

RESEARCH ARTICLE

Resilient Scholarship in the Digital Age

Jeremy Huggett

This paper addresses the nature of digital scholarship and discusses the challenges for digitally engaged researchers in archaeology and elsewhere who find that the move to digital scholarship alters the terms of engagement in both the institutional and the personal context. For example, digital methods can counterintuitively lead to increased workloads and expectations of availability, and they are frequently linked to managerialism and marketisation of scholarship. Paradoxically, digital scholarship can entail both a tightening of control through forms of surveillance and an increase in freedom to work in places and at times of choice. This gives rise to a heightened experience of stress and insecurity, and so this paper will argue for the need for resilience in scholarship, not at the institutional level where business resilience approaches are already applied, but at the community and individual level, to benefit most those who experience the risks and downsides associated with digital scholarship.

Keywords: Digital scholarship; resilience; open scholarship; neoliberal university; sociable scholarship

1. Technology and Scholarship

Once scholarship might be characterised in terms of the lone scholar in an ivory tower, toiling in libraries, reading, writing and communicating their research through conferences, journals and books, networking in person with small 'elite' disciplinary groups, and teaching small numbers of students (e.g. Pausé & Russell 2016: 8). The move to digital scholarship sees scholars acquiring information online and communicating with colleagues via email, video and social media, blogging and networking about research, analysing and archiving data online, submitting and reviewing papers and grant applications via the web, and producing a wider range of outputs including grey literature and podcasts, for example (Holliman 2010: 4). The association of new technologies with scholarly activity

“... marks a new shift in academic practice from a formal, one-dimensional type of communication to different forms of engagement with academic knowledge within and beyond the academy ... [which] ... has given rise to a digital scholarship culture that is epitomised by a perceived liberation of the academic as consumer, producer and publisher of knowledge for the public good.” (Costa & Murphy 2016: 1–2)

Archaeological scholarship is frequently situated beyond the academy with a high proportion of archaeological employment in government agencies and commercial organisations (e.g. Aitchison 2019: 20–21). However, the focus of this paper is specifically on the experience

of the digital scholar within a university environment from a largely UK perspective. European universities are currently less committed to the levels of unbundling and efficiencies experienced in the UK, but strong parallels exist across North America and Australasia (e.g. Muellerleile & Lewis 2019: 6).

But what is meant by digital scholarship? Weller (2011: 184) has proposed that digital scholarship entails engagement, experimentation, reflection, and sharing, with the digital ideally seen to support and extend the existing functions of scholarship, even breaking down the boundaries between them. A precise balance will be found differently by different scholars: for instance, Grand et al. (2016) define three categories of digitally engaged researchers, recognising that these sit on a spectrum (**Table 1**).

Tensions are inherent in this model of scholarship. For example, there is a tendency for approaches to digital scholarship to focus on future trends and developments. In doing so, important practices and values may be lost as a result of commercial and cultural pressures while at the same time what remains may be rigidly ingrained and not necessarily beneficial for scholars or for scholarship more generally (Weller 2011: 169–70). The strike in UK universities in 2018 over pension arrangements brought many of these pressures to the fore and revealed how mainstreamed aspects such as commercialisation and commoditisation had become.

2. The Landscape of Digital Scholarship

One outcome of this commodification of the university is that “the use-value of knowledge diminishes, and academic time is increasingly devoted to establishing the exchange-value of the knowledge we produce” (Schwarz & Knowles 2018: 8). Consequently

Table 1: Features of scholarly digital engagement ‘types’ (Grand et al. 2016: 9).

