

Inquiry An Interdisciplinary Journal of Philosophy

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/sinq20

Collective action, work, and partial plans

Joshua Habgood-Coote

To cite this article: Joshua Habgood-Coote (30 Mar 2025): Collective action, work, and partial plans, Inquiry, DOI: 10.1080/0020174X.2025.2478895

To link to this article: https://doi.org/10.1080/0020174X.2025.2478895

d

INQUIRY

R Routledg

© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 30 Mar 2025.



Submit your article to this journal 🕑

Article views: 125



View related articles 🗹



View Crossmark data 🗹



OPEN ACCESS Check for updates

Collective action, work, and partial plans

Joshua Habgood-Coote

School of Philosophy, Religion, and History of Science, University of Leeds, Leeds, UK

ABSTRACT

Philosophers of action have for the most part ignored work as a case of collective action. Michael Bratman's distinction between shared co-operative activity and prepackaged co-operation goes further, claiming that any kind of co-operation involving a division of labour is at best an attenuated form of collective action. This paper uses Bratman's discussion to lays the groundwork for thinking about work as a genuine form of collective action. Connecting the Marxian economist Harry Braverman's account of the division of labour in Taylorised work and the idea that plans come at different degrees of granularity, I argue that the distinction between flexible co-operation and inflexible preplanned collective action is analogous to the distinction between fine-grained and coarsegrained partial plans in the individual case. Rethinking the difference between co-operative activity and activity characterised by the division of labour opens up the possibility of thinking about work involving a division of labour as a distinctive kind of collective action, involving centralised, front-loaded, and fine-grained planning, and helps us to get clear on the harms of Taylorised and hence deskilled work.

ARTICLE HISTORY Received 16 January 2025; Accepted 9 March 2025

KEYWORDS Collective action; planning theory; taylorisation; deskilling; practical knowledge; ethics of work

Work, in today's society, is a mystery. No other realm of social existence is so obscured in mist, so zealously concealed from view ('no admittance except on business') by the prevailing ideology. (John Bellamy Foster, New Introduction to *Labor and Monopoly Capital*)

In his work on collective action, Michael Bratman draws a distinction between shared co-operative activity and prepackaged co-operation.¹ He takes shared co-operative activity as the central case of collective action. Examples include two people painting a room together, and

CONTACT Joshua Habgood-Coote i j.habgood-coote@leeds.ac.ukx Debtany House, Leeds University, Leeds, LS29JT, UK

¹This terminology comes from Bratman (1992), but it tracks the later discussion in Bratman (2014).

^{© 2025} The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

two musicians singing a duet. According to Bratman's account, in a case of shared co-operative activity, the various participants each have; (a) intentions in favour of the shared activity, together with a complex of interlocking and mutually referential intentions, (b) beliefs that if their intentions persist they will pull off the joint activity and that their intentions depend on one another for their persistence, (c) intentions in favour of the shared activity which depend on one another for their persistence, and (d) common knowledge of the fulfilment of a–c. Bratman argues that these conditions suffice for the existence of a *shared intention*, but not for shared co-operative activity (Bratman 1992, 338–339; 2014, 78–84).

Bratman argues that it is possible to have joint activity and a shared intention in favour of that activity, without the appropriate connection between the two required for shared co-operative activity. His examples are two divers who synchronise their dives by practice, and two explorers who agree on a plan to explore an area whereby they set out on separate expeditions. In these cases, the participants coordinate their activities by means of a prior plan, without the need for mutual responsiveness through their activity. Bratman's thinks that this means their shared intention and joint activity are not appropriately connected. He likens prepackaged cooperation to *ballistic actions* which lack responsiveness beyond the initial stage: a person pushing a boat down a slipway, or throwing a bowling ball towards the pins.

On the basis of these examples, Bratman proposes to differentiate prepackaged co-operation from shared co-operative activity, adding an extra condition to his account of the latter:

e) *Mutual responsiveness condition*: our shared intention to J leads to our J-ing by way of public mutual responsiveness in sub-intention and action that tracks the end intended by each of the joint activity by way of the intentions of each in favor of that activity.

This condition is meant to screen off cases in which a joint activity is guided by a preprepared plan which has no need for mutual responsiveness between participants, meaning that each can fill in their relevant bit by themselves. These cases constitute an 'attenuated' form of shared agency (Bratman 2014, 82) and are placed outwith the central cases of shared co-operative activity.

In this paper, I want to argue that screening off cases of prepackaged co-operation is a mistake which radically impoverishes our understanding of collective action, creating an ideal theory of human sociality (Mills 2005). I will develop two worries.

The first worry is that screening off cases of prepackaged co-operation excludes an important feature of collective action: *the division of labour*. Although there are some cases in which a division of labour is combined with mutual responsiveness, part of the point of the division of labour is to replace complex responsiveness with a plan that chunks up tasks in a such a way that agents do not need to interact with one another. This lacuna is particularly striking since under capitalism, the dominant form of collective action is work, and – as we shall see – the central feature of work under capitalism since the twentieth century is the division of labour (Braverman [1974] 1998).

The second worry is that there is simply no sharp distinction between shared co-operative activity and prepackaged co-operation. Reconsidering the structure of individual action suggests that the right analogy for prepackaged co-operation is not *ballistic action*, but rather a particular kind of partial plan which has been filled in ahead of time. If prepackaged co-operation is the analogue of a filled-in partial plan, we are not dealing with a distinction between two kinds of collective action, but with a spectrum of cases in which collective plans are increasingly filled-in ahead of time. The task is not to offer an autonomous account of prepackaged cooperation, but to develop an integrated account of collective actions involving plans which are more or less filled-in.

A number of writers have pressed the worry that Bratman's focus on modest sociality means that his account will struggle to account for larger-scale collective action (Habgood-Coote 2020; Kutz 2000; Shapiro 2014). Although I am sympathetic to these concerns, they will not be our focus. Prepackaged cooperation and the division of labour are not a phenomenon of scale: Bratman's examples of prepackaged co-operation involve two people (see also Kutz 2000, 18), and one person can engage in a diachronic division of labour with herself. The concern is that Bratman has gerrymandered the target of analysis for an account of collective action even in cases of modest sociality in a way fails to account for the division of labour, entails that work is not a kind of collective action, and obscures continuities between individual and collective action.² My hope is that bringing the planning theory into contact with accounts of the sociological structure of work can correct this target, allowing us to get a clearer picture of the planning structures involved in work under capitalism.

The plan of action is as follows. In the first section, we will lay the groundwork in the individual case, supplementing Bratman's planning

²In recent work, Bratman has begun to develop an account of institutional action (Bratman 2022). While this account has some useful resources for the application of the planning theory to collective action, it doesn't directly address the importance of the division of labour.

theory with an account of what it means to have a more or less filled-in plan, and when different kinds of planning might be appropriate. In the second section, we turn to the role of the division of labour in collective action, drawing on Harry Braverman's account of degraded work, which he argues is the apotheosis of the division of labour. In the third section, we put these two parts together, arguing that the division of labour and degraded work are not novel phenomena at the collective level, but are continuous with planning features of individual agency.

1. Partial plans

Bratman's planning theory – initially developed in *Intention, Plans, and Practical Reason* (Bratman 1987) – starts with two ideas about human psychology. First: we are cognitively limited agents for whom deliberation is a significant cognitive cost. Secondly: we are social agents who need to be able to co-ordinate with one another and do things together. Bratman argues that this pair of needs generates a distinctive state of intention which cannot be reduces to belief and desire.³ Bratman highlights two features of intentions. Intentions are *settling attitudes* which draw deliberation to a close and are resistant to reconsideration. And intentions are *partial* plans which provide only some of the details about how an end is to be reached, leaving open some issues to be resolved on the fly. When I form an intention about what to have for dinner, I settle the question of what we are going to eat, while leaving open how I will make it, what time we will eat, and so on.

