

CHAPTER 5

Researching ICT: The Scholars' Alienated Experience

Somewhere along the line I slipped off track
I'm caught movin' one step up and two steps back
Bruce Springsteen: 'One Step Up'

5.1 Introduction

This chapter examines the experience of academics researching the ethical and societal aspects of ICT. The decision to concentrate on scholars researching this subject was linked to the desire to see how effective Marx's theory of alienation would be when applied to what could be described as a relatively benign experience compared to those solely focused on university teaching since it is generally assumed that researchers have more autonomy over their work. The chapter opens by describing the conflictual and constantly changing conditions that shape the scholars' working environment with its attendant stresses and contradictory pressures. Sarah Mann has used alienation theory to explore problems linked to surface/strategic/deep approaches to learning by focusing on the alienated experiences of learning. This chapter uses Mann's application of Marx's theory of alienation to students' lack of engagement to bring the educator into focus in this process.

Alienation is a lived experience with real, practical relations, seemingly between the things a person encounters but in reality it is a relation between people. Therefore, it is going to be expressed, in the first instance, in different forms given that it is mediated through the prism of different experiences. This notion of mediation is critical in comprehending the different forms in which

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alienation is manifested in different contexts and flags up three potential pitfalls when considering these issues.

The first is that an investigation following a compare-and-contrast approach can lead to a shallow analysis since it will be primarily concerned with comparing the outward appearances of alienation as expressed in two or more contexts, rather than exploring the underlying impulses creating alienation within each specific context to see if there are deeper, concealed commonalities. The second potential problem arises from simply expecting to find the same manifestations of alienation across different contexts. This can lead to the third problem which lies in the possibility of collapsing the discussion to cover degrees or levels of intensity of alienation, for example by considering if ICT professionals are more alienated than scholars. Marx, by talking about alienation having a practical expression, is perhaps anticipating these problems and seeking to avoid a view which includes an expectation that the form alienation is expressed in one context will necessarily mirror that found in another. Coupling alienation to mediation allows for the application of the general theoretical principle but recognises there may be significant differences in expressions of alienation. As has been argued in the previous chapter, alienation is clearly evident in their activity because of the way work is organised. For academics, particularly those who are primarily research focused, the experience is much more nuanced, and the discussion will open by looking at the general conditions within which scholars undertake their labours.

5.2 The Academic Environment

There have been profound changes within higher education (HE) by forces which continue to deepen and widen adverse academic conditions. The HE landscape internationally has been shaped by practices such as standardisation and benchmarking, ranking league tables (where universities compete on both national and international levels), audit technologies, research assessment exercises, and increased class sizes, all affecting the way scholars work. Working under the auspices of the UK Office for Students, the Quality Assurance Agency (QAA) is responsible for conducting random reviews of higher education providers in England to check quality and it has published subject benchmarks that describe the nature of study and the academic standards expected of graduates in specific subject areas. They show what graduates might reasonably be expected to know, do and understand at the end of their studies (Quality Assurance Agency 2018). Adherence to these benchmarks is enforced through the publication of QAA Reports for HE institutes following a random inspection. The QAA is a member of international quality assurance agencies such as the European Association for Quality Assurance in HE (ENQA) and the International Network for Quality Assurance Agencies in HE (INQAAHE). These institutions are part of an all-embracing international

infrastructure that, in the name of international competition, seeks to shoe-horn all institutes of HE into the same relatively narrow standardised prescriptive confine that has embraced the commodification of HE (Saunders and Blanco Ramirez 2017).

Other contradictory pressures arising from research imperatives, which undermine traditional approaches to scholarly activity, are derived from the need to reinforce competitiveness generally as well as focus on income generation. One such pressure is the determination by university managers to prise research from teaching thus buttressing the division of scholarly labour. As Imrie argues, the trend is towards the privatisation of research and its co-option and capture by specialist, partisan organisations (Imrie 2009: 86). Neoliberalism, a reform process that encourages global competition in all sectors (Giroux 2019; Hall 2018a), is generally recognised as the overarching impulse driving these trends. The neoliberal agenda seeks to mould all institutions of HE using a die cast by a philosophy that champions the role of the private sector in political and economic affairs, holding that competition brings about efficiency (Adamson 2013: 301). In Europe, the Bologna process is the driving force behind much of this change (Teelken 2012). The adverse impact of neoliberalism on HE is well researched indicating that de-skilling and casualisation are significant consequences of the process (Callinicos 2006, Fredman and Doughney 2012). Bamberger et al. (2019) discuss the way in which seemingly progressive ideas, when linked to the neoliberal drive into HE, provide cover for the normalisation of educational inequalities.

It also impacts on academics' working conditions. In the United States, non-tenure-track positions of all types now account for over 70% of all instructional staff appointments in higher education with part-time (adjunct) college lecturers comprising of 50% of academics. This rapid expansion of non-tenured appointments has resulted in an increasing number of lecturers working in precarious employment situation earning low pay and without benefits. Kingkade (2017) estimates that part-timers typically earn between \$20,000 and \$25,000 annually with pay determined by the level and numbers of courses taught with variation between institutions. In Britain, the university lecturers' union, UCU, has revealed that 54% of UK academic staff are employed on insecure contracts. Employed by the hour, on fixed-term contracts, or employed as post-graduate student teaching assistants, there is little by the way of career progression (Wänggren 2018). However, 54% is an average figure, since for some institutions and grades the number is far higher. At the University of Southampton 80% of Level 4 research staff are on Fixed Term Contracts (FTCs), at Oxford University 55.3% of all academic staff above 'Grade 6' – an Oxford job classification which includes all those who can act as supervisors – held a fixed-term contract in July 2017, compared to 54.6% in 2016 (Cherry 2018).

A further result is 'the rise of managerialism and a diminishing influence of the academic voice' (Courtney 2013:41), where targets, contribution towards competitive edge, and performance management systems together with obtaining

revenue from external sources such as funding bodies or providing training courses, determine the worth of an individual academic to her institution. The neoliberal agenda has seen the emergence of new forms of measuring academic activity categorised as quantification, standardisation and surveillance. Consequently, measures such as benchmarking related to student performance, critical success factors and key performance indicators become the management tools measuring the efficiency of the academic. While measuring university staff performance is not new, the intensification of competition between educational institutions both within and beyond national boundaries is driving managers in universities to develop, from their perspective, effective performance metrics that can hold scholars to account. Here the language is concerned with, *inter alia*, geometric averages that measure the ratio of output- and input-based indices target achievement, target interconnection, consequence management, and (fuzzy) Analytic Hierarchy Process performance measurement tools (APH) (Lee 2010) and value-added activities. Essentially what is being described here is a:

management model that analyzes all organizations (universities, hospitals, railways) as if they all have the same formal structure and they consist of identical input/output processes, which can be quantified and controlled by management. In theory the manager's job is to make these processes as efficient as possible (Lorenze 2012: 611–612).

Another implication of the neoliberal agenda has been identified by Rikowski when he states that ‘the current crisis of higher education appears to be facilitating the capitalisation process: it provides opportunities for the business takeover of higher education and the expansion of private higher education provisions’ (Rikowski 2012). It is the policy of the UK Conservative government policy to open up HE to private companies and to include the right for students in private universities to have access to the student loan scheme (McGettigan 2014). The expansion of private universities has been, until recently, minimal in the United Kingdom, but they play an increasingly prominent role in global HE with a third, some 60 million, of HE students (Levy 2018) studying in private HE institutions. Only 10 countries do not have some form of private HE provision and even in France 19% of HE students attend private institutions (Bothwell 2018). This has consequences for the examination of and discussions concerning academic conditions since many of the recent texts in the critical tradition, influenced by the autonomist perspective, start from the need to arrest the erosion of existing HE public provision and to mobilise around the idea of the commons. However, in doing so they disregard the condition of scholars working in the newly created or existing private universities. For these scholars there is simply no commons, for them to defend.

There is a non-critical response to the neoliberal push which celebrates managerial and organisational changes outlined by the concept New Public

Management which universities hierarchies seek to implement. These cover the possible integration of Total Quality Management (TQM), Business Process Management (BPM) and Business Process Reengineering (BPR) and lean management practices, such as Lean Six Sigma, that have been applied in private enterprise and, increasingly, other public sector organisations (Maciag 2019). This strong emphasis on managerial leadership in universities is allied to conversations about internationalisation and the need for academics to embrace an imaginative approach to the role of HE as well to commit to university brand images and marketing programmes (Hall and Weale 2019).

