

# Preface

My first memory of using a computer is one of failure. I was a high school student in Dallas for my final year and a paper I had written on a Dell somehow went missing after the machine had crashed. My memory is sitting in my father's office as he did all sorts of creative manoeuvring to retrieve it. When it came to light, I was of course, very relieved. My main memories are the preliminary anxiety, the period of tense waiting, then the incredible joy. The memory is not of the content of the paper or the class it was for. I don't even recall the PC itself. The memory is related to what I felt was a huge amount of work that had gone into writing the paper and the reliance I had on the machine to produce the work.

My family had moved around the world a lot for my father's job as an anthropologist and it just so happened that we were living in Dallas at the time. Little did I know at the time but these formative experiences would play into my lifelong interests in technology and work.

Some of my memories from that year revolve around the only car Yugoslavia had ever manufactured, aptly named the Yugo. My father had bought more than one: a sort of 'cheaper by the dozen' approach, where if one part on one of these tiny cars, broke, it would be replaceable with a

part from one of the others. *Cheaper by the Dozen* if, of course, the biography of Frank and Lillian Gilbreth published by their children in 1948. The Gilbreths, at the beginning of the twentieth century, led in research on time and motion studies, a technologically driven approach to work intended to make the work efficient and fast.

When the Gilbreths talked about ‘cheaper by the dozen’, they were of course making a joke about their rather large family, but in terms of time and motion research, *less* is, in fact, more, because efficiency should be improved by using technology to measure and dictate work performed. Scientific management has become a hallmark for thinking about early stages of manufacturing and industrialisation. But as this book shows, the debates about whether scientific management has been fully removed from working practices today, or not, continue to rage. The dangers that the trades unions who stood up to scientific management said in the early part of the twentieth century at the time, were automation, mechanisation and work speed-up. Many of these concerns are becoming ever more possible in the contemporary era as robots replace workers in the factory context and algorithms, cameras and checkpoints begin to replace physical bosses in service work like taxi driving, security and cashier work.

In 2015, nearly a fifth of employees in Europe had access to wearable technology at work. Now, one in three companies provides wearable devices to track activity, save money and allegedly improve employees’ health and happiness. What has been called a ‘quantified work environment’ is one that resembles the world of athletes where technology aids people in identifying peak performance times and gaining rapid feedback. Accelerometers, Bluetooth, triangulation algorithms and infrared sensors allow managers to monitor workers far beyond traditional hours logged by swipecards in the current era. Call centre data reporting has long been used to view workers’ emotional responses to customers but the types of monitoring and tracking this book outlines, take things a step further. The Global Corporate Challenge and JawBone Up offer self-tracking packages with dashboards that reveal compared data. A related product, Olivetti Research’s Active Badge and its successors Sociometric Badge and Wearable Sensor Badge, can trigger automatic doors, transmit wearer identities and forward telephone calls.

Badges record workers' movements, speech, proximity and interactions, and analyse voice patterns and non-verbal cues to deduce mood and interpersonal influence. These new technologies reflect significant changes in management patterns and workplaces.

I have been working in this area for some years and have always researched the issues workers face in contemporary societies. One cannot discuss work now without considering technology, but I have never seen technology in workplaces as a neutral arbiter. My background in trade union work and international research adds a social justice approach and angle to my work and I was very quick to note the exploitation possibilities for introducing devices into working lives. What were the reasons for introducing new technologies? My research has shown that reasons range from monitoring hours and toilet breaks in factories, to health tracking in offices, to gamification, and even surveillance.

In April 2016, I ran a symposium at the International Labour Process conference in Berlin. I invited several academic colleagues who I knew were researching in the area of digitalised work: Sian Moore, Martin Upchurch, Xanthe Whittaker, Alessandro Gandini and the well-known trade unionist Pav Akhtar who leads the Global Union Federation's managers and professionals unions internationally and predominantly works with ICT workers. Pav has been fighting for workers' rights in digitalisation for years.

The symposium I ran in Berlin was entitled 'New Technologies of Surveillance at Work'. The panel description I had submitted and was accepted to the conference reads:

A regime of total mobilisation and surveillance corrodes workers' health and safety, creating anxiety, burnout and overwork. Neoliberalism however requires portrayal of such problems as failures to adapt, personal psychological shortcomings, or educational deficits. We claim, rather, that surveillance in workplaces are a systematic effect of a particular labour process. Labour movements will need to combat such corrosion or risk the generalisation of the types of psychological collapse seen at the range of suicides recently seen at Foxconn. This symposium looks at a series of cases of surveillance in workplaces as new technologies provide the means to increase, posing the question: what we can do about it?

After a successful symposium, we realised we had enough new material to put together a publication. All speakers from that lovely day in Berlin appear in this edited collection. I am fully committed to supporting women in research projects, and we invited four further authors to contribute, those being Winifred Poster, Yujie (Julie) Chen, Penny Andrews and Rebecca Lemov, who all agreed. In terms of acknowledgements, my co-editors Xanthe Whittaker and Martin Upchurch merit a lot of praise for contributing to this process and never failing to communicate at key points and offering very valued, but under-recognised work that goes into book preparations. I would like to thank my authors for not being late with chapters in most cases and where these were late, they still arrived and were in great shape. We are clearly fighting for the same cause as the level of collegiality in this process has been exquisite. Ursula Huws and Rosalind Gill, editors of this series, and our anonymous reviewers, have been extremely supportive of this publication. Furthermore, Shazad Ali and Tommaso Ramella helped with the final editing processes. I also want to acknowledge my brilliant families, the Moores, the Carters, the van Somerens and my partner Dan for always standing by me. Someday I will probably have to thank robots, but for now, I will leave it there. I hope you enjoy this book.

London, UK

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Humans and Machines at Work

Monitoring, Surveillance and Automation in  
Contemporary Capitalism

Moore, P.; Upchurch, M.; Whittaker, X. (Eds.)

2018, XVI, 260 p. 2 illus. in color., Hardcover

ISBN: 978-3-319-58231-3