This combination of settledness and partialness helps to manage our cognitive limitations and co-ordinate with other people. The ability to draw practical deliberation to a close prevents us from wasting our cognitive effort in constant reconsideration (Bratman 1987, 28), and helps us to shape our activity in a way that is easily predictable by other people (see Holton 2014, 13–14). Many of us have *flaky* friends, who fail to plan and tend to fall through at the last minute (Hawley 2016, 2019, 80–81). Part of the reason flakiness is so annoying is that it is cognitively demanding. When you make plans with a flaky person you have to include backups in case they fall through or show up late. Over time, it might become unwise to make any plans that depend on a flaky friend. The

³I am tempted to think about Bratman as implicitly employing something like a conceptual genealogy in which our practical needs as cognitively limited social doers shape the way we talk about think about intention, much as for Edward Craig, our needs as informationally limited social thinkers shapes the way we talk and think about knowledge (Craig 1990).

ability to form partial plans also allows us to simplify our planning by putting off resolving practical questions until relevant evidence comes in (Bratman 1987, 31) and allows us to distribute our deliberative energies across time. At the same time, the partialness of plans helps us to co-ordinate by leaving open space to adjust for other peoples' plans. If I plan to cook fish and chips for 7 on the dot, and I find out my partner is going to be out until 8, I will have to drop my plan. But if I simply plan to cook them dinner, I will be easily able to integrate their planning into my own.

In *Intentions, Plans, and Practical Reason* Bratman is more concerned with norms of consistency and means-ends coherence, but in a suggestive remark he addresses the granularity of plans:

Of course, means-end coherence does not require that my plans specify what I am to do down to the last physical detail. Rather, my plans will typically be at a level of abstraction appropriate to my habits and skills. (Bratman 1987, 31)

To unpack this, we will need to have a way to think about the granularity of plans, and an account of how 'habits and skills' ought to figure in our planning.

To think about the granularity of partial plans, we can follow Snedegar (2019) in thinking about partial plans as *question-directed*. When Bratman introduces the idea of a partial plan we get a string of interrogatives:

Suppose I decide this morning to go to a concert tonight. I do not settle all at once on a complete plan for the evening. Rather, I decide now to go to a concert, and leave til later deliberation about *which* concert to go to, *how* to get tickets, *how* to get to the concert in ways consistent with my other plans, and *what* to do during intermission. (Bratman 1987, 29, italics added)

Settling the question of what to do by deciding to go to a concert raises⁴ further questions which must be resolved if Michael is to successfully get to his concert, avoid messing up other plans, and meet his background goals (such as the desire to not be bored). We can think about each of these questions as a set of alternative courses of action. For example, *what to do?* might correspond to {go to concert; mark papers; go for a walk}, and *which concert to go to?* might correspond to {see Atlantic star; see the Beastie Boys; see Chicago}. The initial decision about what to do is not a complete answer to the question of what to do: it raises further other questions which must be resolved in turn.⁵

⁴How to understand raising is a slightly complicated issue. One can either think about it as involving the remaining subquestions of *what exactly to do?* which haven't been answered by the initial decision (borrowing Craige Roberts' notion of a subquestion Roberts 2012, 6:6–6:7), or one can think about it as an instance of question evocation (in the sense explicated by Wiśniewski (1995; 2003)).

If we think about partial plans as question-directed, we can then think about how fine-grained someone's plan is in terms of how many of the questions raised by her plan she has answered.⁶ If Michael decides to go to a concert, and swiftly forms the plan to see the city orchestra, to buy tickets on the door, to travel on the bus from work, and to get ice cream in the intermission, he will have formed a fine-grained plan. If Michael decides to go to a concert but leaves all of these questions open, he will have formed a coarse-grained plan. The granularity of a partial plan is a scalar phenomenon – one plan can be more or less fine-grained than another, and plans will become more fine-grained over time - but the cases of maximally filled-in and maximally open plans are limit cases. There will always be issues that have to be resolved as one goes along (if Michael chooses to walk to the concert, he won't decide whether to start on his right or left leg) (Bratman 1987, 31) and background commitments will limit the space of options (going to a concert on the Moon is not an option for Michael).

Leaving open a question in a partial plan involves a distinctive kind of self-trust. By leaving a part of a plan open, you rely on yourself to have the skill and judgement requires to fill it in when the time comes. Leaving open a part of a plan can save on cognitive labour. This is the point that Bratman is making in the passage above: if Michael has a habit of walking a particular way to the Tanner library, and he knows how to walk and avoid people and other obstacles, he doesn't need to invest resources in planning which way to go, or how to deal with contingencies on the way: he can work things out on the fly.⁷ We can rely on our knowhow to make up for sketchy planning. But, just as in the interpersonal case, self-trust can be misplaced when it isn't accompanied by competence (Hawley 2019). Leaving open a how-to question without knowing how to bring off that activity is rationally criticisable, and generates a significant risk that one will fail to pull off the overall plan. Habgood-Coote

⁵As I will think about things, forming an intention to do something generates a commitment to answer the question of how to do it, which is in turn split up into a series of smaller subquestions. Some of these subquestions will interact with other commitments and desires, and are not strictly means-ends questions (doing something during the intermission is not a necessary condition for going to a concert).

⁶More precisely we should say how much of the question of how to do it she has resolved, since some questions will be more consequential to a plan than others (deciding on means of transportation will matter more to what you do at the concert than deciding whether to wear a blue or white t-shirt). In this sense, how much of a question one has answered is a matter of how many complete answers to it one has ruled out (see Habgood-Coote 2022).

⁷How much cognitive effort one needs to invest also depends on the environment: someone who uses a wheelchair in an environment with poor accessibility will have far fewer options for successfully getting about, and will have to invest significant amounts of cognitive labour to avoid failure in everyday tasks.

(2018) gets at this idea by arguing that there is a knowledge-how norm on the open parts of a partial plan:

KNI-PP: One must: intend to V, leaving open a set of how-to issues {how to V1, how to V2, ... how to Vn} only if, for all of the open how-to issues in that set one knows how to perform those tasks.

Notice that this norm is indexed to how many how-to questions are open in a partial plan. If one leaves open a lot of questions (perhaps better: if one leaves open a lot of the question of how to V), one needs a lot of know-how and if one leaves open only a few (better: a little), one need comparatively less knowledge.

The combination of cognitive limitations and self-trust means that the granularity of our planning is subject to two opposing impulses: we want to keep our plans coarse-grained to avoid investing unnecessary cognitive resources, whilst making sure that we don't leave open questions which we aren't competent to answers.

The connection between knowledge-how and partial plans means that people who know more or less about how to do something (Pavese 2017) will plan in importantly different ways.

People with a lot of know-how don't need to plan ahead of time. An experienced cook making a dish which isn't unreasonably complicated will not need to form a detailed plan before they start cooking. They can rely on their habits, their knowledge how to perform a range of cooking tasks, and their skills of judgement to fill in the details of their plan as they go along. This kind of fluid and skilful exercise of knowledge in on-the-fly deliberation can be pleasurable for the cook, and for anyone who happens to be watching her. By contrast, a novice cook will have to form a detailed plan before they start. They will have to think about what ingredients they need and get them ready on the countertop, run through the steps of the recipe in their head before they start, and may form a sequential plan for the steps. At least part of the reason why cooking may be a chore for the novice chef is that she must invest large amounts of deliberative resources.