Managers see an important ideological role for academics on fixed-term contracts such as the incorporation of full-time non-tenured post-holders into processes focused on issues concerning governance. This process has been identified as a key element in overcoming the obstacles to neoliberal reforms within universities arising from the inertia or opposition of tenured post-holders (Armstrong 2016). Non-tenured positions make it easier for managers to control costs and employees, as well as creating a fifth column, unintentionally developed by non-tenured post holders, within academia itself to undermine the status quo. The relationship between non-tenured posts, management strategies and issues of governance is underresearched and deserves greater scrutiny.

Interventionist managerial processes are not accidental nor simply the wishful fabrications of human resource departments. They are the practical localised manifestations emanating, in the European context, from the Bologna process initiated in 1999, developed within the Lisbon agenda, which mirror the free-market, strong-state neoliberal perspective advocated by the Chicago School of economics and politicised by Reagan and Thatcher in the 1980s. These processes Europeanise, marketise and boost competition within HE under a seemingly benign progression of harmonisation across the EU. The result, however, is anything but harmonious (Brøgger 2019).

Yet, because these processes are mediated through specific contexts, not all academics have experienced the environment described above in the same way or at the same time. Thus, some European academics believe 'that efforts to care for academic creativity and pursuit of knowledge for its own sake are not endangered by the growing pressures' (Horle and Teichler 2013: 34). However, in the United Kingdom 'many academics consider themselves as losing the typical academic life due to managerial pressures' (Horle and Teichler 2013: 34). This is not surprising given that previously the neoliberal agenda had more purchase in the United Kingdom than in much of the rest of Europe. However, that picture is changing with HE in Europe increasingly morphing into its UK and US counterparts (Schmidt 2018). In terms of research, 'academics find themselves working not within groupings defined by their original discipline but in theme-based interdisciplinary groups whose organising rationale is to serve some external constituency' (Brennan 2007: 20). While ideology is the driver for changed priorities in HE, technology is the delivery mechanism.

Technologies such as virtual reality offer possibilities for transforming the educational experience, but managers talk of digitally enabled institutions where ICT forms the nervous system, carrying the message about redesigning HE and undermining professional autonomy through non-inclusive decision-making processes, increased workloads, and expanding contradictory teaching and research roles.

Academics are also judged by their engagement with research as gauged by grant approvals, publications, conference papers, and participation in the publishing process via journal editorships, membership of editorial boards and peer reviewing. For-profit academic publishing is a \$25bn industry with profit margins reaching between 35–40% with the emergence of China as a major player in the area (Johnson et al. 2018). Academic publishing is an increasingly competitive environment with the concentration of academic publishing in a limited number of publishing houses (Hampe 2013). Consequently, five major for-profit publishers (Elsevier, Springer, Wiley Blackwell, Taylor & Francis and Sage) own over half of the world's academic material (Jandrić and Hayes 2019) up from 20% in 1973 with an estimated three publishers, Elsevier, Springer and Wiley Blackwell, controlling 42% of all published articles. However, some of these publishing houses are themselves owned by larger multinational companies with, for example, Elsevier being a profitable part of the RELX group which also controls the Scopus, ScienceDirect, SciVal and ClinicalKey academic databases. The numbers are staggering. Johnson et al. (2018: 25) estimate that there were about '33,100 active scholarly peer-reviewed English-language journals in 2018, collectively publishing some 3 million articles a year'. According to RELX's own figures, during 2018 there were:

over 2m articles submitted and 1bn articles consumed by researchers. In 2019, Elsevier published over 49,000 gold open access articles, a double-digit growth on the previous year, making it one of the largest open access publishers in the world. Elsevier's portfolio of 2,500 journals is managed by more than 22,000 editors (RELX 2019).

This concentration and centralisation of academic publishing and databases has intensified the competition, directly impacting on how research is undertaken and disseminated in terms of form and content (Peekhaus 2012) adversely impacting on the viability of niche journals, often linked to professional associations and providing an important outlet for quite specific areas of research. This has resulted in a funding decrease and problems of ranking as academics and librarians are coerced into subscribing to the journals owned by the big publishing houses (Rokach 2012).

There has been an increase in the number of online open access journals which account for between 7 and 11% of academic publishing (Kaiser 2010). While this appears to be a positive development, it does raise questions

concerning the business model with the possibility of authors having to carry the cost of publication which can range from \$500 to \$3000 per paper (Kaiser 2010). A further problem is associated with peer review and 'according to the Directory of Open Access Journals, which tracks some 5000 scholarly and scientific journals, only two-thirds are peer-reviewed' (McKetin 2013: 1).

The peer review process is also problematic. Leaving aside issues such as quality, Eve notes that peer reviewing often acted as a filter to reduce the number of articles appearing in journals given the limitations of space (Eve 2014: 140). Further, the process of peer reviewing is often faulty given the nature of the subject areas and various sub-sets contained within them, and the targeted audiences for academic journals. The act of peer reviewing has stimulated the development of a problematic self-censoring mechanism by encouraging submissions that fit the priorities and perspectives of a given journal, and which are not always 'peer reviewed'. Goodfellow (2014) argues that there are problems associated with digital scholarship and openness and that:

any assumption that as academic scholarship becomes more digital it should naturally become more open ignores tensions that reside not only within the scholarly community in its response to digitality, but also between the ideals of academic scholarship and the idealisation of a democratising and inherently educational open internet (Goodfellow 2014:).

Even getting published does not necessarily mean access to funding for research. Studies looking into the allocation of health research funding in both the US and the UK noted that while there may be some differences between the two experiences, 'the picture seems to be consistent in both cases: many of the researchers who publish the most influential papers in health research may be left out of public and charity funding' (Stavropoulou, Somai and Ioannidis 2019). They further add that most of the funding available for health research from the three major funding bodies was awarded to serving board members of those bodies who do not figure as authors of the most cited, influential research papers. Stavropoulou, Somai and Ioannidis conclude their paper by saying decisions on who will receive a grant may be influenced by the 'money-follows-money' rather than 'money-follows-excellence' principle.

Prior to the 1980s, the scholar's experience was mediated through specific national and sectoral contexts. However, the neoliberal reshaping of the university sector plus the domination of academic publishing by an increasingly diminishing number of publishing houses has homogenised the conditions within which academics work. Difficulties in obtaining funding for research; the imperatives of funding bodies; the squeeze on time because of teaching or administrative commitments; the lack of institutional, human and technical support on top of the pressure to publish are the burdens with which

research-focused academics must cope (Kinman, 2019). Yet, as Halfman and Radder argue, for ‘public professionals at universities, despite everything, an academic profession is still also a vocation’ (Halfman and Radder 2015: 184) they see themselves, first and foremost, as researchers or experts in a ‘disciplinary or professional field rather than teachers of their subject’ (Macfarlane 2004: 8). Therefore, the evidence indicates key concepts which were ‘traditionally firmly woven into the very fabric of knowledge production’ (Kogan and Teichler 2007: 11) and which denote the academic professional, such as autonomy, academic freedom, linking research to teaching, the pursuit of knowledge through scholarship, and the freedom to publish without constraint and external pressure, have been eroded by the neoliberal steamroller. Scholars’ aspirational view of themselves lags behind the underlying reality of their working conditions. This self-image clings to a romantic view of the scholar’s position which is increasingly untenable and one sustained by what Gibbs (2019) calls a veil of self-deception about their roles and possibilities. The only certainty for the academic profession is increasing uncertainty.

The conditions in which lecturers work have encouraged researchers, such as Musselin (2007), to argue that:

the current developments affecting academic (craft) activities tend to transform them into academic (industrial) work. This considerably reduces the differences between the members of the academic profession and traditional workers. In terms of control over the organisation of their time, the allocation of tasks and the specialisation of their activities, as well as in terms of staff and career management, the discrepancies between a wage-earner in a firm and a faculty member have decreased on the average (more for contingent staff than for the traditional tenured positions) (Musselin 2007: 183).

In one study of graduate teaching assistants in the UK, one participant said they are:

acting a little bit like peacekeepers and a little bit like a machine factory, just to get everybody through. So especially with the labs. So I taught the same lab 21 times over three-week period, and it was a little bit like a factory turning out the same thing over and over and over again to students (Raaper 2018: 429).

