Book Review

Simon Schaupp (2021) *Technopolitik von unten. Algorithmische Arbeitssteuerung und kybernetische Proletarisierung [Technopolitics from Below. Algorithmic Coordination of Work and Cybernetic Proletarianisation].* Berlin: Matthes & Seitz.
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Technopolitik voon unten explores the effects of the digitalisation of labour based on field research in four companies in Germany: two industrial factories and two platform companies. The approach of the book is to structure the nature of the conflicts according to three arenas of conflict: regulation, implementation and appropriation. This approach comes with the possibility to distinguish how workers' interests are shaped by the various arenas and how they find different expressions according to the arena where those interests are articulated.

The author states that conditions in the industrial and platform companies differ a lot. The industrial companies have a medium amount of unionisation, which in the German metal industry is still quite high. In contrast, the two platform companies, one a large digital warehouse and the other a bike delivery company, mostly for food, have only seen recent and fragile forms of unionisation. Therefore, the platforms experience rather antagonistic industrial relations, which the author assumes will give way to more corporatist forms of representation over time. On the other hand, while the unions in the two industrial companies are, to a large extent, cooperating with management and only oppose measures that violate data protection of workers, the author states that there is widespread discontent among workers about this soft line of the industrial unions. Thus, Schaupp assumes that the labour relations in digitalised industries will see more conflicts in the future.

In the area of implementation, Schaupp identifies interesting trends: the tracking of work processes is done with the ultimate aim of collecting enough data to be able to automate more processes in the future. But this is still in the planning stage, and it is not yet clear if it will be technically or economically viable. More important is that there is a downward trend in investment in heavy machinery, one cause for the already notorious lack of productivity advances in the past few years globally. Instead of this, there are more computer systems which explain all work processes in a very tacit way. Those systems allow the employment of almost any worker without much prior training, and also allows moving workers between departments. This trend of dequalification provides some relief for workers initially, but later on processes are sped up and workers feel that they become expendable after their work experience has been condensed into computer algorithms. This dequalification even allows the employment of workers without any German-language capabilities. Especially in the platform companies, a considerable number of the workers are refugees who are under pressure to maintain their residence status. Since that status depends on continuing to be employed, those workers are much more obedient in the workplace

than workers with a less precarious resident status.

Schaupp, therefore, characterises the overwhelming experience of workers with the digitalisation of work as the expansion of low-paid job opportunities, while for employers it represents much greater flexibility and a reduced need to invest in training on a broad scale. This tendency goes across both industrial and platform companies in Schaupp's case study. There is not only the experience of more alienation in work processes due to less freedom to intervene in them, but also higher stress levels since the algorithms aim to constantly increase the performance levels of workers.

In the area of appropriation, Schaupp detects important differences between industrial and platform companies: The physical sharing of the same space in industrial companies comes with a more natural solidarity in work processes – for example, helping each other out with certain tools. At the same time, due to the less confrontational situation, resistance in the industrial companies takes place mostly at the level of jokes about the new machines – for example, a vibrating glove that is intended to provide physical feedback when workers make unexpected movements or a logistics robot that continually does not work in the way it was programmed and turning out to be useless. In one of the industrial plants, the workers agreed that they would all work at a certain speed in order to sabotage the algorithm that continually tried to impose a more rapid work speed. In the industrial plants, the split between workers with and without precarious residence status became hard to overcome, while in the delivery company there was more cooperation between workers in resolving problems regarding residence status.

Against many studies that see machines taking over many jobs, Schaupp's results converge more with the study by David Autor (2015), who sees a further polarisation of income with the digitalisation of work, but no substitution of jobs. The danger lies rather in the fact that both industrial and platform work is organised in such a way that less qualification is necessary. While the simplification of work processes could be a positive utopian goal, in the capitalist context it turns into work pressure, monotony and easy replacement of workers by others. Knowledge is formalised in machines that can then instruct other workers. Thus, the workers are forced to contribute to their own potential replacement. Schaupp concludes that the workers stand in an antagonistic relation to those data that are used to formalise work processes, more than any other product of their work (p. 255). The stressful work under algorithmic labour control also leads workers to use more private services in their free time since they are too tired to cook, for example (p. 260), increasing the need for low-paid service jobs.

What Schaupp calls the "cybernetic proletariat" is not limited to a specific sector, but it tends to become a broad category. The digitalisation and dequalification of work are more appealing for employers than a risky investment in automation technology, an investment that needs more time to become profitable. Thus, the tendency that started with the relocation of jobs to low-wage countries instead of further automation, continues with the digitalisation of work processes in Germany. Low wages and the flexibility to employ almost any worker are attractive incentives for employers to digitalise work processes.

Schaupp's findings are of high relevance and point out important tendencies in the digitalisation of work. The book is accessible to a wide range of readers, does not come with heavy jargon and focuses on a generalisation of the findings. This, unfortunately, at times is at the cost of a lack of details that would be helpful to better understand the specific work processes. Since the real names of the companies are not used in the book, those more specific details might make it easier to identify those companies, but in the case of the two platform companies, one can easily guess which they are anyway. Moreover, more ethnographic details about the perspectives of the workers would have been interesting.

Notwithstanding these remarks, the book is a milestone for understanding what digitalisation of work means in a variety of sectors in a highly developed country. The book is in German, which restricts its readership, but the author has also published various pieces as outtakes of the book in English-language journals, which I recommend reading (Schaupp 2021).

References

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BIOGRAPHICAL NOTE

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