These styles of planning are reflected in the way recipes are written for novice and experienced cooks.⁸ Recipes for beginner cooks have lots of details about quantities, cooking techniques, and include notes about

⁸A number of writers have stressed that written recipes are always incomplete, and successful cooking brings together a recipe with a cook's skills, their knowledge how to perform particular steps, and their awareness of a culinary tradition (See Borghini 2015, 730, 732–733; Cleland 2001, 222; Fox 2020). There is an interesting history to be told about how greater detail in recipes reflects changes in the knowledge expected of home cooks.

8 🍝 J. HABGOOD-COOTE

correcting for errors. A detailed plan in effect outsources the cognitive effort of cooking, replacing the effort of forming a fine-grained plan ahead of time with the simpler task of *following the recipe*. By contrast, recipes for experienced cooks will often have scant details, assume that cooks know how to successfully carry out fairly complex tasks, and will be able to adjust to unexpected contingencies (think of the technical challenges in the Great British Bake Off).

People who know how to perform an activity can still form very finegrained plans, if they need to pull off an activity to a particularly high standard, or in a specified time. A cook in a commercial kitchen will be working to a well-defined plan set by the head chef, and an experienced home cook will write themselves a plan when they cook a Christmas dinner. More knowledgeable agents *may* form coarse- or fine-grained plans depending on the needs of the situation, whereas less knowledgeable agents may only form a fine-grained plan.

Why does forming a more fine-grained plan require less knowledge? First, fine-graining a plan breaks down complex questions into simpler questions. If you plan to make a roux, you better know how to make a roux, but if you plan to heat the pan, add a cup of butter, melt the butter and so on, you only need to know how to do these simpler activities. Secondly, fine-graining a plan often simplifies the task to be performed. If you form a plan to cook *coq au vin* following a standard recipe, you won't have to deal with any number of problems that might be caused by freestyling the dish.

In this section, we've laid the groundwork to thinking about the range of plans that can be involved in collective activity. We've set out the core idea of the planning theory that intentions answer to our needs as cognitively limited social agents, and built on Bratman's picture by filling in a picture of the granularity of partial plans, arguing (i) that we can think about the granularity of partial plans in terms of how many of the questions raised by an intention have been answered, and (ii) that there are connections between knowledge and planning which lead to importantly different styles of planning.

2. Work and the division of labour

With an account of the fine-grainedness of plans on the table, we can turn to the analysis of the division of labour. Our guide to the division of labour in work will be the Marxian political economist, Harry Braverman. In *Labor* and Monopoly Capital, Braverman argues that through the twentieth century, there is a tendency for work to become increasingly degraded, and that this trend arises from the application of the principle of the division of labour to work. Although the significance of the division of labour was recognised by Adam Smith and Charles Babbage, Braverman argues that it reached its final form in the work of the management consultant Frederick Winslow Taylor. Starting with Taylor's work in manufacturing in the late nineteenth and early twentieth century (Taylor 1911), Braverman traces the progress of scientific management through the twentieth century, and into new fields of work (including office work and the service sector ([1974] 1998, C15 & 16)).

For Braverman, degradation is not an essential or general feature of work under a capitalist system. It is a particular kind of work which emerges under capitalism through the unrestricted application of efficiency considerations to the interests of management. New kinds of work might take some time to become degraded or might bring together tasks to reverse degradation ([1974] 1998, 227), and there might various constraints on degradation. Nonetheless, Braverman claims that over time, work tends to become less valuable to workers. Braverman deploys a wealth of sociological, ethnographic, and personal evidence for this historical claim. However, for our purposes we won't need to rely on general claims about trends in work: we only need to assert that some actual work fits Braverman's model of degraded work.

2.1. A genealogy of the division of labour

One way into thinking about degraded work is through the history of the division of labour, which highlights the way in which this idea has come to be deployed in increasingly extreme ways.

In the *Wealth of Nations*, Adam Smith draws on the description of pinmakers in Diderot and D'Alembert's *Encylopedie* (1776, 25:5:1–25:6:1) to argue that breaking down the tasks assigned to workers into smaller parts allows the whole task to be performed more efficiently. Smith claims that efficiency increases are due to increases in workers' dexterity, from obviating the need to switch tasks, and from the inventions of machines to 'facilitate and abridge labour' (Smith 1776). Although Smith was interpreted as a proponent of factory manufacture (most notably by Babbage), the historian Lorraine Daston argues that in the context of the *Encylopedie* pinmaking was a craft process (Daston 1994, 197–198). Smith seems to have thought about the division of labour as a part of craft production, in which workers would have considerable autonomy: for example, he suggests that machines to abridge labour would be invented by workers.

Smith's ideas swiftly returned across the channel, where they were deployed by the French mathematician Gaspard de Prony. Tasked by the post-revolutionary government with producing tables of logarithmic and trigonometric tables, Prony concocted a plan to apply the division of labour to calculation (Daston 1994, 2018; Grattan-Guinness 1990; Grier 2005, 34–37; Lefort and Prony 1858). Aiming to 'manufacture logarithms as easily as one manufactures pins' (Prony, quoted in Babbage 1835, 193), Prony and a team of mathematicians split the calculations which would normally be carried out by highly knowledgeable savants up into repeated operations of addition and subtraction. They employed a second layer of algebraicists who used general formulae to deduce the initial numbers, and then employed a third group of somewhere from sixty to ninety people to actually carry out the operations. The exact identity of these workers remains somewhat of a mystery. Prony hints that they were political refugees, and according to legend some were ex-hairdressers to the French aristocracy (Daston 1994, 190 fn 22). What is not in contention is that these workers had extremely limited mathematical education, perhaps restricted to the functions of addition and subtraction. Although the tables were completed, they were never published. The main significance of the project was symbolic. It transformed from the highest operation of the human mind into a manufacturing process carried out by savants into a quasi-mechanical process which employed non-specialists (Daston 1994).

As Smith inspired Prony, Prony influenced Babbage, who took the tables project to demonstrate the possibility of applying the principle of the division of labour to mental activities (Babbage 1835, CXIX). Prony's project (and the method of differences he employed) was a direct inspiration for Babbage's plans for the difference engine. For Babbage, the model for the division of labour is the factory: he presents Prony as 'a skilful person about to construct a cotton or silk-mill', and likens the third section of workers ('which may almost be termed mechanical') to machines (Babbage 1835, 157).

Babbage uses Prony's project as evidence for a general principle about the organisation of labour (which Braverman calls *the Babbage Principle*). This principle states that:

That the effect of the *division of labour*, both in mechanical processes and in mental processes, is, that it enables us to purchase and apply to each process

precisely that quantity of skill and knowledge which is required for it. (Babbage 1835, 162)

This principle would become increasingly important as the possibilities of mechanisation increased through the nineteenth century. In its application, the Babbage principle has an intimate relation with social hierarchies: allowing skilled white men to be replaced by less skilled women, children and racialised minorities, whose low social status was taken as further evidence that the work in question required no skill whatsoever. It is no accident that from the advent of large-scale human computing, computers were young boys, white women, and Black women.⁹

In Braverman's view, the definitive statement of the value of the division of labour in the capitalist workplace comes in the writing of the early management consultant Frederick Winslow Taylor (Taylor 1911), which Braverman presents as 'nothing less than the explicit verbalisation of the capitalist mode of production' ([1974] 1998, 60). Taylor is famous (along with Frank and Lillian Gilbreth) for introducing scientific management: the systematic study of workers' activity, with an eve to how it can be made more efficient.¹⁰ Taylor developed his approach working as a supervisor in steel production. He guickly realised that workers were not performing tasks as guickly as they could and were 'soldiering' to conceal from management how guickly a task could be perfumed (Braverman [1974] 1998, 64–75). He viewed the relation between workers and management as antagonistic, with workers' knowledge of the labour enabling them to perform tasks badly or slowly, and to pass off machine breaking as accidents.¹¹ In order to transfer the balance of power to management, Taylor proposes an appropriation of both knowledge and control of the labour process.