This is the general environment within which scholars carry out their daily tasks and space has precluded from this discussion issues such as diversity, recruitment, career progression and research opportunity; the relationship between academic journal editors and publishers; the link between plagiarism and the pressure to publish; the increasing problem of published papers based on false

or reworked (and misrepresented) data, the growing divide in income between university bosses and scholars, and the relation between the managers and the managed. Another focus could be on the crisis developing in HE governance while at the same time appreciating the mediating factors that influence these problems on university governance.

5.3 Alienation Theory in Education

Mann (2001) uses Marx's theory of alienation to examine the student's alienated experience to seek an explanation for and a possible solution to the lack of active engagement by learners in HE. By recasting her approach to focus on the lecturer's perspective, it enables us to glimpse at the alienated condition of the academic. Mann writes of the difficulties associated with surface or strategic learning. The former is 'characterised by a focus on rote learning, memorisation and reproduction, a lack of reflection and a preoccupation with completing the task' (Mann 2001: 7). Strategic learning is driven by simply getting the task done and is determined by 'assessment requirement and lecturer expectations and a careful management of time and effort, with the aim of achieving high grades' (Mann 2001: 7). However, students can only employ such learning strategies within an overarching educative process designed and implemented by lecturers. Thus, the institution through the practical activity of the lecturer, encourages and delivers the constricted and task-driven activity of the student via a set of contradictory relations.

Mann locates alienation in specific concrete practical conditions and identifies six possible conditions where learners' alienation may arise. The first relates to the tendency for HE to focus on external needs, primarily the labour market where notions such as utility and transferable skills drive the teaching and research agendas. These imperatives are familiar to those working or studying in HE since they dominate curriculum design, subject choice, subject coverage, delivery and assessment modular teaching, research and so forth. This results in the student being estranged from the possibility of a meaningful personal purpose in engaging in HE. To emphasise this theme, Mann cites Barnett who comments, in words that could equally apply to those researching in HE:

To reduce human action to a constellation of terms such as 'performance', 'competence', 'doing' and 'skill' is not just to resort to a hopelessly crude language with which to describe serious human endeavours. In the end, it is to obliterate the humanness in human action. It is to deprive human being of *human* being (Barnett 1994: 178).

The second and third alienating contexts Mann identifies are related first to the student entering a 'pre-existing discourse' determined and controlled by

entrenched, established roles and ‘more powerful others’ (Mann 2001: 10). Secondly, when the student encounters language, customs and systems alien to her, she is an outsider. Here Mann uses the metaphor of colonisation to illustrate the argument. These two pressures create a tension within the student between the creative urge to explore the world and the repression of this creativity arising from the need to conform to the demands of HE. As Mann argues:

The demands of learning the language of rational, abstracting, academic discourse and processes may require the student to repress their being as non-rational, creative, unconscious and desiring selves, the very selves which they may need for engaging in learning (Mann 2001: 12).

These pressures led to Mann’s fourth manifestation of alienation: the denial/repression of student creativity by the knowledgeable other. Compliance and acquiescence to the institution, lecturers and course demands dominate the student’s existence. Consequently, the student is estranged from her ‘own creativity and autonomous self as a learner’ (Mann 2001: 13). Mann’s fifth description of alienation draws heavily on Marx in that she likens the student’s loss of ownership of the learning process to that of labour. In the context of HE, the product, e.g. the essay, report, exam paper or Phd thesis, becomes part of the system of exchange. Hence, the relations between the student and the institution are mediated through assessment outcomes, undertaken by the academic staff, thereby reinforcing the power relations. Students have no right to challenge academic judgements about the quality of their work. Rather than liberating the student and propelling her into greater discoveries about herself and the world in which she lives, the product of her work simply reinforces the powerlessness she feels and replaces the idea of study with achievement determined and judged by pre-set norms.

Mann refers to Marx’s notion of species-being to argue that the student’s drive to engage in creative study is undermined by the very learning process itself:

From this perspective the learner’s estrangement arises out of the unequal distribution of power within the teaching and learning relationship, and the ownership by lecturers or the institution of the means for, and the values given to, work produced through assessment (Mann 2001: 14).

This has profound implications for the scholar since the student also ceases to be a person and becomes a summation of her grades which are eventually incorporated, via key indicators and so forth, into the grades of other students. This leads to Mann’s final expression of alienation where the process of assessment, apart from reinforcing hierarchical and unequal relationships as well as normalised judgements, determines what a student feels about what he has or

has not achieved. His worth is measured by his marks and his worth, as determined by the grade, is judged against those of other students.

Thus a 'good' grade reaffirms the student's worth to the institution, to his teachers, to her supervisors, to other students and to herself as well as to all those outside the education institution, such as parents, who have invested time, money and emotional energy in the student's outcome, as well as potential employers. The grade, which is itself the result of an academic judgement which cannot be challenged, cements the power relations within academia. As Mann notes, 'Such an experience, especially when it is linked to failure, can be argued to contribute significantly to a feeling of alienation, in the Marxist sense, from the product and process of one's work, from one's self and from others' (Mann 2001: 15). Further, a good or bad grade reflects on the academic by enhancing or undermining her reputation with subsequent impacts on her department and so forth. These sentiments can also be applied to the scholar with, for example, the publication of an article in a prestigious journal.

From the perspective of the student, it is the needs of the other that determine education programmes so, for example, the organisational structures and goals set for students, at all levels, in the EU are geared towards enabling students to become digitally literate so as to provide a workforce of appropriate skill levels to meet the labour needs of the knowledge economy. This environment has significant ramifications for academics for several reasons. The first is the impact on scholars from priorities driven by corporate goals. 'As universities and departments operate according to corporate plans, so the institution takes priority over individual creativity and collegiality gives way to corporate-bureaucratic line-organization' (Thorpe 2009: 110). Here Thorpe cites the specific instance of the UK Research Assessment Exercise driving the research agenda and determining the quality of research output. The second is that if the student is alienated the question follows: from whom is she alienated? Part of the answer must be her lecturers and those who are responsible for running the institution. Thus, implicit in Mann's thesis is the creation and continuation of a whole series of alienated relations and shifting the angle of vision in her argument reveals the role of the scholar in this process.

5.4 The Scholars' Perspective

These conditions have an impact on how academics feel about their roles and the strategies they use to work in an environment riven with competition, contradiction and alienated relations with students. In looking at how academics react to managerialism, Teelken (2012) found that academics exhibited 'a clear dislike of the growing administration, the increasing competition for research funding, the obligation to fill in time-consuming grant applications and the heavier workload. Examples of frustration and stress are omnipresent' (Teelken 2012: 287). An extensive study of Australian academics found that on average

they tended to work 55 hours a week, 35% of which were worked at home. Not all this work was directly connected to the university since many 'successful' academics are also required to undertake outside consultancies (Goodman-Delahunty and Walker 2010). A more recent study of workloads at a research-intensive American university found that academics work up to 60 hours a week (Misra et al. 2012). The problem of academics pressured into working long hours does not appear to be a nation-specific characteristic as evidenced by research from Iceland (Heijstra and Rafnsdóttir 2010).

The increased demands placed on academics are mediated through and amplified by the tools they use to do their job. The impact of ICT on academics has been a topic of extensive research, covering themes such as increasing email traffic (Jerejian et al. 2013), surveillance (Lorenz 2012), ethical concerns relating to plagiarism (Byrne and Trushell 2013), impact (or lack of) on teaching practice (Chetty 2013), and work-life balance. Research in Iceland found that ICT has a serious impact on academics' ability to manage work and home life because of irregular sleeping patterns, very early morning starts to check email, and the blurring of the distinction between work and self-time (Heijstra and Rafnsdóttir 2010). In many of the studies adopting a qualitative approach, such as the one in Iceland, the female participants had concerns about life as an academic.

This working environment presents several problems for relations in the sector. Cummings and Finkelstein note that academics express 'a sharp decline in their loyalty to their employing institutions' (Cummings and Finkelstein 2012: 131). Furthermore, the evidence indicates that a reconfiguration of relations is taking place within and between universities with a divergence of interests emerging between those individuals or institutions that have access to research funding and those who do not. An analysis of the impact the peer review process has on competition for research funds found that both within and between universities the process appeared to strengthen research elites and university managers (Musselin 2013). In discussing the relationship between academics, one researcher goes so far as to talk about 'academic tribes' and while this may be overstating the case, it does evoke an image of desperate academic groups in conflict over dwindling resources (Jones 2013: 76).