	Online persona	Engagement	Digital tool use	Digital practice
‘Highly wired’	Well-developed	Highly collaborative, works with multiple stakeholders	Multiple tools; strategic; sustains partnerships	Originally personal but extends to projects
‘Dabbler’	At an early stage of development; patchy or unfocused; spread across multiple tools	Mixed; partial; collaborative; cooperative; multi-disciplinary within academic contexts	Some experience with multiple tools; strategic use at early stage; draws on colleagues’ skills	Originates in project demands but extends to personal
‘Unconvinced’	Non-existent or meeting minimal institutional demands	Minimal; discipline-focused within academia	Uses communication tools e.g. email	Low-level or non-existent

“The ideals of digital scholarship are tempered by the realities of academia, with its powerful prestige economy alongside the pressures of a diversified workload ... taking advantage of the digital revolution should come with an advisory sticker attached.” (Costa & Murphy 2016: 2).

Digital technologies are not the cause of the commodification and commercialisation of universities; nevertheless, they enable the characteristics of the neoliberal university which can

“... be seen as forming a critical new terrain inside which digital technology is used to control labour-power ... Cybernetics is a means of controlling, deconstructing and reimagining academic labour-power for value production, such that academic autonomy is unimaginable.” (Hall 2018: 149).

Accordingly,

“Understanding the complicated landscape of what it means to be a digital scholar now requires a more sophisticated appreciation of both the shift from legacy to digital scholarship and the struggle between the forces of commercialization and democratization” (Daniels & Thistlethwaite 2016: 17).

However, debates concerning digital scholarship and the neoliberal, commercialised, commoditised university are frequently disconnected. Discussions about digital scholarship focus primarily on techniques and technologies and their mainstreaming in practice (e.g. Borgman 2007; Cohen & Scheinfelt 2013; Weller 2011). Changes introduced through digital scholarship have become “co-opted into broader agendas around commercialisation, commodification and massification of education” (Weller 2017). Conversely, despite the digitalisation of university practice, critiques of the modern university (e.g. Berg & Seeber 2016; Brink 2018) make little reference to digital scholarship beyond passing reference to aspects such as the impact of email and virtual learning environments. In some accounts, the scholar is absent entirely (e.g. Sperlinger, McLellan & Pettigrew 2018). This makes sophisticated appreciation of the transition to dig-

ital forms of scholarship alongside the evolution of the commercialised, commoditised university difficult, and as a result the outcomes may be unforeseen, hidden, unexpected, and largely unrecognised.

For the individual scholar that is caught amidst the collision and hybridisation of digital technology and the academy (Suiter 2013: 9) this can be a profoundly unsettling experience, characterised as precarious and fearful:

“Widespread redundancies, growing levels of casual employment, unrelenting pressures from an increasingly global marketplace, new forms of professional surveillance and mounting institutional ‘productivity’ demands see increasingly apprehensive scholars in perilous professional positions” (Hay 2017: 1).

Since all scholars are now digital to some degree (Tables 1 and 2), digital technologies are implicated in the transformation and reconfiguration of universities: whether it is to teach more students, to publish more and higher quality research, or to engage with professional, commercial and lay communities (Bacevic 2019: 79; Woodcock 2018: 130). This relationship between the scholar and digital technology is little researched in terms of their socio-cultural and political contexts, however (Lupton, Mewburn & Thomson 2018: 3). For example, administrative, bureaucratic, and surveillance functions are not normally considered as part of digital scholarship, but they are increasingly part of the scholarly experience (Table 2). The definition and scope of digital scholarship therefore needs to be expanded in the face of function creep: the experience of a digital scholar extends beyond the core activities of research and teaching that are the focus of most attention to date.

3. Institutional Digital Scholarship

Considering digital scholarship in these broader terms encompasses areas most closely associated with the management of the academic institution: specifically, surveillance, audit and metrics, administration of research and teaching, and the management of workloads, although little unambiguously differentiates archaeological practice at this level. Features of the modern business world, their introduction into the university brings scholarship into the realms of a service industry, where, for example,

Table 2: The digitalisation of the academic labour process (after Woodcock 2018: 137).