In Braverman's view, Taylorist scientific management involves three stages of the transformation of work ([1974] 1998, 77–83).

The first stage is the dissociation of the labour process from the skills of workers. This takes place via the systematic study of work, aimed at understanding how much workers can do, how tasks can be performed more efficiently. The 'scientific' veneer of this process is what earns Taylor's approach the moniker *scientific management*. Taylor presents

⁹See (respectively) the descriptions of the Greenwich observatory, the Harvard college observatory, and NASA in Grier (2005).

¹⁰Taylor's approach to efficiency optimised for speed, whereas the Gilbreths optimised for simplicity of movement, which they decomposed into 18 basic movements called 'thebligs' ([1974] 1998, 120–124).

¹¹On the politics of machine breaking, see Mueller (2021).

12 😉 J. HABGOOD-COOTE

this study as transforming practical knowledge into a standardised and theoretical form:

The managers assume the burden of gathering together all of the traditional knowledge which in the past has been possessed by the workmen and then classifying, tabulating and reducing this knowledge to rules, laws, and formulae. (Taylor 1911, 36)

This transformation has the effect of both evening the balance of knowledge between worker and manager, and of making the workplace and labour process surveyable by management (see Scott 1998, C9).

The second stage of Taylorism involves the separation of conception from execution. Taylor is typically blunt:

All possible brain work should be removed from the shop and centred in the planning or laying-out department. (Taylor 1903, 30–31)

This process involves a drastic limiting of workers' autonomy:

Both in order to ensure management control and to cheapen the worker, conception and execution must be rendered separate spheres of work, and for this purpose, the duty of work processes must be reserved to managers and kept from workers, to whom its results are communicated only in the form of simplified job tasks governed by simplified instructions. (Braverman [1974] 1998, 81)

The cheapening of the worker can take a variety of forms, and involves both employing workers who are less skilled and obfuscating workers' contributions to make them appear less valuable than they are. In its more extreme moments, cheapening slides into dehumanisation. Taylor presents a model worker as an Ox (Braverman [1974] 1998, 75), and explicitly deploys racialised hierarchies to devalue workers.¹²

The third stage of the Taylorist transformation combines the first two, and involves management using 'this monopoly over knowledge to control each step of the labor process and its mode of execution' (Braverman [1974] 1998, 82). This step replaces workers' autonomous control over their work, with 'systematic pre-planning'. Taylor describes the output of this process as follows:

¹²In Shop Management (published in 1903) Taylor celebrates the effects of scientific manangement by stating that 'the type of man who was formerly a day labourer and digging dirt is now for instance making shoes in a shoe factory. The dirt handling is done by Italians or Hungarians' (quoted in Braverman [1974] 1998, 89). For context: In 1911 the Dillingham commission in the US would deploy a eugenicist and anti-Catholic version of this racial hierarchy to justify restrictions on immigration for Southern and Eastern Europeans. Roediger and Esch (2012) argue that scientific management had an ambivalent attitude to race, avoiding the explicit endorsement of scientific racism, while implicitly endorsing 'racial knowledge' when expedient. On racial platform capitalism, see Gebrial (2024).

The work of every workman is fully planned out by the management at least one day in advance, and each man receives in most cases complete written instructions, describing in detail the task which he is to accomplish, as well as the means which are to used in doing the work. (Braverman [1974] 1998, 82)

The centralisation of control means that management can both plan out work in a way that furthers their interests, and can ensure that workers follow their plan. These systems can take a number of forms: plans for the division of labour (Braverman [1974] 1998, 101–103), the employment of technology which constrains the way work is carried out (consider how the assembly line determines the pace of work (Braverman [1974] 1998, 101–102, 160)), and the employment of workers who not know enough to do a bad job (Braverman [1974] 1998, 218–222).¹³ The efficiency gains associated with this extensive pre-planning arise from a combination of the Smithian benefits of the division of labour, and the Taylorist focus on maximising efficiency and increasing the pace of work.

2.2. Degraded work

Braverman argues that the unconstrained application of Taylorist principles to work has profound effects on both work and workers. By applying the division of the labour to the activities of planning and execution, Taylorisation allows managers to purchase a cheaper, smaller, and less knowledgeable workforce, in line with the Babbage principle. This workforce is divided into two classes: clerical and scientific workers who plan, and unskilled workers who execute. Skilled workers are either laid off, are consolidated into clerical roles, or take on less demanding work. For workers who follow detailed instructions, work becomes tedious, repetitive, nerve-wrecking, and mind-numbing. Work becomes degraded.

While it removes the opportunity for the exercise of traditional skills, monotonous work is not completely unskilled. Daston observes that human computers needed to develop prodigious skills of concentration to repeatedly perform rote tasks (Daston 2018, 22–26). Borrowing a term from Gregory and Sadowski (2021), we might suggest that Taylorism promotes *perverse virtues*: traits which are useful from the point of view of workplace efficiency, whilst actively undermining the well-being of workers.

¹³In metaphysics theta, Aristotle observes that skills can produce both good and bad effects ('the medical art can produce both disease and health' 1046b), suggesting that one way to prevent workers from doing a bad job is to employ those who aren't skilled enough to intentionally produce bad effects.

Taylorisation also has profound epistemic consequences, leading to polarisation of knowledge, and the deskilling of workers. There are three connected phenomena to untangle in Braverman's discussion.

The first is the polarisation of knowledge (Braverman [1974] 1998, 266, 294) that occurs when managers appropriate the practical skills of workers and transform them into a 'scientific' form.¹⁴ This is a kind of redistribution of knowledge: roughly the same body of knowledge (with the addition of the lessons of time and motion studies) is distributed between people in a more unequal way.

The second is the simplification of tasks. By standardising and systematising work, we can simplify it, and make it require less knowledge. When clothing manufacture shifted from tailoring and made-to measure to ready-to-wear, the task of making clothes became simpler, and the knowledge required of tailors diminished as a consequence.

The third is rationalisation. The ability to purchase exactly the labour power required for a task makes general knowledge surplus to requirements. Just by implementing a division of labour, management can replace a group of generalists with people who have only been trained to perform their parts of a work process.

The combination of polarisation, simplification, and rationalisation mean that Taylorism will often involve both a more unequal distribution of knowledge in the workplace, and a reduction in the total amount of knowledge required by tasks, meaning that workers are deskilled by scientific managent.

The deskilling of workers has a couple of important consequences for the social life of skill. The replacement of complex workplace tasks with simpler ones can remove the incentives to gain complex skills to gain employment, and undermine the institutions which maintain crafts. Braverman explores worries about the uninvention of numerous crafts – including cooking, agriculture, and metalworking – by the application of the principle of the division of labour to these fields.¹⁵ The deskilling of workers can also lead to semantic shifts in the distinctions between 'skilled', 'unskilled', and 'semiskilled' activities, whereby which workers are classified as skilled expands and contract to meet the needs of mangement (Braverman [1974] 1998, 294–310). Combined with false beliefs about the character of work, we get radical confusion about what work is skilled. For example, through the 1950s and 1960s in the United

¹⁴On epistemic exploitation, see Berenstain (2016).