However, the process here is contradictory since, while being in competition with each other, institutions of HE and researchers seek collaborative projects to frame successful grant applications, especially from awarding bodies like the EU. Researchers who are working for quasi-public bodies that depend on funding from both private and public sources are also in this contradictory position. Many of these institutions regularly participate, alongside academics from universities, in project initiatives from organisations such as the EU running, for example, under the auspices of its 7th Framework Programme. In short, academics work in an environment subject to powerful external shocks adversely impacting on their working conditions as well as forcing through a reconfiguration of relationships with academia.

5.5. The Participants

From the 80 people approached for interview, selected for this setting from editorial boards of and contributors to journals associated with the ethical and societal implications of digital technologies, 20 agreed to participate in the study with eventually 15 participants being interviewed. It was not possible to interview the others because of busy schedules, diary clashes or problems relating to time zones. The 15 participants, seven of whom were women, were spread across four continents: the Americas, Europe, Africa and Australasia. Within the group, five could be described as having made a considerable contribution in researching and teaching the field; four could be described as developing a significant reputation the subject in terms of research and publications; and six could be described as coming relatively recently to research in the area and having made recent additions to discussions in the field. In terms of interest, six were directly concerned with ethics and ICT while the others research areas such as ICT for development (ICT4D), ICT and socially organised work practices, and more broadly, the impact ICT has on society. All the participants have published research and can be described as professionals who have a strong commitment to their work and subject area. Consequently, they were a pertinent group to investigate to what degree factors such as control of product and process, arising from the labour process, play in an assessment of alienation in this setting.

A point of interest to note here is the route by which the different participants came to be interested in research on ICT and ethics and/or the societal impact of the technology. Although the participants in this phase of the research did not share a common working institution and it was not possible to arrange a collective discussion of the issues explored, a number were computer scientists who had come to the area because of concerns about the relationship between technology, society and the computer scientist. The interview group also included academics with a philosophical background who had become interested in the relationship between philosophy and ICT.

Some researchers worked for organisations researching ethics and ICT as part of a requirement for European projects. Others were undertaking research as part of a wider appreciation of the issues and as part of their postgraduate studies. Some participants were linked to networks that have a close, shared, some might say, cherished view of the relationship between ICT and society. Thus, for example, Ethicomp describes itself as 'an interdisciplinary community dedicated to exploring issues and seeking ways forward' while working in a 'supportive and inclusive network' (Inseit 2017). Similarly, the journal *Ethics and Information Technology* outlines its scope as being a peer-reviewed journal dedicated to advancing the dialogue between moral philosophy and the field of ICT. This group of participants shared an intellectual coherence derived from their concerns about the impact of digital technology.

The element of the research involving the academics sought to approach the subject matter of the research from an angle slightly different to that of the other two settings for two reasons. The overarching area of concern for these scholars in the study is the societal implications of ICT. So how they progress their work and how that work is subsequently publicised are of direct relevance to any discussion about ICT, society and alienation since they are indicative of those investigating these issues. In the following section, F and M denote female and male respectively. E stands for an experienced scholar and R indicates a scholar relatively new into the area. US denotes United States, EU means European Union, AUS indicates Australia and SA means South Africa. Thus, FE SA would indicate the participant is an experienced female scholar working in South Africa. Where there is more than one person from a given country with the same profile, a number is used to differentiate between them; hence ME2 US indicates male experienced researcher number two from the United States.

5.6 Commitment to the Subject

Scholarly interest in researching the ethical and societal implications of ICT has a distinguished pedigree and the intention is not to rehearse the history of the subject since this has been well covered elsewhere (Bynum and Roger-son 2003). Rather, the purpose is to explore the reason why the interviewees in this setting were motivated to address a myriad of concerns over the way the technology has been developed and used. Initially, research into the ethical and societal implication of ICT was limited to a relatively small number of ICT professionals and philosophers but this activity has been given a strong impetus flowing from the expansion, development and subsequent use of ICT. One of the initial concerns of computer scientists stemmed from the problems associated with the US Strategic Defense Initiative of the mid-1980s. As one interviewee said, in talking about the information technology required to support that system, *'what me and other computer scientists in the US who did not see great research dollars lying on the table said... you don't know what you are talking about [using computer in the programme] since we have enough trouble just printing bills'* (ME2 US).

These concerns prompted an examination of the technology from a philosophical perspective which resulted in an ongoing conversation between practitioners and philosophers, later joined by social scientists – an engagement that developed as the technology changed and expanded. As the technology evolved so did the nature of the research since each technical development posed new and sharper challenges for those engaged in research thus pulling an ever-growing circle of academics into its fold. The emergence of various national computer associations seeking to encourage IT professionals to connect with the ethical and societal implications of their work provided a further

impulse. From the tsunami of revelations concerning PRISM, the US National Security Agency's data-gathering operation and the implications for the integrity and security of personal data in 2013 (Kuner et al. 2013), through to the Cambridge Analytica scandal on to the issues associated with the Chinese tech giant Huawei and Big Data, there are no end of themes to explore from an ethical and societal perspective.

Academics keen to adapt, develop and employ the technology in a socially progressive way are also drawn to the subject area. One participant commented, *'I am interested because not much work has been done on ethics and ICT for rural development... I want to know why rural ICT projects often fail'* (FR SA). Another referred to the help ICT could offer in the reduction of poverty. One participant commented that her concern was focused on governance issues associated with the way *'IT is planned, built and managed'* (FE AU). A further spur to the interest in research in the area has been the availability of research grants awarded by various funding bodies, both public and private, and the development of corporate social responsibility programmes. In the latter instance, ICT companies are now required by law in some countries, such as those in the EU, to show a commitment to business ethics and compliance policies which results in the development of ethical training programmes. While the motivation for companies adopting these processes can be located in the business case linked to the benefits of compliance and the need to avoid costly fines arising from instances of bribery and corruption, it has added further impetus to research in the field (Jones 2013).

Whatever the specific motivation or particular direction of interest, all the participant academics, including some who have been engaged in this area for many years, indicated a strong personal commitment to their work. They perceive their work to be part of a wider discourse directed at linking ethical issues to digital technologies. One interviewee put it this way: *'Computer ethics has been excellent for me professionally and personally. It has really helped my thought process and I wouldn't change any of that'* (ME1 US). A researcher relatively recent into the area said, *'I feel it is also something that needs to be done and I am in a position to do so... no, no I don't think I would change anything'* (FR EU).

For the scholars researching the ethical and/or societal aspects of ICT, their work is more than a research project: it is a personal commitment that seeks to reach out into the world, and to positively influence the future of that world. As such it could be argued that this activity plays a significant role in defining who they are and their place in the world and underlines the view argued by Marx that work is more than simply a means of earning a living. However as will be seen later, this perception is very much undermined by their own practical activity. Having looked at how important the research theme is to the scholars who participated in this setting, the discussion will now explore to what degree they feel their work is a creative process. This will be followed by looking at collaboration.

5.7 Creativity

Discussing the connection between creativity and work was considered a valuable point of departure when investigating alienation and scholarly activity for two reasons. The first is that it relates to Marx's idea of work being intrinsic in helping to fulfil what he calls our species-being. In his scheme of alienation commoditised labour instead of being a positive, creative and life-affirming experience, is a negative and undermining condition. Creativity is normally regarded as a satisfying activity and therefore considering this aspect of scholars' views of their work could provide an effective examination of alienation. The second reason was that the discussion on creativity provides a useful reference point from which all other aspects of the scholars' work can be considered. The interviews undertaken for this setting identified three ways in which they believe they are creative: first there is their general view about the creative nature of their work; second, their perceived need to produce meaningful and influential outcomes; and finally their need for creativity in conducting the research process. Each of these aspects will be considered in the following sections.

The researchers were asked if they felt their work was creative and, irrespective of either being an experienced or recent researcher in the field, they were remarkably consistent; they all indicated their work to be creative. For them *'being creative means making something that wasn't quite there before'* (FE EU). Making connections that perhaps have been overlooked before which is a process of *'synthesizing and making connections'*, makes the work creative (ME2 US). For them it was specifically about exploring work in other areas and applying it to ICT. As an example, one relatively new researcher said, *'I am at looking actor network theory... and... value sensitive design... and relating them to a capability approach'* (FR EU). This view was supported by an experienced researcher who commented: *'A creative approach means taking what has been applied in other domains'* and utilising it in a different context (ME EU). The creative element is considered important even where the researcher is aware of her limitations in terms of originality. As one interviewee commented: *'Little of what I do is original but taking what has already been done and applying it to technology is creative... is a wonderfully creative, imaginative and intellectual thing to do'* (ME1 US).

