an employer, by virtue of their authority over a person in a junior role, but, at the next level of the hierarchy, occupies a junior role and is an employee, by virtue of the authority that a person in a more senior role has over them. Hence, in a complex work hierarchy one level of employment overlaps with the next level of employment, until the highest point is reached – the role of paramount or master employer. In short, the dialectical relation of employer to employee relates to the process of work through the principle of *concatenation*.

Appendix 3: The Process of Fulfilment

From our review of the published literature about working in Amazon's fulfilment centres, we developed a model of the process of fulfilment that we think resembles, most closely, the work process within Amazon's sortable fulfilment centres, although we expect the work process within the non-sortable fulfilment centres to be similar to it. Our model comprises twelve, distinct yet connected, work processes, each of which is defined, below.

1. *Docking* or unloading, which involves removing cargo (typically, boxes of merchandise which have been requested either from suppliers or from another Amazon warehouse) from the freight container of an inbound delivery vehicle.⁵³⁶

2. *Checking-in*, which involves

- registering each box of merchandise via the computer system;^{537, 538}
- unpacking the contents to check that the bar codes are scannable;^{539, 540}

536. It is usual for a single worker to remove boxes of merchandise from a freight container. Amazon asks its suppliers to send items of merchandise in boxes that are small enough for one person to carry; if boxes are too large, Amazon has to implement special handling requirements, which causes a delay to the process of unloading. See Amazon, 'How Amazon Receives Your Inventory,' Video, December 23, 2013, <https://www.youtube.com/watch?v=dAXdeqcHBp4>. Note that unloading is also referred to as *devanning*.

537. A worker scans the shipping label to make sure that a shipment identification for that box of merchandise is already in the computer system and that the box has been sent to the correct fulfilment centre. It is for this reason that Amazon asks its suppliers to fix the shipping label to a flat surface and to one side of the seam of a box, to reduce the likelihood of the label becoming damaged in transit or as the worker opens the box. If the shipping label is unscannable, the worker hands the box to an Amazon problem solver, and there is a delay to the checking process. See Amazon, 'How Amazon Receives Your Inventory,' Video, December 23, 2013, <https://www.youtube.com/watch?v=dAXdeqcHBp4>.

538. According to two reports in the mainstream media, the checking-in process has been mechanised; that is, after being unloaded, boxes of merchandise are put onto mechanical conveyors, which take them to a scanner that registers the seller's identification, the weight of the items, the dimensions of the box, and the order number. See Mary-Patton S. Davis, 'Behind Amazon's Well-Oiled Machine: How the "Everything Store" Ships Everything,' *MP is for Mary-Patton*, October 27, 2014, <http://mpisformarypatton.com/2014/10/behind-amazons-well-oiled-machine-how-the-everything-store-ships-everything/>, and Phillip Tracy, 'Case study: Amazon embraces shipping automation, robotics,' *RCR Wireless News*, July 8, 2016, <https://www.rcwireless.com/20160708/internet-of-things/amazon-automation-tag31-tag99>.

539. Having opened the box, the worker removes any packaging that the supplier has used. Amazon asks its suppliers not to use loose packaging, such as packing peanuts or shredded paper, because these have to be removed using a vacuum. To minimise delay, Amazon asks its suppliers to use foam, air pillows or full sheets of paper for packaging. See Amazon, 'How Amazon Receives Your Inventory,' Video, December 23, 2013, <https://www.youtube.com/watch?v=dAXdeqcHBp4>.

540. The worker checks that each item inside the box has only one scannable barcode. If the worker finds that it does not have a scannable barcode or has more than one barcode, the worker gives the box of items to a problem solver, who identifies the item by other means. Moreover, Amazon expects its suppliers to fix a bar code to each item of a case of items. A bar code only on the casing can lead to multiple items being received as a single unit. See Amazon, 'How Amazon Receives Your Inventory,' Video, December 23, 2013, <https://www.youtube.com/watch?v=dAXdeqcHBp4>.