The Labour Process	Academic Work	Impact of Digitalisation
The activity of work	Research, teaching, administration	Acceleration of activities, linked to management strategies of control
The objects of work	Research outputs (journal articles, books, publicity). Teaching materials	Online media outputs and new metrics for research success. Email, online materials, and lecture capture for teaching. New methods of control
The instruments of work	Tools for researching, writing, and teaching	New skill requirements; the university becoming more like a digital platform

“... the professoriate is expected to treat students as customers ... Serving the customer (student) means extending office hours, being on-call via email and social media for emergencies, counseling the wayward and grief stricken, becoming a graduate admissions counselor, self-disclosing personal information, and exuding warmth and approachability.” (Lawless 2018: 92).

3.1. *Metrification of scholarship*

Recasting universities as corporations has led to the creation of digitally managed audits and surveillance metrics purporting to measure the quality of teaching and research which feed into league tables and income streams (e.g. Feldman & Sandoval 2018; Morrish 2019a). These place demands on scholars to focus on areas which enhance such metrics and generate income (e.g. Dyson 2015: 65–67; Rustin 2016: 154–159), emphasising what is measurable at the expense of other equally valid areas of scholarship. Research is judged as much on its economic and social worth as its academic value (Ylijoki 2013: 243) and shifted away from curiosity-driven research. Audits quickly become a managerial device which increasingly bear down upon scholars and scholarship (e.g. Holmwood 2018: 70). For example, metrics-based management practices were introduced across UK universities under the Research Excellence Framework (REF) (e.g. MacDonald 2017) with individuals required to meet targets for the number of internationally excellent or world-leading publications, the number of research students, impact, and income generation (e.g. Morrish 2019b: 31–32). Failure to achieve targets requires closely monitored individual action plans for improvement, with ‘capability procedures’ applied if progress is deemed inadequate, leading potentially to demotion or dismissal (e.g. Baker 2018). The introduction of the Teaching Excellence Framework (TEF) in England and Wales expanded this approach into the management of teaching (e.g. Morrish 2019a) while the proposed Knowledge Exchange Framework (KEF) promises to do the same for knowledge transfer. Inevitably, this has led to precisely the atmosphere of precariousness and fear identified by Hay (2017: 1) and fundamentally shaped research and teaching outcomes.

Introducing digital technologies to monitor performance, seeking to render everything auditable, knowable, and calculable (Gill 2016: 42) has reinforced the corporate model of university management. However, the knowledge captured is often poorly related to the realities of

scholarship and do not measure what was intended. For example, Gill (2016: 46) highlights the Transparent Approach to Costing (TRAC) methodology applied in the UK since 2000, introduced to calculate the direct and indirect costs of academic and professional staff activities. This employs a model of academic employment predicated on proportions of notional contracted hours rather than actual hours worked, so consistently under-represents the cost of scholarly work by disguising the actual levels of staff contribution.

Although responsibility for these audit processes might be laid at the door of national policy, they are implemented at local level and most institutions operate additional ‘shadow’ audits to predict the potential outcome of the periodic national audit for planning purposes (Holmwood 2018). As a result, an intermittent process becomes continuous evaluation of individual performance, creating a comparative and competitive and anxious workplace in which “another’s success becomes a possible sign of one’s own failure” (Grealy & Laurie 2017: 463).

3.2. *Administrative scholarship*

Most digital systems at institutional level are concerned with business activities. Promising to support scholars and provide relief from administrative work, their reality is often the reverse. Of course, the introduction of complex computer systems across government agencies, health services, and other large organisations have a long history of problematic implementation. For instance, in a review of the *Epic* computer system introduced in US hospitals, Gawande (2018: 62) describes how “a system that promised to increase my mastery over my work has, instead, increased my work’s mastery over me”, with staff trapped in the system,

“all of us hunched over our screens, spending more time dealing with constraints on how we do our jobs and less time simply doing them. And the only choice we seem to have is to adapt to this reality or become crushed by it.” (Gawande 2018: 65).