¹⁵On uninvention, see MacKenzie and Spinardi (1995).

Kingdom computing was presented as both a mechanical and a feminised occupation in the unskilled category, with the consequence that the skills of female computer operators were unrecognised, most notably when the civil service undertook to replace female employees en masse with men when they realised the value of the computing sector (Hicks 2018).

One might worry that Taylorism is simply a different phenomenon to the division of labour. Taylorism involves a process of measurement, centralisation, and control which aims to maximise efficiency. Although in some cases efficiency will be improved by implementing a division of labour which splits a task into smaller fragments, in other cases greater efficiency gains will be made from changes of pay structure (Braverman [1974] 1998, 64–67, 70–73), or changing the way workers carry out their allocated tasks (Braverman [1974] 1998, 120–126). There are two things to say here. First, the division between conception and execution which is essential to Taylorism is itself a form of interpersonal division of labour. This system splits people planners and doers. Secondly, the interpersonal division of labour is not the only kind of division of labour. When Braverman introduces the division of labour, he uses examples of a tinsmith and bookkeeper finding ways to efficiently perform a repetitive task by splitting it into minimal parts. Commenting on these cases, he says 'the division of labor in production begins with the analysis of the labor process – that is to say, the separation of the work of production into its constitutive elements' (Braverman [1974] 1998, 52). Here Braverman highlights the continuity between the interpersonal and interpersonal division of labour. Just as Henry Ford split up the task of making a car interpersonally by assigning each worker a distinct task along the production line, the tinsmith and bookkeeper who are analysing their tasks splitting up their own activity diachronically by splitting up their own activity into distinct tasks.¹⁶

To sum up: on Braverman' view, degraded work arises from the extreme application of the division of labour, and has three distinctive features: (i) it is organised around efficiency involving obsessive focus on the division of labour and worker control, (ii) it involves a fragmentation of tasks, which encompasses both interpersonal and diachronic division of labour, and (iii) it involves a polarisation of knowledge in which there is both a transfer of knowledge from workers to managers, and –

¹⁶While this example may not raise the same moral concerns as Braverman's interpersonal examples, the popularity of self-tracking technologies does open up the possibility for self-Taylorisation (see Moore and Robinson 2016).

via simplification and the application of the Babbage principle – a reduction to the total amount of knowledge required by tasks.

3. Collective action, partial plans, and degraded work

How should the planning theory think about collective action? Whereas Bratman takes on this question by circumscribing a category of 'modest' sociality, I want to think generally about how groups of people can handle partial plans, and the practical questions they raise. We will first consider the distinctive features of partial plans for collectives, then think about how collectives deal with fine- and coarsegrained partial plans. With these ideas in hand, we can see: first, that the features of degraded work that Braverman identifies are really just features of collective action driven by a fine-grained collective plan, and second, that Bratman's distinction between shared co-operative activity and prepackaged co-operation disguises a whole spectrum of cases in which plans for collective action come at different levels of granularity.

3.1. Partial plans for collectives

An individual plan is a plan for what I am going to do, and a collective plan is a plan for what we are going to do.¹⁷ As in the individual case, deciding what we will do raises questions about how we are going to do it. If we decide to go to see a show tonight together, we commit to answering how we are going to get there. The question of how we are going to carry out our plan will be divisible into a bunch of subquestions, some of which will interact. These interactions can be simple: if we decide to see the Backstreet Boys, then we will need to find somewhere to meet up close to the venue at which they're playing. But they can also be extremely complex: if we are singing a duet together, we will need to answer a large number of subquestions of *how can we sing harmoniously together*? as we sing. Call questions that connect the activities of two people in a collective plan *co-ordination questions*. Dealing with co-ordination questions creates the need to have meshing subplans (Bratman 2014, 53–57).

¹⁷Two complications. First: cases when an individual plans to do something by themselves, then finds out that they need help down the line. Are these cases of outsourced individual action, or individual actions which become collective actions? Secondly: cases of institutional action, in which the plan concerns what the institution will do. In some cases a collective noun phrase will be a shorthand for a group (the rowing club), but in at least some cases institutions appear to behave like individual agents.



There are two basic strategies available for a group to fill in their partial plan. They can split up the how-to questions into subquestions, and fill them in sequence, exploiting the kind of diachronic division of labour familiar from the individual case, or they can assign these questions to different people to be fill in in parallel, giving rise to an interpersonal division of labour. The best strategy might be determined by the form of the activity. If we are lifting a piano up some stairs, it will probably be easiest to answer questions about how we will navigate each obstacle in sequence through collective deliberation. By contrast, if we are making a piano, it will probably be easier to split up the task into subtasks (make the keyboard, make the cabinet) which will be allocated to different members of the team with suitable skills.

So, there is both a diachronic and an interpersonal dimension to the division of labour, and most collective plans will involve both. Both kinds of division of labour involve the same basic phenomenon: the division of a practical question into parts to simplify it and make answering it more manageable. We can see both kinds of division of labour in collective plans as manifesting Bratman's initial rationale for partial plans. When a group of people are doing something together it is just as important to settle who is doing which part of a task, to avoid superfluous planning, and forming a plan which is partial for a division of a practical issue into parts such that some can be dealt with by the collective, and others by individuals.¹⁸

3.2. The granularity of collective plans

Collective plans can be more or less filled in ahead of time. We might decide what to do, form a sketchy plan, then leave it up to a mix of individual and collective deliberation to fill that plan in. Or, we might decide lots of details ahead of time, front-loading deliberation onto collective discussion, leaving relatively few details to be resolved by individuals. If two people are cooking dinner together, they might decide ahead of time what dishes to make, and then fill in the details of which culinary dish is next, who will it cook it, and how as they go along. This would

¹⁸Thinking about collective action as involving the distributed process of filling in a partial plan undermines the idea that each participant in a collective action need to intend its overall aim (condition (a) in Bratman's account). If individuals can contribute to collective action by filling in a part of a collective action, then having what Kutz calls a participatory intention (an intention to do one's bit in a collective plan) might be enough to secure a role in the group-level fulfilment of the plan (Kutz 2000, 10). Just as in the individual case Michael's plan to take the bus downtown is part of his plan to go to a show tonight, in the group case your plan to make the cabinet of the piano is part of our plan to make the piano (whether or not you also intend the piano to be made (Kutz 2000, 14, fn 27)).

be a fairly coarse-grained plan, which leaves open both questions about the tasks to be performed, and how the two cooks will co-ordinate. On the other hand, the cooks might decide ahead of time not just what to make, but also who is going to make which dish, how they are going to make it, and so on. This would be a more fine-grained plan: it resolves more practical questions ahead of time, and settles the kind of co-ordination which the participants in the activity will employ.

Which style of planning is appropriate for a collective depends on several factors.

As in the individual case, competence will play a role. If participants know less about the tasks to be performed, then they will need a more detailed plan. This applies to both first-order and co-ordination questions: participants who know how to get along with one another in the relevant activity¹⁹ can get away with leaving their co-ordination questions open, whereas those who are less skilled at getting along will need to answer co-ordination questions ahead of time.

A distinctive feature of the collective case is that task-relevant information is distributed across a number of people. If I am to know whether to salt the potatoes as they roast, I need to know whether they have been cooked in seasoned water or not. As a rule, it is beneficial to reduce the amount of information that needs to be transferred between people. This can be achieved by dividing up tasks between people in a way that means that task-relevant information is picked up as a matter of course (I will already know how much to salt the potatoes, if I pre-boiled them), or by forming a fine-grained plan that settles co-ordination questions ahead of time (say we've already decided that our policy is to season all water).