- determining whether or not additional preparation is required.⁵⁴¹
3. *Preparation*, which involves ensuring that items which have not been properly prepared are protected from damage during storage and shipping to the customer.
 4. *Receiving*, which involves
 - checking each item of merchandise for signs of damage;⁵⁴²
 - verifying that the title of the item as it appears on the computer screen matches the item that has been scanned.⁵⁴³
 -
 5. *Stowing*, which involves re-stocking the inventory with items which have been received successfully by the warehouse.
 6. *Picking*, which involves retrieving, from the inventory, items which have been ordered by customers.⁵⁴⁴
 7. *Item sorting*, which involves arranging picked items into single and multiple orders.
 8. *Packing*, which involves putting into packaging items which have been picked to order.
 9. *Package checking*, which involves checking that the correct items have been packed.
 10. *Address labelling*, which involves printing the customer's name and address on a label and affixing the label to the package.
 11. *Package sorting*, which involves grouping packages by destination.
 12. *Shipping*, which involves fitting packages into the freight container of an outbound delivery vehicle.⁵⁴⁵

541. The worker decides whether or not any items of merchandise require additional preparation to ensure that they will not be damaged during storage or shipment to the customer. If the worker decides that additional preparation is required (perhaps because the supplier has not prepared fragile items properly), the worker writes the letter 'P' on the outside of the box and it is side-lined as requiring special handling. Additional preparation causes a delay to the completion of checking, which may be two hours or two days, depending on the amount of additional preparation that is required. If the items of merchandise do not require additional preparation, they are transported to the receive area, either by trolley or mechanical conveyor. See Amazon, 'How Amazon Receives Your Inventory,' Video, December 23, 2013, <https://www.youtube.com/watch?v=dAXdeqcHBp4>.

542. The worker performs a six-sided check of each item, to identify any signs of damage; see Amazon, 'How Amazon Receives Your Inventory,' Video, December 23, 2013, <https://www.youtube.com/watch?v=dAXdeqcHBp4>.

543. If the title of the item does not correspond to the item that the worker has scanned, the worker passes the item to an Amazon problem solver. If the title does correspond, the worker puts the item of merchandise into a tote, which is then conveyed mechanically to the stowing area; see Amazon, 'How Amazon Receives Your Inventory,' Video, December 23, 2013, <https://www.youtube.com/watch?v=dAXdeqcHBp4>.

544. Item sorting encompasses at least two distinct tasks: inducting and re-binning. Inducting involves removing an item from a yellow tote, scanning it, and putting it into a grey tray, which is carried away by a conveyor. The re-binner receives the tray, takes the item out of it, scans it, and puts it into the correct slot on a shelving rack, as indicated by a flashing light; in this way, the separate items of a multiple order can be brought together in preparation for packing. See Christoph Roser, 'The Inner Workings of Amazon Fulfillment Centers – Part 3,' *All About Lean*, November 5, 2019, <https://www.allaboutlean.com/amazon-fulfillment-3/>; Mary-Patton S. Davis, 'Behind Amazon's Well-Oiled Machine: How the "Everything Store" Ships Everything,' MP is for Mary-Patton, October 27, 2014, <http://mpisformarypatton.com/2014/10/behind-amazons-well-oiled-machine-how-the-everything-store-ships-everything/>; The Sugar Family, 'Working at Amazon Warehouse: Training Day and Work Expectations,' November 13, 2020, https://www.youtube.com/watch?v=mfKctyhTl_Y; and The Sugar Family, 'Working at Amazon Warehouse: Watch This Before You Apply,' December 15, 2020, https://www.youtube.com/watch?v=dSmVA3x8e8w&list=PL8Ja-dm83mgqj8B_cP4GtjMiRtn3k1nR9&index=6.

545. Shipping is also referred to as despatch.

Note that the range of checks carried out by workers at multiple stages of the process of fulfilment highlights the degree of human attention and judgement required, alongside mechanical elements of the work. Docking, checking-in, preparation, receiving, and stowing are parts of the inbound operation of a fulfilment centre, whereas picking, item sorting, packing, package checking, address labelling, package sorting, and shipping are parts of the outbound operation.

Note also that, owing to gaps in the published literature, more is known about some of these processes than others. For example, it is known that receivers, stowers, pickers, order sorters, and packers are expected to complete their tasks at a certain rate, measured as the number of items processed per hour. However, it is not known whether or not the performance of the other work processes is measured in the same way because there is much less publicly available information about these.⁵⁴⁶ There are also unanswered questions about how some of the processes are linked together. Alessandro Delfanti, for example, tells us that, once items of merchandise have been received, they ‘travel to the “stow” area, where they are grouped in bins workers carry into the “pick tower”’.⁵⁴⁷ However, it is not known who arranges the received items into groups or how this is done. It is possible that items to be stowed are arranged into groups on the basis of their size or another physical characteristic.