Such a description is familiar to scholars who have experienced the introduction of a large-scale computer system across a university. For example, student lifecycle management systems have been widely implemented, designed to manage the student record from application through registration, course selection and enrolment, timetabling and room allocation, assessment and examination,

progression and graduation, and thereafter as alumni. Sold to institutions as a means of enhancing their competitive edge (e.g. Oracle 2015), staff are persuaded their administrative burden will be reduced. However, such off-the-shelf commercial systems do not fit local procedures without considerable modification (different terminologies, degree structures, academic year structures, assessment models, etc.) leading to a choice between expensive customisation or altering well-established processes to fit the system. The inexperience of academics and administrators in specifying, testing, and understanding complex computer systems, as well as the need to populate those systems with large amounts of previously under-formalised course details and regulations can lead to faulty process modelling, overly complex and cumbersome procedures, poor configuration, and inadequate implementation. Developers frequently fail to understand local circumstances, are inadequately informed as to the procedures in operation, and often seemingly unresponsive to requests for even minor modifications to the system to better reflect the needs of staff and students. The reliance on students to correctly enter details into unfamiliar and often forbidding-looking systems leads to student (and parent) frustration, anxiety and anger which is projected onto the academic advisers and administrators providing their personal interface with the institution. The rigid implementation and sequencing of embedded rules can seem illogical and deliberately obstructive. For example, students may be required to complete financial registration before academic registration can commence, causing problems for international students and students with non-standard financial circumstances. Resolution of laboratory or tutorial timetable clashes may require a student to un-enrol and re-enrol on a course and hence risk loss of access to oversubscribed courses. Courses may simply not be available because no room has yet been allocated to them. The demands on scholars and administrators to assist students, even to the extent of completing registration and course enrolment on their behalf, results in considerable unrecognised time commitments outside of normal working hours as well as the emotional cost of dealing with stressed and distressed students.

Bedding in such complex systems successfully can take several years, and the burden placed on staff in the interim to manage the imperfections in the system is often unrecognised. Yet such systems are claimed to be a means of relieving academics from arduous administrative paperwork and reducing perceptions of overload (e.g. Zábrodská et al. 2018: 815).

3.3. Intensification of scholarship

In conforming to the broader digital economy, universities have changed the nature of scholarly labour. Alongside the digitalisation and informatisation of scholarly activities, there have been significant temporal consequences in relation to the technological acceleration of the tempo and rhythm of academic life (Ylijoki 2013: 246) and seemingly constant restructuring, reorganisation and change. Gill (2016: 46) describes a punishing intensification of work as endemic to academic life alongside an extensification of work across time and space, facili-

tated by digital technologies that render it possible to be 'always on' (Gill 2016: 48). In the process, universities have "exploited and normalised anxiety-driven overwork as a culturally-acceptable self-harming activity" (Hall & Bowles 2016: 33).

For example, the University and College Union calculated that UK staff worked the equivalent of two unpaid days per week on average, and some considerably more (UCU 2016a: 18). Further, the UK's Trades Union Congress found that academics and teachers were the most likely occupational group (other than Chief Executives) to do unpaid overtime (TUC 2017). Gill (2016: 46) suggests that institutional awareness of this lies behind the use of proportional rather than actual time in the TRAC methodology. Institutional responses to workload issues can seem detached: time management courses which academics have no time to attend, for example, and workload models which are ineffective in the face of demonstrably high workloads or worse, consider an inability to complete workload within 'normal' hours as a personal performance failure.

Intensification is also experienced in the use of teaching technologies:

"... it is no longer enough to give a lecture and run some seminars, we are also expected to produce a set of resources for use on the new online communications platforms ... the pressure that is produced by such constant exhortations to be more creative, teach more innovatively, be at the cutting edge (etc) is undeniable – particularly because it meets an already existing set of desires and ethics around being professional and wanting to do a good job." (Gill 2016: 49).