3.3. Degraded work and fine-grained plans

I want to suggest that we think of Braverman's account of degraded work as an analysis of planning structures of fine-grained plans. This allows us to see that the separation between planning and execution involved in Taylorisation is not a distinctive group-level phenomenon, but a general feature of planning: the formation of a fine-grained plan which obviates the need for the on-the-fly planning by frontloading planning onto deliberation before action starts. This identification allows us to

¹⁹Which may involve performing tasks in distinctive ways that make salient information that is relevant to co-ordination questions, see Birch (2019) on co-ordination enablement.

explain the distinctive features of degraded work as stemming from properties of fine-grained collective plans.

3.3.1. Fine-graining and the division of labour

Above, I suggested that a fine-grained partial plan is one that has answered a large proportion of the subquestions of the question of how to carry out the plan. In Taylorised work, the lion's share of planning is taken up by management, and the open guestions which are left to workers are radically simplified. The repetitive and simplified tasks characteristic of Taylorisation are just the consequence of a pre-packaged plan which leaves open only very simple practical questions. Rather than a worker being assigned the question of how to make a chair, they will be assigned the question of how to bend a particular piece of wood on a machine designed for precisely that purpose. Under this extreme version of the division of labour, the question of how to perform a task is not only split up into many subquestions corresponding to the smallest realistically implementable parts of that task, but the majority of each of these subquestions will be answered by management (taking into account the results of time and motion studies). It is only after how-to questions have been mainly filled in that they are split up between workers, leaving them a radically constrained space of options in which to exercise their agency. It is worth reiterating that a maximally finegrained plan is an idealisation, and there will always be some decisionmaking and skill exercised in the performance of these micro-tasks,²⁰ but an important ethical concern about the division of labour is that it stifles the development of workers' epistemic and moral characters by constraining their agency (see Smith 1776).

3.3.2. The division of labour and mutual adjustment

For Bratman, the central feature of shared co-operative activity is mutual responsiveness, and should think about prepackaged co-operation as analogous to individual cases of 'ballistic action' – pushing a boat down a slipway, throwing a bowling ball – in which one only has control of the materials of an activity in its early stages (Bratman 2014, 81). We can now see that this analogy is misplaced. The reason why prepackaged

²⁰This point is particularly important in automated tasks, which often involve huge amounts of human labour (Braverman [1974] 1998, 155). The fiction of automation effected by effacing human labour is particularly evident in artificial intelligence services, which often involve what Astra Taylor calls *faux-tomation*: purportedly automated processes which merely obscure human contributions (Gray and Suri 2019; Mueller 2021; Taylor 2018).

20 🔄 J. HABGOOD-COOTE

co-operation doesn't require on-the-fly co-ordination is because the finegrained plan involved has answered co-ordination questions ahead of time. Part of the transformation of work effected by the division of labour is the replacement of highly integrated co-operative activities – which are a potential source of solidarity and co-operation²¹ – with parallel co-operation in which workers work on the segmented parts of an activity alone. A group of skilled carpenters working in a co-operative might decide how they will work together at the beginning of each day, depending on their skill levels, the pressing tasks for the day, and personal preferences. A group of carpenters working under a developed division of labour will have no such flexibility: the form of their collective action will be set by management's plan, which itself will be partly instantiated by the machines installed in the workshop (Braverman [1974] 1998, 134). The lack of mutual adjustment in Taylorised work processes, and at least some other collective activities that involve a division of labour is simply a feature of a particular kind of partial plan which settles collaboration questions ahead of time, removing the need for on-the-fly co-operation between people.

3.3.3. The rationale for fine-graining

In section 1, I suggested that there are two reasons to form a more finegrained plan: to ensure we perform a task in a specified manner, and to get around our ignorance. Taylorisation invokes both kinds of reason.

Managers have an interest in making sure that work tasks are performed as efficiently as possible to benefit owners and stockholders. By contrast, workers have an interest in protecting their health and wellbeing while continuing to collect wages. This conflict of interests creates what Braverman calls the problem of management (Braverman [1974] 1998, 39-40). If the plan for work is coarse-grained, it will be open to workers to perform their allotted tasks in a way that benefits them (soldiering, managing their effort avoiding exhaustion and so on). But a fine-grained plan will mandate that work tasks are performed in a manner that at least appears to further the interests of owners and stockholders. There simply won't be an option to work in an inefficient manner, at least without explicitly resisting by departing from the pre-prepared work plan.

²¹The very phenomenology of co-operative activity gives rise to solidarity, see the discussion of whale oil processing in Moby Dick in Dreyfus and Kelly (2011, 200).



In the individual case, we form fine-grained plans to make up for a lack of knowledge (which also occurs at the collective level). The same phenomenon occurs at the collective level: it is easy to imagine a new company forming guite detailed plans for co-operation until everyone learns how to get along with one another. Taylorisation reverses the direction of fit between plans and knowledge. In a Taylorised labour process, a fine-grained plan is formed in order to make the workforce less knowledgeable. The managers of a work process will of course be interested in ensuring that their workforce still has sufficient knowledge to meet the collective version of the knowledge-how norm of intention, but a fine-grained collective plan means that workers need to do less to meet this requirement. By centralising planning-related knowledge into the hands of managers, simplifying tasks to remove co-ordination questions and the need to pool information, shrinking the size of the practical questions assigned to workers, and removing surplus knowledge from the workforce, the managers of a work process can ensure both that the bar of knowledge required for a task are minimised, and that their workforce barely meets this requirement.²²

3.4. Shared co-operative activity and prepackaged co-operation

Our initial worry about Bratman's distinction between shared co-operative activity and prepackaged co-operation was that it relegated all collective activity involving a division of labour into the unanalysed category of prepackaged co-operation, making it impossible to recognise work as a genuine form of collective action.

We are now in a position to see that Bratman's problem wasn't just that he drew a distinction which excluded an important set of cases. The problem is that there simply isn't a sharp distinction between shared co-operative activity, and prepackaged co-operation. There is a spectrum of cases of plans at different levels of granularity. Shared co-operative activity is a kind of collective action involving a (relatively) coarsegrained plan that leaves open co-ordination questions, whereas prepackaged co-operation is a kind of collective action involving a (relatively) fine-

²²Does a Taylorised workforce have collective knowledge-how, if it knows less than would be required of a non-Taylorised workforce? I think that the right answer is that it depends on context. Consider an analogy with the individual case. In unrestricted contexts, we would say that both an experienced chef and a novice who leans heavily on a recipe both know how to cook a particular dish. They just employ different ways of doing that task. However, in contexts in which the task of *cooking without the recipe* is salient, only the experienced chef counts as knowing how to cook the dish. The fact that drastically different amounts of knowledge can suffice for true know-how ascriptions is a feature of the context-sensitivity of knowledge how ascriptions (Hawley 2003).

grained plan which resolves most co-ordination questions. We can talk in terms of shared co-operative activity, and prepackaged co-operation, referring to cases at opposite ends of this spectrum, but we shouldn't neglect collective plans that are only somewhat filled in, or think that this distinction is tracking a sharp distinction.²³

Some degree-like phenomena involve gradual shifts between importantly different phenomena. Think of the sorites series between bald people and non-bald people, or the transition between blue and green. There are agential, epistemic, and moral differences between finegrained and coarse-grained plans for collective activity, but the differences lie within the domain of ordinary planning agency. We don't think that an individual who has formed a very fine-grained plan for how to get to the shops is engaging in some special kind of action, they are engaged in normal intentional activity, guided by a particular kind of plan. At least in terms of the planning structures involved, there is a fundamental continuity between shared co-operative activity, and prepackaged co-operation.