546. However, in a blog post that is based on an interview with two workers from the Brieselang fulfilment centre in Berlin, it is revealed that workers in shipping do not have to meet productivity targets; see Angry Workers of the World, ‘Welcome to the Jungle – Working and Struggling in Amazon Warehouses,’ International, December 20, 2015, <https://www.angryworkers.org/2015/12/20/welcome-to-the-jungle-working-and-struggling-in-amazon-warehouses/>.

547. Alessandro Delfanti, ‘Machinic Dispossession and Augmented Despotism: Digital Work in an Amazon Warehouse,’ *New Media & Society* 23, no. 1 (January 2019): 39-55, <https://journals.sagepub.com/doi/10.1177/1461444819891613>.

Appendix 4: Management Roles

The advertisement below, for the role of Operations Manager, was published on Amazon's website on October 14, 2020.⁵⁴⁸

Operations Manager

Job ID: 1308830 | Amazon UK Services Ltd.

Description

At Amazon, we pioneer.

We also treat every day just like it's day one. And we never sit still while we do it. Are you up for creating solutions and solving tomorrow's problems today?

Then we have the opportunity for you!

We're seeking an experienced, Operations Manager to join our Customer Fulfillment team. You'll operate out of one of our dynamic Fulfillment Centers: these sit at the heart of Amazon's world-class, rapidly growing business. They're where we manage our fast-moving inventory; they're also where we developed our smart, industry-leading workflows.

As an Operations Manager, you'll deliver inspiring, supportive leadership for the teams you manage. But at the same time, you don't shy away from rolling up your sleeves and getting involved whenever necessary.

You'll be directly responsible for managing a team of Area Managers and their direct reports: meanwhile, you will report to the Senior Operations Manager of your Fulfillment Center. The quality of your leadership is key to success in this role: you'll motivate and inspire your teams to do their best work, while planning schedules and activities that balance their needs with that of the business.

Another key aspect of your role will be to lead on numerous process improvement projects, with the aim of streamlining all activities, both for yourself and the team members you manage. The ideas, innovation and leaps out of the status quo that you come up with could very well be rolled out across the Amazon network: this immense opportunity is yours for the taking.

Job Description

Your role will be pivotal in the overall management, control, organisation and direction of either Outbound or Inbound operational areas of your FC. Your responsibilities will include, amongst others:

- Maintaining Health and Safety standards within your remit area, while promoting an inspiring Health and Safety culture on-site,
- Become a subject matter expert on specific, larger-scale processes and activities within FCs, such as 5S audits,
- In your inventory control and systems environment, you'll manage timely data collection, updating operations metrics on an hourly basis,
- Therefore, you'll aim to achieve productivity targets, reduce cost per unit, eliminate errors and ensure an excellent customer experience,
- Work closely with other support teams (HR, Finance, Facilities, Safety and Security, IT) on staffing plans, schedules and performance levels,
- Implement process change and contribute in cross-functional Six Sigma initiatives within your site and the broader Amazon EU Operations network.

548. Amazon Jobs, 'Operations Manager,' <https://www.amazon.jobs/en/jobs/1308830/operations-manager>. Amazon's Chesterfield fulfilment centre opened in 2019: Amazon Jobs, 'Chesterfield, UNITED KINGDOM,' <https://www.amazon.jobs/en/locations/Chesterfield-UK>.

The advertisement below, for the role of Senior Operations Manager, was published on Amazon's website on September 16, 2020.⁵⁴⁹

Senior Operations Manager

Job ID: 1275986 | Amazon UK Services Ltd.

Description

We're hiring a Senior Operations Manager. This leadership role is all about ensuring Fulfillment Center (FC) delivery is smooth and efficient. You'll be reporting to the General Manager, as you keep an eye on several critical areas of Fulfillment & Operations.

Across our growing presence, Fulfillment Centers sit within our wider Fulfillment & Operations network: they're the backbone of our global business, driving our innovative culture and growth. These environments are both highly stimulating and rewarding: you'll step into your Fulfillment Center by leading a team of Operations and Area Managers.

We'll expect you to proactively collaborate with the Operations and Area Managers you'll be directing. They'll require coaching and mentoring from you, to ensure that they, and the teams they manage, are able to meet performance objectives.

How you'll succeed:

The name of your game is to help tackle complex problems that affect Amazon's Operations and Customer Service. The teams you manage are always working to resolve just about any problem that arises during the customer journey. They'll need your input to aid them in thinking 'outside of the box'.

Together with them, you will aim to:

- Continuously improve the efficiency of operations and delivery processes,
- Instill a culture of customer obsession, aiming for excellent customer service,
- Maintain high standards of operations Health & Safety,
- Inspire and reward an atmosphere of best practice sharing among employees.