These digital resources become commodified as the institution assumes ownership, leading to situations such as during the UK 2018 strike when some universities reportedly sought to appropriate recorded lectures and deliver them to students in order to offset the effects of strike action. Suspicions remain that lecture capture can be used as a means of surveillance of academic performance, even removing academics from the teaching process (Woodcock 2018: 136).

Intensification is further revealed in the overflow of work beyond core hours. Most of the functionality of the workplace is easily reproduced in the home through networked access to institutional data systems, library catalogues, and online journals, books, databases, and archives. These are commonly seen as 'free goods' but their costs are absorbed by scholars in terms of free hours worked, the substituted labour of their partners or others (Jarvis & Pratt 2006: 338), and lost time with family and friends. Scholars for whom circumstances limit such free work are disadvantaged, with consequences for their promotion and advancement. Institutional building programmes which move academics into smaller and/or shared offices, even hot-desking, can appear to encourage scholars to rely on home resources more than ever. As Gill (2016: 48) observes, working in universities has become literally academia without walls.

That so-called ‘sacrificial labour’ is long-established in the form of scholarly service on editorial boards, review panels, conference committees, community organisations, charitable trusts and the like does not detract from the criticism that digital scholarship is complicit in supporting this intensification and extensification of academic labour. However, much academic labour is affective in nature, in that it “... does not result in direct financial profit or exchange value, but rather produces a sense of community, esteem, and/or belonging for those who share a common interest” (Gregg 2009a: 209; see also Lupton, Mewburn & Thomson 2018: 10ff). In short, scholarship is something that is enjoyed by the individual academic, as it generates personal gratification, passionate attachment, builds personal reputation and profile, develops personal networks and social contacts, and is effectively a form of self-aggrandisement. This exposes scholars to manipulation:

“For academics in particular, affective labour explains how the university draws on the psychological lives of staff to both exploit and disguise the ‘immaterial’ dimensions of working life. Productivity demands placed on academics rarely acknowledge the human factors that complicate the tasks of thinking, writing and delivering the timely outcomes crucial to individual and institutional success. Meanwhile, the language of campus mission statements and marketing campaigns promote ‘creativity’ and ‘innovation’ as the university’s asset base, emptying out the discursive terrain in which employees may have once expressed admiration or commitment to the institution.” (Gregg 2009a: 212).

A sense of alienation from the institution is a typical consequence of the metrification of scholarship, increased administrative loads, and the intensification and extensification of work.

4. The Individual Digital Scholar

The affective nature of scholarship – even if it may be manipulated for coercive ends – means that many of the more traditional aspects of scholarship can be seen as spaces over which the individual exerts more control. Areas such as publication and social engagement, for example, primarily entail risk-taking and decision-making by the individual scholar, although institutional and other external constraints may remain influential in practice.

4.1. Open scholarship

Digital scholarship is not the same as open scholarship (although Weller (2017) points to an increasingly close relationship between the two), but the venues associated with openness are frequently digital and the emergence of open scholarship sits alongside broader technological advances (Veletsianos & Kimmons 2012: 172–3). Digital scholarship is frequently linked with the democratisation of knowledge production and consumption as a result of changes in how scholars engage with their materials and their audiences (e.g. Daniels & Thistlethwaite 2016). However, free, open scholarship can effectively devalue the

intellectual labour of academics, and humanities scholars are especially disadvantaged since scientists and engineers have more opportunities to profit from their research (Columbia 2016: 101). Furthermore, while open access presents the scholarly product as ‘free’ to consumers, it takes little account of the unpaid academic labour beyond authorship: peer review, editorial and advisory roles, and so on are not covered by the author processing charges made by commercial publishers (e.g. Eve 2014: 56–67). Nevertheless, open access is increasingly mandated by government and institutional policy despite significant outstanding problems.