There will be other differences between highly Taylorised work and small-scale co-operation: the former typically involves unilateral decision-making, authority-relations (Shapiro 2014), and coercion which undermines worker autonomy. How to account for these phenomena within an account of collective action is a large issue which we will not be able to fully resolve. Even setting aside these controversies aside, accepting a category of collective action guided by fine-grained plans is a theoretical gain, because there are many non-work examples of collective activities which are guided by fine-grained plans, including volunteers in citizen science projects, the members of an amateur theatre putting on a show, and mutual aid groups.

3.5. The ethics of degraded work

My hope is that establishing the continuity of the planning structures involved in individual action, small-scale collective action, helps us to lift some of the darkness surrounding work. Although there is a prevailing idea that Taylorised work has been superseded by a combination of automation and the growth of the service sector, recent research on gig work (Cant 2019), online platform labour (Gray and Suri 2019; Jones 2021),

²³How might we divide up plans depending on their granularity? Thinking of the granularity of plans in terms of how much of the relevant how to question has been answered, we could set various ratios as dividing lines, but it's hard to think of any non-arbitrary dividing lines.

commercial content moderation (Roberts 2019), call centres (Woodcock 2016), and warehouse work (Vallas, Johnston, and Mommadova 2022) reminds us that Taylorisation arises wherever there are efficiency pressures. In fact, the affordances of communications technology enable even more extreme forms of fragmentation of tasks, leaving workers repeatedly performing what Amazon Mechanical Turk euphemistically calls 'human intelligence tasks'. If we want to think about platform work, we need the resources to make sense of Taylorised collective action (Crawford 2021; Mueller 2021).

Drawing on critiques of Taylorised work offers us important historical perspective on the ethical problems with platform work. We can draw out several themes from our discussion. First, by presenting workers with simple practical questions, Taylorised work stifles their agency and distorts their moral and epistemic character. In *The Wealth of Nations*, Smith clearly identifies this concern:

The man whose whole life is spent in performing a few simple operations, of which the effects are perhaps always the same, or very nearly the same, has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur. He [...] generally becomes as stupid and ignorant as it is possible for a human creature to become. (Smith 1776, G.ed 782)

The restriction in the agency of workers limits the opportunities for workers to develop meaningful skills, both limiting their possibilities for personal development, and threatening to uninvent practical skills associated with the non-Taylorised labour process. Second, the ideology around Taylorised work distorts our understanding of what workers do. The idea that the division of labour transforms workers into the parts of a machine both enables them to be treated as if they were machines (a distinctive and undertheorised species of objectification), and encourages us to overlook the real skills which workers possess, even in the context of an extreme division of labour. As a consequence, the contextual standards for what counts as 'skilled' work may shift, allowing workers to be paid less. Thirdly, by centralising planning relating to co-ordination guestions, Taylorisation alienates workers from one another, ripping the rich complexity of co-operation mutual adjustment out of the fabric of the working day. Fourthly, Taylorisation locks workers into a distinctive kind of drudgerous work which becomes painful and psychologically damaging to the worker over time. This feature ought to be included amongst the non-monetary bads of work in debates about meaningful work (Gheaus and Herzog 2016; Kandiyali 2023; Schwartz 1982).

Although these concerns might feel anachronistic, research on gig work, warehouse work, and commercial content moderation reveals that they are real and serious concerns for workers across a range of sectors.

4. Conclusion

If we accept the idea that under capitalism, workers are alienated from the value they produce by exercising their labour, there are two ways we might want to understand the agency exercised by workers. On the one think about workers hand. we miaht as mere instruments, fleshy extensions of the machines which they operate. This view locates the locus of agency in work within the purview of management and the owners of capital, and workers are instruments, mere extensions of the agency of their masters.²⁴ On the other hand, we might think of workers as exercising genuine agency – both individual and collective – in their work, but maintain that this form of their work both curtails their autonomy, and masks the agency which they do exercise. We might think that there is an epistemology of ignorance (Mills 2007) surrounding the contributions of workers to the labour process, which serves both to hide the fact of their contributions (think of content moderators who are masked by an work platform and myths of automation (Frost-Arnold 2023; Roberts 2019)), and to downplay the significance of these contributions (think of the way that the distinction between practical and theoretical labour serves to underplay the contributions of workers classed as unskilled).²⁵ In this paper, we have gone some way towards preparing the ground for an agential view of the collective aspect of work, which would allow us to recognise work as a genuine form of collective activity. If we want to think about the ethics of work, we need the conceptual tools to think about the agential structures of contemporary work.

Acknowledgements

Thanks to Andrew Peet, Haixin Dang, Robert Williams, Ludovica Adamo, Heather Logue, Matthew Clark, Simon Graf, Matthew Cull, Michael Davin, Chae Young Paak, Matt Chennells, Olle Blomberg, Isaac Shur, Omni Hirvonen, Dennis Whitcomb, Amelia Horgan, Alex Douglas.

²⁴Locke articulates something like this view in the Second Treatise (II. 28): 'the Grass my Horse has bit; the Turfs my Servant has cut; and the Ore I have Digg'd in any place where I have a right to them in common with others, become my *Property* [...] The *labour* that was mine, removing them out of that common state they were in, hath *fixed* my *Property* in them' (Ludwig 2017, C14) articulates a slightly different version of this view, presenting workers as proxy agents for shareholders.

²⁵I take it that this idea is one of the points of the slogan 'there is no such thing as unskilled labour' (Ehrenreich 2002).

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by European Research Council [grant agreement number 818633].

References

Babbage, C. 1835. On the Economy of Machinery and Manufacturing. London: Knight.

- Berenstain, N. 2016. "Epistemic Exploitation." Ergo: An Open Access Journal of Philosophy 3: 569–590.
- Birch, Jonathan. 2019. "Joint Know-How." Philosophical Studies 176 (12): 3329–3352. https://doi.org/10.1007/s11098-018-1176-6.
- Borghini, Andrea. 2015. "What Is a Recipe?" Journal of Agricultural and Environmental Ethics 28 (4): 719–738. https://doi.org/10.1007/s10806-015-9556-9.
- Bratman, Michael. 1987. Intention, Plans, and Practical Reason. Cambridge: Cambridge, MA: Harvard University Press.
- Bratman, Michael E. 1992. "Shared Cooperative Activity." *Philosophical Review* 101 (2): 327–341. https://doi.org/10.2307/2185537.
- Bratman, Michael E. 2014. Shared Agency: A Planning Theory of Acting Together. Oxford: Oxford University Press.
- Bratman, Michael. 2022. Shared and Institutional Agency: Toward a Planning Theory of Human Practical Organization. New York, NY: Oxford University Press.
- Braverman, H. (1974) 1998. Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century. New York: NYU Press.
- Cant, C. 2019. *Riding for Deliveroo: Resistance in the New Economy*. London: John Wiley & Sons.
- Cleland, Carol E. 2001. "Recipes, Algorithms, and Programs." *Minds and Machines* 11 (2): 219–237. https://doi.org/10.1023/A:1011251504223.
- Craig, Edward. 1990. *Knowledge and the State of Nature: An Essay in Conceptual Synthesis*. Oxford: Oxford University Press.
- Crawford, Kate. 2021. Atlas of Al. New Haven: Yale University Press.
- Daston, L. 1994. "Enlightenment Calculations." Critical Inquiry 21 (1): 182–202. https:// doi.org/10.1086/448745.
- Daston, L. 2018. "Calculation and the Division of Labor, 1750–1950." Bulletin of the German Historical Institute 62 (Spring): 9–30.
- Diderot, D., and J. L. R. d'Alembert. 1776. Encyclopédie, ou, Dictionnaire raisonné des sciences, des arts et des métiers (Vol. 5). Pergamon Press.
- Dreyfus, H., and S. Kelly. 2011. *All Things Shining: Reading the Classics to Find Meaning in a Secular Age*. New York: Free Press.
- Ehrenreich, B. 2002. *Nickel and Dimed: Undercover in Low-Wage America*. New York: Granta Books.
- Fox, Craig. 2020. "On Making Sense of Recipes." Humana Mente 13 (38): 229–254.