Referring specifically to ICT and ethics, a number of the participants said that the subject itself allowed room for creativity since *'ethical and societal issues of ICT have been overlooked... there is a need to look at ICT from a new perspective. This area allows for a lot of creativity'* (FR SA). This echoes the views of another participant who said it is *'very much a creative process because it is a relatively new field compared to say medicine... not a lot has been done in this area... [there is] room for creative work, looking at emergent technologies and relating ethics to them'* (ME3 EU). Another interviewee put it this way: *'The intention of research*

is to create new knowledge and add to the existing knowledge base... My gut feeling is that what I do is creative. I wouldn't be doing it if I wasn't' (MR EU).

From the foregoing comments it can be seen then that creativity plays an important part in the motivation of the scholars who were interviewed for this study. For these scholars, the space to engage with a creative impulse should form part of their everyday activity which supports the notion proposed by Marx concerning the importance of labour to the worker. The following sections will consider how this notion of creativity relates to the practical outcomes of their work.

For the scholars, it was important that their work realised tangible benefits. This is not surprising given they are concerned in one form or another with the relationship between society and ICT and their ability to influence that relationship. Thus, they shared a collective view that their creativity had to take concrete, practical forms such as, for example, the creation of a framework governing the use of ICT; publications like reports; a course of academic study; the creation of communities aimed at broadening and deepening interest in the topic, such as those which has developed around *Ethicomps*, societies, and journals; the production of a specific ICT product; and a system valuable to end-users. The last two were particularly important for scholars engaged in research related to ICT for Development (ICT4D). For some of those more closely allied to ICT and ethics, the creation of, for example, codes of ethics were considered important. In some instances, the audience for these outcomes existed outside of the academic community, with for example one of the participants regularly writing a column for a technical magazine; another giving presentations on ICT and ethics to large multinational ICT companies; and others being engaged in linking ICT to rural development.

The participants were extremely sensitive to the need to produce publications such as conference papers and/or journal articles and this was considered a critical aspect of their work. One very experienced scholar referred to a '*very creative*' paper written some time ago that has since been taken up in some parts of the subject area. He added that he believed his location, in Europe, allowed for greater creativity than has been experienced by academics working in the US (ME2 EU). This production of intellectual artefacts was seen by all participants as being of critical importance for their sense of self-worth. Even where research programmes result in a product for an external body, such as a funding body requiring a final report, or a piece of equipment, researchers believe that the publication of journal articles is central to their role. The motivations described here strongly echo some of the comments Marx makes about our species-being, in that we seek to change the world to make it more fit for living but do so in a creative, contemplative and reflective manner.

However, the outcomes of this creative endeavour are often directed at other academics since journal articles and conference papers tend to be read only by those active in academia. In this respect, researchers in this field are no different

to those working in other subjects. So, as Jones argues, unlike the artist who produces for a general audience, academics create for their peers located within a relatively restricted community consisting of people ‘who are familiar with the discussion that led to the work at issue and who, consequently, understand the presuppositions and assessment-criteria upon which the claims being made are based’ (Jones 2013: 82). The above discussion indicates that creative activity is seen by scholars as a vital part of their work and is seen by them as being expressed in a concrete form. The following section looks at how creativity is applied to the research process.

For some of the respondents, creativity is a condition for undertaking the act of researching: it is integral to the activity. As one contributor commented: there is a *‘need to be creative, to find novel aspects of a problem... creative to define a research problem and to do something and to find an answer’* (ME1 EU). This view was echoed by the views of another scholar when she said, *‘I am going down avenues that people have not been before... I am approaching things in a different way... I am creating an alternative’* (FE EU). A significant amount of research is currently being undertaken in a collective environment with research proposals often requiring teams of academics to collaborate to initially write and submit grant applications and subsequently undertake research. This environment also encourages scholars to apply their creativity beyond the production of the specific outcomes discussed earlier and is seen as a key component of the work process in which these scholars are involved. *‘You need to be creative’ [because of the need] ‘to collaborate, to share data... and to make things happen’* (FE EU). Creative problem-solving is considered an important element in developing solutions to difficulties that may be encountered. In particular, the participants identified the challenges evident in trying to get end-users, technical experts and academics working effectively for the same objective. Creativity of process is therefore seen as an important requirement to achieve outcomes. As can be seen then, the notion of creativity runs like a gold thread through the actions of the scholars who participated in this part of the study. They were also aware that much of their work demands collaboration with others and the discussion now focuses on this aspect.

5.8 Collaboration

All but one of the participants indicated that they considered their work to be of a collective nature in one form or another. For some, the collective aspect referred to drawing on the previous work of other contributors to the field. As one participant said: *‘I always say we stand on the shoulders of giants. You cannot write something interesting if your work is not embedded into a particular framework’* (ME4 EU). Most referred to a peer-review process, either informal or formal.

'I have not written any paper that I have not shown to someone else... so it is collective' (ME2 US). The positive aspects of collaboration were emphasised by several of the interviewees as indicated by one of the scholars, *'this is a collective process... within Europe it is very collective... people don't want to re-invent the wheel'* (FE EU).

A further comment related to the sense of belonging to a wider community: *'I have the feeling I am not alone in getting this process across'* (FR EU). This sense of community registered strongly in many of the contributions with one interviewee saying, *'I rarely write something by myself anymore...I am always collaborating'* (ME1 US) and another commenting that *'all my work is done jointly with students... and I collaborate with other academics'* (ME3 US). Most of the scholars interviewed for this setting would support the view that research in a collaborative environment is a positive experience with two saying: *'I have a fantastic collaborative environment'* (FR AUS) and *'Most of it is collective. We work in teams with universities or students or supervisors... Whenever we are involved in a project it is usually a huge team'* (ME3 EU).

For some, research can only be successfully undertaken within a collaborative environment. As one participant said: *'the whole idea of research only works as a collective effort... nobody can do it on their own. The individual has a role... [it] becomes important if it is part of a collective endeavour'* (ME EU). This interesting comment hints at the notion that individuality can only be expressed in a relationship to a wider collective environment. For some participants, collaboration played a fundamental role in the development of a supportive, nurturing context within which research could be undertaken. The Ethicomp conference and its supporting infrastructure were cited as an example of a positive and inclusive milieu which seeks to address the key issues relating to the ethical and societal issues of ICT while encouraging, embracing and valuing new researchers in the subject. The participants' comments in this section of the study indicate a strong resonance with the co-operative nature of work identified by Marx in his discussion about alienation.

The evidence presented so far describes a condition in which these scholars see their work as a life-affirming, creative and collaborative experience from a number of perspectives and as such they are prepared to make a considerable personal commitment to the research. While appearing to confirm Marx's linkage between concept of species-being and creativity, it is also at odds with his theory of alienation arising from the labour-capital relation. However, in applying Lukács' formulation of totality, mediation and immediacy, there is a need to zoom out and to place this activity in a wider context of trends in HE to consider whether this broader environment has a positive or negative impact on the scholars' work. The following sections seek to explore issues such competition, as it appears in various forms, the publication environment, institutional pressures, and control of the research agenda. The discussion opens by looking at academic competition and then moves on to consider the other issues.

5.9 Research and Competition

As has been discussed above, scholars considered creativity and collaboration as playing an important role in their work: indeed, it is seen as a necessary requirement for them to engage in research. However, this creative and collaborative engagement takes place within a wider context of trends in HE whose broad characteristics have already been outlined. The conversations with the scholars indicated that they are sensitive to this wider context and are aware that it impacts on how they go about their work. The interviewees identified how competition is evident and influential in specific areas of activity, some of which had not been anticipated in advance of the data gathering. The areas identified by the interviewees where competition had a significant influence included: funding, publications, on relations between institutions, within institutions, within the subject area, and with other subject areas. They also spoke about the impact competition had on their activities. It is these aspects that are discussed in the following section which opens with a reference to funding.