More day-to-day responsibilities:

- Proactive, constructive engagement with Delivery Service Providers,
- You'll need to monitor the delivery metrics and performance of more than 2000 Associates,
- You'll oversee plans for employees, schedules, quality initiatives, process change initiatives, in order to help FCs achieve year-on-year improvements,
- You'll manage a large team (typically 2,000+): this workforce will consist of both permanent and temporary employees,
- Via our People Agenda, you'll create, build up, lead and inspire your workforce to deliver improved performance levels. Part of this will include paying attention to:
 - The safety of our team members,
 - Employee engagement,
 - Performance leadership,
 - Talent & succession management
 - Training & development

549. The job advertisement refers to a 'Virtual Location' for the role: Amazon Jobs, 'Senior Operations Manager,' <https://www.amazon.jobs/en/jobs/1275986/senior-operations-manager>.

The advertisement below, for the role of Director of Plant Operations, was published on Amazon's website on November 9, 2020.⁵⁴⁰

Director Plant Operations

Job ID: 1340714 | Amazon UK Services Ltd.

Description

We are hiring a General Manager of Operations who will lead people, process and systems at our Fulfillment Center that deliver important products to our customers as promised. This role is challenging and appeals to people who have a pioneering spirit and founder's mentality.

Across our growing presence, Fulfillment Centers are the backbone of our global business, driving our innovative culture and growth. The Fulfillment Center General Manager serves as the face of the organization to thousands of employees and the entire community where the center is located. Our corporate leadership depend upon the fulfillment centers to deliver the ultimate in customer experience and satisfaction, and it is a role that is taken extremely seriously throughout the company.

Reporting to the Regional Director Operations, you will drive delivery of all targeted business plan metrics across productivity, quality, cost, safety and people at your site in pursuit of our customer promise. You will create and build upon operational plans, drive a mind-set and culture of continuous improvement through Kaizen and Lean initiatives and sustain a culture of learning and development. At an individual level you will contribute to site, regional and global initiatives, tackling complex problems that affect customers and work to resolve them with innovative solutions.

The extent of your duties will include but not be limited to:

- Leading an Amazon Fulfillment Center by managing in-house logistics as well as the internal interfaces to vendors and carriers.
- Lead delivery of all targeted Business Plan metrics across productivity, quality, cost, safety and people.
- Maintain health and safety standards within area and promote a positive health and safety culture on site.
- Lead and drive staff planning, schedules, quality initiatives, process change initiatives, and other ACES/Six Sigma initiatives to enable Operations and ultimately the FC to attain Amazon's Business Plan.
- Manage a team of 2000+ employees within a demanding, fast-paced/time-critical and multiple product line environments.
- Lead a cross disciplinary team to regularly review manager performance levels to continuously improve strategies.
- Carry out leadership responsibilities in accordance with the organizations policies and procedures.
- Maintain a complete leadership overview and thorough understanding of inventory in a multi-product automated environment.
- Implement change and/or develop new processes as required to provide ability to better direct ship multiple products to multiple locations and geographies.
- Continuously measure and evaluate the departmental goals and all work processes.
- Set and clarify requirements and expectations for all cross functional direct reports.
- Leverage off Operations, Area Managers, and Team Leaders to source and nurture ideas and roll them into the creation of improvement plans for the site.
- Take proactive steps to ensure that best practices are shared across all departments and the wider Amazon network.
- Work effectively with support staff (HR, Financial Manager, Safety & Loss Prevention Manager, IT Manager and Engineering) to build and secure support and resources for projects and initiatives.
- A successful leader can expect a robust Amazon career trajectory, including: regional leadership, global opportunities and corporate roles that match their skills and interests.

540. Amazon Jobs, 'Director Plant Operations,' <https://www.amazon.jobs/en/jobs/1340714/director-plant-operations>.

Work Futures Research Group

The rapidly changing world of work has been highlighted as an urgent concern by government, academics, and numerous professional bodies. The Work Futures Research Group builds on and consolidates areas of strength across the School of Social Sciences that are addressing some of the most challenging issues these changes present.

The group takes a distinctive approach in that it encompasses the wider social, economic, political, and organisational contexts in which work takes place and connects the study of work to the development of innovative work practices and healthy workplaces.

For more information visit:

<https://bit.ly/NTUWorkFutures>

Contact Dr Dominic Holland and Dr Tom Vickers for further information about this report: dominic.holland@ntu.ac.uk — tom.vickers@ntu.ac.uk