- 26 👄 J. HABGOOD-COOTE
- Frost-Arnold, K. 2023. *Who Should We Be Online?: A Social Epistemology for the Internet*. Oxford: Oxford University Press.
- Gebrial, D. 2024. "Racial Platform Capitalism: Empire, Migration and the Making of Uber in London." *Environment and Planning A: Economy and Space* 56 (4): 1170–1194. https://doi.org/10.1177/0308518X221115439.
- Gheaus, Anca, and Lisa Herzog. 2016. "The Goods of Work (Other Than Money!)." *Journal of Social Philosophy* 47 (1): 70–89. https://doi.org/10.1111/josp.12140.
- Grattan-Guinness, I. 1990. "Work for the Hairdressers: The Production of de Prony's Logarithmic and Trigonometric Tables." *Annals of the History of Computing* 12 (3): 177–185. https://doi.org/10.1109/MAHC.1990.10029.
- Gray, M. L., and S. Suri. 2019. *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass*. Boston: Houghton Miffler Harcourt.
- Gregory, K., and J. Sadowski. 2021. "Biopolitical Platforms: The Perverse Virtues of Digital Labour." *Journal of Cultural Economy* 14 (6): 662–674. https://doi.org/10. 1080/17530350.2021.1901766.

Grier, D. A. 2005. When Humans Were Computers. Princeton: Princeton University Press.

- Habgood-Coote, Joshua. 2018. "Knowledge-How is the Norm of Intention." *Philosophical Studies* 175 (7): 1703–1727. https://doi.org/10.1007/s11098-017-0931-4.
- Habgood-Coote, Joshua. 2020. "Group Inquiry." *Erkenntnis* 87:1099–1123. https://doi. org/10.1007/s10670-020-00232-5.

Habgood-Coote, J. 2022. "Knowing More (about questions)." Synthese 200 (1): 1-23.

- Hawley, Katherine. 2003. "Success and Knowledge-How." American Philosophical Quarterly 40 (1): 19–31.
- Hawley, Katherine. 2016. "But I Didn't Mean to Let You Down!" *Psychology Today*, October
 20. https://www.psychologytoday.com/gb/blog/trust/201610/i-didnt-mean-let-you-down.
- Hawley, Katherine. 2019. How to be Trustworthy. Oxford: OUP.
- Hawley, K. J. 2019. How to Be Trustworthy. New York, NY: Oxford University Press.
- Hicks, M. 2018. Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing. Cambridge, MA: MIT Press.
- Holton, Richard. 2014. "Intention as a Model for Belief." In *Rational and Social Agency: Essays on the Philosophy of Michael Bratman*, edited by Manuel Vargas and Gideon Yaffe, 12–37. Oxford: Oxford University Press.
- Jones, Phil. 2021. Work Without the Worker Labour in the Age of Platform Capitalism. London: Verso.
- Kandiyali, J. 2023. "Sharing Burdensome Work." The Philosophical Quarterly 73 (1): 143– 163. https://doi.org/10.1093/pq/pqac023.
- Kutz, Christopher. 2000. "Acting Together." *Philosophy and Phenomenological Research* 61 (1): 1–31. https://doi.org/10.2307/2653401.
- Lefort, F., and R. Prony. 1858. "Description des grandes tables logarithmiques et trigonometriques, calculees AU Bureau du cadastre, sous la direction de Prony: et exposition des methodes et procedes mis EN usage pour leur construction." Annales de L'Observatoire de Paris 4:123–150.
- Ludwig, Kirk. 2017. From Plural to Institutional Agency: Collective Action II. Oxford: Oxford University Press.

- MacKenzie, D., and G. Spinardi. 1995. "Tacit Knowledge, Weapons Design, and the Uninvention of Nuclear Weapons." *American Journal of Sociology* 101 (1): 44–99. https://doi.org/10.1086/230699.
- Mills, C. W. 2005. "'Ideal Theory' as Ideology." Hypatia 20 (3): 165–183.
- Mills, Charles. 2007. "White Ignorance." In Race and Epistemologies of Ignorance, edited by Shannon Sullivan and Nancy Tuana, 11–38. Albany: State Univ of New York Press.
- Moore, P., and A. Robinson. 2016. "The Quantified Self: What Counts in the Neoliberal Workplace." *New Media & Society* 18 (11): 2774–2792. https://doi.org/10.1177/ 1461444815604328.
- Mueller, G. 2021. Breaking Things at Work: The Luddites are Right About Why You Hate Your Job. London: Verso Books.
- Pavese, C. 2017. "Know-How and Gradability." Philosophical Review 126 (3): 345–383.
- Roberts, Craige. 2012. "Information Structure in Discourse: Towards an Integrated Formal Theory of Pragmatics." *Semantics and Pragmatics* 5:1–69.

Roberts, S. T. 2019. Behind the Screen. New Haven: Yale University Press.

Roediger, D. R., and E. D. Esch. 2012. *The Production of Difference: Race and the Management of Labor in US History*. Oxford: Oxford University Press.

- Schwartz, A. 1982. "Meaningful Work." *Ethics* 92 (4): 634–646. https://doi.org/10.1086/ 292380.
- Scott, J. C. 1998. Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed. New Haven: Yale University Press.
- Shapiro, S. 2014. "Massively Shared Agency." In *Rational and Social Agency: The Philosophy of Michael Bratman*, edited by Manuel Vargas and Gideon Yaffe, 257–293. OUP.
- Smith, A. 1776. "An Inquiry into the Nature and Causes of the Wealth of Nations."
- Snedegar, Justin. 2019. "Deliberation, Reasons, and Alternatives." *Pacific Philosophical Quarterly* 100 (3): 682–702. https://doi.org/10.1111/papq.12262.
- Taylor, F. W. 1903. Shop Management in. Scientific Management (2004). Routledge.
- Taylor, F. W. 1911. Scientific Management in, Scientific Management (2004). Routledge.
- Taylor, A. 2018. "The Automation Charade." Logic 5. https://logicmag.io/failure/theautomation-charade/.
- Vallas, S., H. Johnston, and Y. Mommadova. 2022. "Prime Suspect: Mechanisms of Labor Control at Amazon's Warehouses." *Work and Occupations* 49 (4): 421–456. https://doi.org/10.1177/07308884221106922.

Wiśniewski, A. 1995. The Posing of Questions. Dordrecht: Springer.

- Wiśniewski, A. 2003. "Erotetic Search Scenarios." Synthese 134 (3): 389–427. https://doi. org/10.1023/A:1022983325118.
- Woodcock, J. 2016. Working the Phones: Control and Resistance in Call Centres. Pluto Press, London.