Access to funding plays four vital roles. Firstly, researchers depend upon the allocation of resources, which can take various forms, to provide support for their work. In addition, successful access to funding forms part of the criteria determining the worth of a researcher, measured both formally and directly, say within a given institution, such as the allocation of research hours and in considering applicants for appointments, and indirectly as, for example, in determining who would be a worthy partner for projects both internally and externally. Thirdly, winning funding imbues the successful applicant with a credibility that can be cashed later for further funding. Finally, and this is particularly so for research centres, it binds researchers together under a particular research agenda, often of an international nature.³ However, as research indicates (Rodríguez and Zaballo, 2013) the quest for funding is undertaken within an environment that is increasingly competitive as funding for research has experienced considerable cuts in recent years.⁴

One experienced researcher recalled the intensely competitive environment of a previous workplace that *'was a very competitive environment...[at two others there was a] great scramble for grants... at another we were constantly talking about where the next grant proposal was coming from...'* (ME3 US). As the following comment indicates, this environment has a directly adverse impact on researching the subject area: *'One of the most effective computer ethicists... uses his spare time writing on computer ethics because... he is required (by his institution) to get large scientific grants... it doesn't help him when there is this competition model'* (ME2 US).

Not all participants have encountered the scramble for funding. As one interviewee commented: *'I have not had any problems with competition funding because I produce papers... [but before]... it was a problem getting an organisation to fund me.'* However, this comment was quickly followed by a reference to

the difficulties in getting access to funding in his home country: *'In my country if you are not linked to someone very powerful you have no chance of getting a grant'* (ME2 EU). This experience echoes the reference made earlier to funding following a person of influence rather than excellence. Other participants concurred with the sentiment expressed by two scholars with one saying, *'In one way... all research is competitive... you compete to get funding from different agencies'* (ME SA) and *'There are certainly limited resources... amounts of time and funding from national agencies...'* (ME3 EU). Having looked at competition for funding, the discussion will now shift to consider the competition involved with publications.

A great deal has been written recently on the problems associated with getting published and, as mentioned earlier, all the scholars interviewed for this study felt that publishing papers was a key aspect of their work. One recent researcher in the field said, *'Competition relates to publications... getting the word out... getting your publications known'* (FR SA). Her immediate concern was to disseminate her research as widely as possible yet, as another participant from her region notes, *'In my country there is only one set of peer-reviewed journals and resources are affected by who gets published'* (FE SA).

These two quotes neatly summarise the problem facing any scholar seeking to reach out to a wider academic circle: *'Because there are a limited number of publications and spaces this leads to competition'* (ME2 US). Publication is critical for the diffusion of research results and directly impacts on the distribution of research funding. The problem is compounded by the self-perpetuating hierarchy of journals in terms of ranking. The higher the ranking the more difficult it is to get a paper accepted by a journal thus increasing the intensity of competition. As one interviewee said, *'Getting into certain journals is highly competitive'* (ME1 US). The impact of this environment on the mood of the scholars, particularly those new to the subject, is summed up by one participant when she asked, *'Have you not heard of publish or perish?'* (FR EU). The hierarchy of journals is matched by the hierarchy of authors for, as one contributor said, *'If your name in the field is known, there is normally no problem to get published. If your name is not known... it is very difficult to get published'* (ME2 EU). He went on to say that a paper that had previously been rejected would now be accepted because of his reputation.

A key aspect of publishing is the peer review system and all of the participants in this part of the study had experienced peer reviewing, in one form or another, and their views on peer-reviewing were mixed irrespective of whether they were recent or experienced researchers. Talking about peer reviewing for journals, two scholars commented: *'Usually I am quite happy with it... it is helpful... my experience generally is that they [reviewers] are helpful'* (FE SA) and *'most of the time I appreciate the value added by the reviewers'* (ME1 US). Another commented that she found the system *'valuable, and sometimes you get excellent feedback and it helps you improve'* (FE EU) and one other said, *'Sometimes it was really helpful'* (FR EU).

However, almost all of these comments were qualified to one degree or another. *'I mean sometimes you are frustrated by reviewers' comments...'* (FR EU). Another explained that *'you are assuming that it is an expert who is doing the review... and has an overview of the field... this is utopian now because... it is impossible for someone to have an overview of all that is produced'* (FE EU). Another participant remarked that *'sometimes the reviewers are not a match with the topic'* (FR SA). Rejection of a paper is not a light matter for these scholars, for as one experienced researcher in the field said, *'Some of the time I think it is unfair and incorrect and I take it personally'* (ME3 US). To this he added, *'Getting accepted is a big deal. Even at this point in my career I still get rejections, and this is still discouraging'* (ME3 US). Overall, the participants felt that the idea of having their work reviewed by their peers was just a part of the research process activity and the general view of these scholars towards the journal peer review process was summed up one participant when he said *'I feel about the peer review process the same way I feel about the job interview process... they always do injustices and yet they are necessary'* (ME3 US).

If the peer review system for journals appears as an imperfect and yet necessary process, project reviewing was seen as extremely problematic by one participant with experience of projects as this extended quote indicates:

When it comes to project review this is a different story... it is of a very low standard and not really serious... from within the European Union... there is pressure not to be too critical... there are lots of problems with this review process (FE EU).

Given that substantial sums of funding are now available for projects concerned with ICT from the EU and given that these projects include a wide range of researchers, the weakness in the review system identified by the comment immediately above has consequences for the quality of research. There is a further problem associated with publishing linked to authorship which is in turn related to the prolific publishing schedules of some scholars. Ioannidis, Klavans and Boyack (2018) have undertaken an examination of primarily scientific papers to show that there are relatively few academics publishing a significant number of papers with the number publishing 72 or more per year having increased over a 14-year period. It is not surprising that they open their paper with the sentence: 'Authorship is the coin of scholarship — and some researchers are minting a lot' (Ioannidis Klavans, and Boyack 2018: 1). Having considered aspects linked to the competition involved with funding, publishing and peer review, the discussion will now briefly consider other forms of competition identified in the interviews.

So far, the discussion on competition has focused on funding, publication and peer review. However, competition exists in other guises and this section touches upon three identified during the conversations with the interviewees, namely competition between theoretical approaches, academic societies and

disciplines. Scholars concerned with researching the ethical and societal implications of ICT, like academics in other disciplines, draw upon an array of theoretical perspectives to inform their investigations and individual researchers can focus on a particular aspect. In the specific context of ICT ethics, one experienced scholar said, *'I push practitioner ethics... others take a more philosophical perspective'* (ME2 US). There is tension between these two broad approaches which has been exacerbated by the expansion of interest in the area. In discussing the globalised nature of the subject area, an experienced scholar referred to a possible competition for a hegemonic position within the field and remarked that we *'might start to see clear competition between approaches... competition between... Anglo-American and ... Continental Europe and Australia on the one hand... and the Islamic countries and China and India on the other'* (FE1 EU). One participant noted that this growing interest has led more academic societies to become concerned with the subject thus creating competition for resources, including people. He added, *'... we don't always play nicely with each other'* (ME1 US).

A further area of competition mentioned by the scholars related to competition between disciplines and the pressure this creates in undertaking particular forms of data gathering. As one researcher said, it is *'a competitive process in terms of other areas of research... for example... economics... [and the]... pressure to get more quantitative data'* (FR SA).⁵ Having looked at some of the competitive aspects of research in this field, the discussion will now turn to look at the impact of a competitive atmosphere.

This section looks at the differing perceptions of the participants of the significance or otherwise of the competitive environment. For some, competition was considered beneficial, and an important component in safeguarding quality; as one scholar commented: *'I want competition to be there as a sort of guard against fluff passing as good ethics'* (ME3 US). This view was supported by two other interviewees who remarked that, *'I do think that competition can lead to better quality'* (ME2 EU) and *'I do see the merit in competition as driving up... quality'* (ME1 EU). Although the latter scholar qualified this comment by adding that *'perhaps this is too simplistic.'* Another participant said that she enjoyed this environment: *'That is to me one of the reasons I am here. I like to work under stress'* (FE SA).

However, the comments from most of the participants were critical of the environment. Some identified competition as leading to exclusion with two participants remarking that, *'There are certainly people who are left wishing they had more interaction and influence'* (ME3 US) and *'I am starting to learn to be careful with people I don't know about sharing ideas... I limit now to working with a smaller group of people that I know and can trust'* (FR EU).

The grant tendering process, discussed above, deepens the exclusive impulse and has consequences for academics looking to develop networks and relationships; as one interviewee said, *'You have basically to win... so there is competition and you choose who the best partner is'* (RE EU). What is being highlighted

here is that well-established researchers or (increasingly) research centres are preferred to relatively less well-known scholars even if the latter have greater expertise in the subject area.

At the same time, the pressure to develop a high profile produces contradictory tensions for scholars that undermine the collaborative inclination for, as one participant said, *'Perhaps people who are younger and less well established... cannot afford to be too collaborative'* (ME1 US).

