

CHAPTER I

Introduction: Contradictions of ICT

‘The iPhone controls me, I don’t control it.’

Christine, Professor of Cinema Studies

1.1 Introduction

A profound contradiction exists at the heart of our interaction with Information Communication Technology (ICT): it offers a myriad of possibilities to enrich our lives yet it habitually fails to deliver on its promises, leaving us grappling with profoundly negative experiences at global, national, local, organisational or personal levels. The outrage concerning Cambridge Analytica and Facebook impacted across all these domains. The ProtonMail service, developed at European Organization for Nuclear Research (CERN), was designed to aid a more open, yet secure, Internet, prioritising the protection of civil liberties. Ironical then, that ProtonMail was the mailer selected by those working for Cambridge Analytica when they, allegedly, harvested 87 million accounts from Facebook. Berners-Lee warned of the loss of control of personal data, the spread of misinformation on social networking sites, and sought greater clarity of political funding and use online (Berners-Lee 2017). Problems associated with issues such as Big Data are indicative of the contradiction since ‘Big Data technologies promise to create certainty in a highly uncertain world, yet through their logic of digital solutionism they exacerbate the crises’ (Fuchs 2019a: 49). Digital technologies drive the development of ever more sophisticated weather systems analyses helping us to understand climate change, yet the data centres used to carry out this work adversely impact on the environment by contributing 17% of ‘total carbon footprint’ using 30 billion watts and wasting 90% of the energy they use (Isberto 2018). Electronic voting, envisaged as the future method to secure democratic elections,

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carries its own set of problems (e.g. the 2019 elections in New South Wales, Australia) and is vulnerable to failure (Switzerland) or mismatch between local and central voter registration databases (France, EU election 2019).

The ICT industry, perceived as offering high quality knowledge-based jobs, has a male gender bias deeply rooted in the sector (European Commission 2018a). In 2017, most European Union ICT specialists were men: the share of female ICT specialists was 17.2%, a decline of 5.3% from a decade earlier. For many Chinese ICT professionals, working 12 hours a day, 6 days a week is the norm. The same can be said of the video game industry where hours of work and pressures arising from delivery deadlines create a stressful, harmful working environment. Child and forced labour form constituent parts of the ICT production cycle (Know the Chain 2016) and ICT is instrumental in enabling the development of modern slavery (Theron 2019).

Ethical and societal implications of artificial intelligence include the possibility that Artificial Intelligence (AI) programmers and data scientists, often innocently, use existing texts to guide AI development thus importing bias, based on gender or stereotyping, into AI code. The fiasco associated with 2020 grades for the UK's International Baccalaureate and A level results, have revealed the profoundly biased assumptions that can reside deep within AI algorithms. As these cases show, the negative impacts of suspect AI programmes can have devastating consequences on people's life chances. ICT has been overtly politicised in the international race for technical supremacy as evidenced by concerns over Huawei and 5G expansion. The introduction or upgrading of ICT systems threaten jobs or facilitate greater surveillance of employees.

The genesis of this contradiction can seem to be inadequate technology, poor decision making, ineffective ethical policies, problems emanating from limited end-user proficiency, or a mixture of all these. Hence, the belief that better technology and/or better policy initiatives/ethical frameworks and/or improved end-user education will resolve the contradiction. In reflecting upon the Cambridge Analytica disclosures, Berners-Lee tweeted the problems were caused by 'bugs, in the system. Bugs can cause damage, but bugs are created by people, and can be fixed by people' (Berners-Lee 2018).

Yet despite the wide-ranging and sometimes positive initiatives flowing from this approach, the contradiction remains, and deepens and widens as more people use increasingly complex technologies. Apart from issues such as system security and the deliberate misuse of ICT, experience of ICT can, for example, lead to normally calm people becoming enraged with their digital devices or technology in general; drive those proficient in a range of other skills to denigrate themselves by saying 'I am useless with computers'; feed a fear of what ICT can do; result in an adverse disruption of family and work life; and facilitate major economic crises or influence the outcomes of elections. The smart phone has replaced the alarm clock as one of the most oppressive pieces of technology. Even an Amazon digital video doorbell creates civil rights issues.

This book addresses one simple question: what feeds the central contradiction where people experience ICT in a profoundly contradictory way? I argue that approaches such as calling for better technology and/or more effective end-user education as well as greater regulation of the digital sphere, are inherently limited. They may identify manifestations of the problem but fail to provide fundamental solutions. I explore the problem from a radically different perspective and demonstrate how valuable the Marxist concept of alienation is in researching and explaining the contradictory nature of ICT. This book is a contribution to the growing pulse of interest in Marx's approach which can be detected in contributions to journals such as *Work Organisation, Labour and Globalisation* and *triple C: communication, capitalism and critique*, indicating that the contradictory reality of ICT is beginning to be addressed by researchers using theories of alienation.