The choices made when deciding to publish research papers are strongly influenced, in several ways, by the competitive environment. Describing the situation in this context, one scholar said, *'In terms of getting into journals it is highly competitive where some journals have a 5% acceptance rate'* (ME1 EU). He later added that these *'are just different types of conditions that influence my behaviour.'* Some had doubts about how effective competition was in pushing up the quality of research. A more recent entrant into the field said, *'What you have in journals is not a measure of your work for society or how much you have helped stakeholders'* (FR EU). They are also aware that often their work and the work others produce are not of an original nature, for as one of the participants said, *'The idea of publish or perish is for me is something quite bad because I think that only creative papers... saying something new should be published'* (ME2 EU).

Competition also has subtle, self-regulating impact. One participant in talking about his research output said, *'I certainly have made arguments that deep inside myself I would have made differently, on the basis that I knew that if I didn't do otherwise the work would not go through the peer review'* (ME1 EU). It is important to recall here that the participants were scholars who are deeply interested in the ethical and societal aspects of ICT and this particular researcher was an advocate of competition. However, as the quote indicates, he acknowledges that the pressures of competition compromise intellectual integrity.

The notion of creativity is also undermined by the competitive environment. As one interviewee said, *'The problem is that when you have so much pressure to publish you cannot publish something creative all the time so you have to publish something quite average... not something particularly new'* (ME2 EU). The process being described is one where scholars must publish and impose self-censorship on the intellectual core of their work to meet the demands of a given journal and/or institution and knowingly submit work they feel is of an inadequate standard. The implication underlying these sentiments is that competition has a significant negative impact on the quality of intellectual endeavour because it limits the scope of research (it has to fit with the demands of the preferred journals) and leads to the recycling of existing ideas.⁶ Furthermore they imply that the competition to publish denies the possibility of judging the significance of research using other criteria.

Competition also has a negative impact on the collective nature of research and here not all the participants felt the collective effort was beneficial. One

researcher working in Europe said, *'Doing the research individually but listening and getting comments from other researchers...projects create the need for a more collective approach...[this] can be negative... it would be better for individuals to get research money'* (ME3 EU). One indicated that she preferred to work alone: *'I have very little collaborative work... Philosophers are usually loners, right?'* (FE EU). Another hinted that collective work can disguise individual contribution. *'The most recent work was part of a team... we published as a team, but I did all the work... I had the time... they had the grant... '* (FR AUS). Competition results in winners and losers and as one scholar remarked: *'I think that the people who are at the top of this field have won this competition'* (ME1 USA). However, for those who have *'won'* they must keep winning which is not a given and there are continual reminders of this. One experienced researcher said that the competitive nature of research becomes evident, *'every time you get rejected for publication be that a paper or proposal'* (MR EU). This is also the experience of emergent researchers for as one participant commented, *'entry-level researchers do consider it to be competitive'* (ME3 USA).

In talking about how she felt about the competitive nature of the activity, one scholar said, *'I struggle with that personally quite a lot... the tension between scientific goals of the university and social goals is very stressful... '* (FR EU). Another articulated a view that sailed close to the cynical and resigned when he said it is *'part of the game'* (ME1 EU). Having looked at issues arising from the competitive nature of the research environment, the discussion will turn to consider to what degree scholars believe they have control over the outcomes of their work.

5.10 Control of Outcomes

Participants made a clear distinction between what they produce and what control they have over how their final creation is used. Thus, one very experienced researcher said, *'I have enormous control over what I am writing'* (ME2 US) and this was supported by another interviewee who remarked, *'I can produce anything I want now'* (ME2 EU). These sentiments clash however, with those who expressed concern regarding competition where the final outcome can be influenced by a self-censorship process with papers and/or grants applications being tailored to meet the specific demands of a given publication/funding body. These comments link into the discussion Marx makes about alienation in that they indicate that these researchers seem to believe they are in control of their work, whereas the objective context, as discussed earlier, creates an environment within which external overarching imperatives drive the research agenda.

In other contexts, control of outcome can be quite overt with several other scholars noting that for externally funded projects outcomes can be

predetermined. As one remarked, *'It depends on who you work for... if the purpose and objectives are given to you at the start of the project you have less control over the research because you only give the results they want'* (FE SA). This does not mean that the scholars simply write what the funding body wants to hear, but that the scope of the research is constrained. As a result, other aspects are ignored, even though they may be considered by researchers to be worthy of investigation and directly related to the specific study. While there were differences of view over what control they have may have, for example, over the content of the papers, for example, they may write, there was a near unanimous view among the scholars about how much control they had once their work went out into the world. In discussing this aspect, comments such as *'Very little to tell the truth. You know when you produce these documents you basically submit them to the [fund provider]... and that is really it... we don't have any real influence... we finish a project and say goodbye...'* (ME4 EU) and *'to be honest, I don't think we have any control over how work is used...'* (FR SA) as well as *'little. Certainly, academic research gets published and then whatever happens, that is out of your control'* (ME2 EU) were common. This lack of control over outcomes is a critical feature given that earlier it was noted how important outputs are to the creative process and the desire to make a positive impact on the use of ICT.

As these comments indicate, scholars are extremely sensitive to the lack of control they have over how the papers and suchlike they produce are used. The conversations with the scholars also revealed a deep sense of regret over this situation. One developing researcher said that *'this can be quite disheartening because... the result of hard work... is just brushed off and not really applied'* (FR SA). This perspective was echoed by another who remarked *'After I have finished and published and tied it all up... there it sat which was a great pity...'* (FR AU). These sentiments were shared by the more experienced scholars one of whom observed, *'I don't have any control over how that report is used. As a researcher there should be some way to control or inform yourself how these things are used'* (ME4 EU). One participant noted that this lack of control may have an impact on future research when she said that *'...I think the issue is interesting... I have been thinking about it in terms of the ethics of this and how you, down the production line...flag-up areas for the people who are coming up next'* (FE2 EU). This section has discussed the issues emanating from a situation where scholars feel they have very little control over how their outcomes are used once they have been made public. The next section looks at the institutional pressures to which the scholars who participated in the study are subject.

5.11 Institutional Pressures

Although all but one of the participants experienced a degree of institutional pressure to engage in research and to publish that research, not all experienced the demand to the same degree. It was noticeable that those scholars who were

nearing retirement or who had retired believed that the demands from their academic institution took the form of a light touch. For others, however, there was intense pressure from their institution. Most remarked that they were required to publish and generate external revenue from funded projects and suchlike. One was quite specific about the form this took:

we get measured every six months using key performance indicators and if you do not comply out you go... they put pressure on you to produce outputs... I have to produce five peer-reviewed journal articles per year and at least ten conference proceedings... students make this easier (FE SA).

She went on to detail how a *'journal article is rated at 1 point, a conference paper is 0.5... and a book is valued at 5'* (FE SA).

Many of the scholars interviewed also teach, which creates conflicting demands for, as one remarked, *'there is a perception that... we will need to teach better and at the same time we will need to do research... the entire sector has become more stressful'* (ME1 EU). Having outlined several key themes arising from the research findings of this setting, the argument will now move on to an analytical discussion of the data. This will open with a reference back to Marx's notion of alienation.

5.12 Analysis

Marx talks of the creative nature of mental and physical labour and how this is undermined by work in capitalism (Sayers 2011). Some of the comments made by the participants indicate that they firmly believe their work to be of a creative nature. Further, they are all committed to the subject area and, to varying degrees, see their work as important. All would like to see their work as influencing and contributing to developments in the field: for them their work had to result in tangible benefits. In addition, they spoke in positive terms about drawing inspiration from the work of others both past and present, and the nurturing, collaborative environment in which they would like to work. Moreover, they see the work they undertake as being an important element in defining who they are. It would seem, therefore, that the experiences of these scholars are at variance with Marx's approach to alienation in that their work seems life-affirming and collaborative in its nature, to be embraced rather than rejected, and engaging rather than alienating.

However, as the conversations with these scholars progressed, they revealed a deeper set of underlying sentiments that expressed a cluster of contradictions which presented real practical challenges for them and which arise from the intensely competitive nature of the research. The evidence indicates that these contradictions revolve around four specific themes: the significance of the work they produce; the control of the things they produce; the increasingly competitive

environment in which they work; and finally, the compromises they make to be successful participants in the competitive, academic 'game'.