This book is not an overview of theories of alienation, nor does it aspire to be the definitive study of all the problems embedded in ICT. It does not set out to provide final, absolute proof that Marx's theory of alienation is correct. Its ambition is more modest: asking if Marx's view of alienation provides greater explanatory power and clarity than other theories of alienation in helping us research and understand the contradictory nature of ICT.

The *1844 Manuscripts* (Marx 1970b) and *The German Ideology* (Marx and Engels 1970) were the first two works of Marx I read as a young clerical worker in the British Civil Service in the early 1970s at the time when I was also becoming a militant trade unionist. This was a time when my practical activity often clashed with and forced me to reassess my assumptions about the world. I struggled with both books, but they spoke to me about the society in which I lived and helped me grope towards the glimmerings of an understanding of that world. They challenged my perceptions, encouraging me to see things from a different perspective. I would not have called myself a Marxist then – that came much later – but those books were the beginning of my journey to becoming someone who is (so succinctly put by Alex Callinicos (1995)) a naturalist materialist, who embraces Marxism as a social theory and is a revolutionary socialist in practice. Marxism also taught me that it is never enough to simply proclaim a viewpoint – it must be tested, authenticated and continually buttressed with evidence from real, practical life – and to see theory and practice in a dialectical relation.

There are two overarching traditions informing alienation research: Marx's approach, and the Seeman perspective, the latter being the choice of perspective for most researchers. The differences between these two traditions are examined in greater detail in chapter 2. Suffice it to say for now that while both lay claim to a materialist analysis, there are many similarity ends. Marx sees manifestations of alienation as deriving directly from capitalism's conflictual and contradictory nature and it is therefore a *normal* response to the problematic technological burdens we confront, requiring a *totality* of view based on economic and social relations. The Seeman approach locates alienation within a

specific instance, describing it as an *abnormal* response to life's pressures requiring suitable context-specific measures for its alleviation. It seeks to decouple expressions of alienation from the wider perspective and places the emphasis on the individual. This book argues that Marx's perspective offers more fruitful avenues of exploration of alienation than the Seeman route (and/or any of its derivatives).

My focus on Marx's theory of alienation to ICT centred on the following themes:

- Is Marx's theory of alienation effective when investigating the experience of participants in three distinct settings: ICT professionals, scholars, and senior end-users in the Southwark Pensioners' Action Group (SPAG), as they relate to ICT? The decision to investigate alienation within these three scenarios was informed by the need to provide a range of apparently contrasting settings, each linked to ICT. These settings cover those who create digital commodities, those who research the ethical and societal impact of those commodities, and those who use the technologies. This choice is discussed in further detail in chapter 3. My decision to focus on ICT professionals, scholars and pensioners in south London also arose simply because I have taught aspects of ICT, such as web design, as well as the societal and ethical implications of ICT at Westminster University and have lived in Southwark so I was drawing upon an academic context and a geographical area with which I am familiar.
- Can the explanatory power of Marx's theory identify a commonality of experiences both within and between these three settings?
- How does his theory provide a framework for undertaking the research, revolving group discussions and individual interviews, in these three settings?

An additional question also arose that was directly related to the method employed in the research: how far can participatory action research (PAR) make a positive contribution to researching alienation?

Chapter 2 covers theories of alienation, particularly those of Seeman and Marx and includes reference to alienation and reification. Chapter 3 outlines the rationale for the chosen methodology – critical realism (CR) – underpinned with PAR. It provides a description of the organisations and participants of the settings and details the processes involved in obtaining the appropriate data. Chapter 4 covers the setting concerned with ICT professionals; Chapter 5 focuses on scholars researching ICT; Chapter 6 draws upon the experiences of both these groups; and chapter 7 investigates the relation between mature end-users and ICT. These chapters constitute the core of the book and each includes a description and analyses of relevant data. Chapter 8 discusses the extent to which the research themes have been addressed and identifies areas

of possible further research. It also provides a critique of the research process as well as providing a conclusion. Marx's view of alienation is contentious and is regarded as difficult to operationalise presenting significant challenges and risks for research underpinned by his approach. But we all enjoy a good argument, don't we, and normally there is no effort or fun to be had in scaling a three-foot wall: the higher the climb, the greater the view.

There is one important concluding remark required. The Covid-19 virus burst onto the world while this book was being finished and while it is too early to extensively detail the impact this virus will have on the use of digital technologies, sufficient evidence exists to indicate that it is likely to have a profound negative shock on ICT professionals and scholars. The consequences for end users will take time to emerge.