It is clear from the interviews with the scholars that while they would wish it to be otherwise, they know that ultimately the worth of the things they produce is not determined by whether they lead to positive, tangible benefits for society. The scholars know that their research output is the currency, the *cachet*, which opens access to further resources for research and/or helps to develop an academic career. That currency is measured by things such as publications in high-ranking peer-reviewed journals, citations and participation in grant-winning teams. Thus, their research is of value to their institution only in so far as it can be exchanged for something else, and that something else is determined by the organisational imperatives of a range of hierarchies manifestly beyond the control of the scholar. This immediately raises several issues linked to control of, say, outputs. The first is how much control scholars have over the process that determines the importance of their work. The evidence indicates that in several aspects, such as publishing and funding for example, scholars have very little control over this process. The ultimate ambition of any researcher is to be published giving rise to practical questions such as where to publish, what criteria will selected publishing outlets use to assess her work, what does she need to do to get published, and, after peer review, what changes are required to get it into print.

For journals, few academics have an input into determining the ranking of a journal and none of the scholars interviewed indicated that they had played any role in this context. Thus, the prestigious nature of a given journal is decided by the 'other' as is the worthiness of a given paper to be published. The peer review system, based on anonymous assessments, operates in tandem with the ranking process so that when a paper is reviewed, the scholar takes the criticisms and uses them to make the paper more publishable even if, as was hinted during the conversations, this alters, if only partially, the author's original intent. The goal is now to get published. This process distances these scholars from the original motivation they described thereby creating a conflict between the original intent and the need to be published.

A second issue relates to the employer, for while the 'other' making decisions upon the publishable worth of a research paper are often remote, the employer is not. For the scholars interviewed, their employer has little, if any, view on the impact a piece of work may have on society as a whole. The employer is solely concerned with the institution's research profile and this is measured by research assessment exercises and so forth. These pressures constrain what the researcher chooses to investigate; how the investigation is conducted; how the findings are presented; and the frequency of publication.

It also has further, deeper ramifications for it displaces the importance of the researcher's significance of her own work and confirms the value judgement of someone else, be it the publisher, the quality assessor or the institution – people

and organisations over which the scholar has no control. The interviews show that all participants are aware of these tensions and that most find them stressful. A small number, such as those who have retired or are close to retirement and/or some of those who have been involved in researching the subject for a lengthy period, indicated that their direct, immediate experience of these tensions had diminished.

A third issue relates to the distribution of research funds which tend to go to tried and tested institutions and academics. The tendering process encourages institutions to develop close relationships and collaboration with others who are most likely to influence the providers of funds. It also means that funding bodies have much tighter control over the research agenda since both general applications for grants and tendering for specific funds have to dovetail with the imperatives of the grant provider, which, for example, in the EU is focused on strengthening the knowledge-based economy. These developments encourage the emergence of a research hierarchy of organisations, people and ideas, and strengthen a restricted view of what is considered valuable research.

If the process is one which undermines the researchers' notion of value, what control do they have over the work they published? The remarks in the interviews made it clear that for these scholars they have no control over how their work is used once it is published. The article or paper or book or chapter goes out into the world and there is virtually no possibility of determining its impact or indeed its subsequent republication. This is a significant regret for the participants in this setting. The lack of control over both process and product are primary conditions for the theory of alienation advanced by Marx. In what appears at first sight to be the creative and, to some degree, autonomous work of the scholar, belies a deeper reality in which the scholar is in constant conflict arising from a range of contradictory pressures.

Having looked at the issues associated with process and control, the analysis will now focus on the consequences of the competitive environment. The data gathered from the participants reveals the extremely competitive environment within which they work. While some feel this condition is of some merit, most believe that it undermines research activity in general and their own work. It has implications for relationships with other researchers. Apart from the obvious point that other researchers are considered as competitors for resources, the interviews reveal the adverse impact of competition on relationships operating at more profound levels. Competition engenders fear of other researchers and encourages a lack of trust arising from the possibility someone else may steal an original idea. At the same time, the nature of competitive research requires that people work together in teams. Instead of the open and collegiate atmosphere sought by scholars, a contradictory set of relationships is established based on the need to be both competitive and collaborative, yet guarded, in the same moment. Thus, the collegiate impulse which scholars seek to employ in their

relationships with others working in the field is profoundly undermined by the competitive context in which they work.

The scholars in this study have a strong commitment to their work yet the pressures arising from competition contribute to an environment in which intellectual integrity is jeopardised and requires the imposition of a self-censorship. This self-imposed censorship is the practical expression of a conscious self-alienation since scholars are aware of the compromises they are making in order to become known in the field. In making these compromises, their actions contribute to the continuation of a system they recognise as flawed, and over which they have little objective control. Consequently, academics participate in building and perpetuating instruments of their own alienation. The evidence also indicates that for a significant number of scholars interviewed for this setting, dealing with the adverse environment they experience requires adopting coping strategies that involve a denial of preferred ambitions and priorities. It is reasonable to describe this as matching the notion of self-alienation. Further, if it is a reasonable conclusion that researching ICT is an alienating experience, then the commoditised product of that research must be viewed as inherently flawed as an objective assessment of the ethical and societal implications of ICT.

This analysis confirms the view that the key components of Marx's notion of alienation; i.e. alienation from product, process, others and oneself, can be used to examine and explain the condition of scholars who participated in this setting. The evidence also indicates that while the manner in which this alienation is manifested is mediated by specific particulars, there is a shared, overarching experience which influences the work of the scholars and which leads them to be alienated from what they saw as a life affirming activity. A further point of note is the attitude of the scholars to the notion of creativity both in product and process. In their responses to the questions on creativity during the interviews, the scholars were very clear about how important creativity was in their activities. However, when the questions began to focus on the determinants of both product and process, a picture emerges where the notion of creativity is intensely undermined by the overarching imperatives of the academic industry. This raises several questions concerning the space for creative, perhaps non-alienated, labour generally and within academia specifically, as well as focusing on creativity in researching alienation (McGuigan 2010, Woodhouse 2011). One area that has not been covered here but that needs further research is the potentially exploitative relationship between the postgraduate researcher and her supervisors.

5.13 Issues of Validation, Reliability, Bias and Ethics

Assessing the reliability and validation of the data gathered for this setting presented a challenge. As was the case with the chapter concerned with ICT

professionals, a complete version of this chapter was sent to the scholar participants for their comment. However, unlike the ICT professionals, none of the scholars responded with comments on the text they had been sent apart from one asking to be sent a copy of the bibliography. Thus, reliability and validation relied on two processes. The first involved an exploration of consistency of responses across the cases which indicated that on many of the issues discussed, the participants shared a range of similar views thereby enabling a move towards analysis. The other technique employed concerned a re-interrogation of secondary research. This confirmed that the issues raised by the participants are to be found in current research covering similar ground. The internal consistency within the interviews and their strong echoes of similar themes researched elsewhere support the view that the data gathered within this setting can be describe as reliable and valid.

5.14 Conclusion

This chapter has explored the views of scholars concerned with the ethical and/or societal implications of ICT to test whether the analysis of alienation presented by Marx is of any help in helping to understand their condition. It focused on both the processes and products of research and considered these within an overarching framework of intense competition. It also referred to changes that researchers appear to undergo as they go about their work as well the relationships in which they need to participate. The discussion indicates that Marx's notion of alienation has much to offer by way of understanding the day to day experiences of research academics. The act of engaging in the research process is a contradictory one. It enables the scholar to engage in work they deem to be stimulating, fruitful and beneficial in a creative way. Yet the act of researching changes the researchers and the pressures arising from the competitive research environment mean these changes are, certainly for most of the participants in this setting, strikingly negative in one way or another. As such it has implications for the way in which the outcomes of their work should be considered.

While the focus here has been primarily on research, studies relating alienation to education could also encompass more recent developments such as the provision of Massively Open Online Courses (commonly known as MOOCs) which can be free, publicly available classes with normally with high enrolment. Some of the issues that could be explored here could investigate alienation among academics involved with MOOC; the experience of MOOC students; the experience of the technical staff involved in supporting MOOCs; the motivation of MOOC providers and the competition between courses, institutions and academics working both within and outside the MOOC environment. The impact of Covid-19 on online courses will be significant as universities expand

the use of digital technologies to deliver extensive online teaching. Similarly, relating Marx's theory of alienation to the debates concerning the development of an academic commons may add a further dimension to these discussions. The next chapter looks at the views of both the ICT professionals and scholars about a specific aspect of Marx's theory of alienation, namely their attitude to work.