Open scholarship can seem to conflict with traditional expectations of quality and prestige that focus on elite high-ranking journals operated by commercial publishers in a ‘market’ that results in the products of research being costly to publish and/or costly to access. Institutions require papers placed in high-impact journals of international standing and monographs with long-standing, eminent academic publishing houses. However, many independent open access journals are frequently digital only and are not widely recognised or considered high-ranking (e.g. Mišić 2018), and it can be challenging to differentiate them from ‘predatory’ journals. Mišić proposes that established academics should initiate change by providing legitimacy to emerging journals by publishing in them and by serving as editors and reviewers for them. A similar call has been made in archaeology by Costopoulos (2018) who argues for disengagement from the current journal system but recognises that “As established scholars and administrators, we have a duty to protect the most vulnerable from the most disruptive consequences of this transition”.

4.2. Sociable scholarship

Relationships with external audiences, increasingly conducted online through channels such as Twitter, blogs and other forms of digital media represent a significant challenge for scholars. Engagement is seen as ‘good’, but the nature of the audience is ill-defined, and participants can move between different channels, be a member of different audiences, and occupy different roles, often simultaneously. This has been debated extensively in archaeology (see Bonacchi 2012; Bonacchi 2017; Morgan & Winters 2015; Perry 2015; Perry & Beale 2015; Richardson 2015; and contributors in Rocks-Macqueen & Webster 2014 amongst others). This ‘sociable scholarship’ (Pausé & Russell 2016) is not without risk. For example, the long memory of the internet means that past statements can be resurrected and reused, often out of context, and missteps may have a much wider audience compared to, say, a poorly presented conference paper (Pausé and Russell 2016: 19). Sociable scholarship offers a range of potential benefits – enhanced visibility, recognition, reputation, public engagement, participation, influence, and networking across disciplinary lines (e.g. Stewart 2016: 62) – but unmasking the sacred and subverting authority through posting positions, opinions, and discussions (McLean & Wallace 2013: 1520) can pose risks. Engagement with social media exposes scholars to different audiences and frames of reference in a medium characterised by ‘fake news’, ‘alternative facts’, a rejection of ‘experts’,

the ‘weaponisation’ of information, and the blurring of boundaries between public and private. Consequently, it can be both help and hindrance at the same time, a conflict that Stewart has described as

“... the messy business of being *truly* open to multiple publics at once [which] forces scholars to navigate the cognitive dissonance between orality-based expectations of sociality and print-based interpretations of speech” (Stewart 2016: 82).

Traditional means of protecting academic freedom are of limited value online, and

“... cannot protect scholars from cyber-vigilantes who take every post or tweet as an indelible marker of character ... There exists a profound risk, then, that the climate of digital culture, where identity is perceived not as shifting or context dependent, but rather as an expression of a core self, may lead academics to self-censor and in turn bring out a silencing of important conversations.” (Hildebrandt & Couros 2016: 94).

To compound the problem, institutions are often poorly equipped to support staff facing online abuse (e.g. Cook 2019: 10–11; Perry 2014) while at the same time requiring public engagement even if much digital engagement remains largely unrecognised as ‘academic’ work.

4.3. Always-on scholarship

Digital information and communication technologies have enabled the expansion of the scholarly workplace beyond the institution in a process Gregg (2011: 2) defines as “presence bleed”. This is not an aspect of digital scholarship that has received much attention. For example, an outline of the changing habits of digital scholars (Daniels & Thistlethwaite 2016: 9–14) refers to the ability to share scholarly resources via networks across large distances, but not to the way in which work itself can be digitally transferred from place to place, from the workplace to the daily commute to the hotel room to the conference floor to the home office, in an expansion, intensification, and extensification of the scholarly experience. Removing boundaries between work and home life results in a lack of downtime, but to be disconnected smacks of a lack of commitment (e.g. Agger 2011: 123).

The growth in flexible working hours and working from home is facilitated by digital technologies, as is demonstrated throughout a study of ‘hyperprofessional’ academic work (Gornall & Salisbury 2012), for example. Flexible working arrangements are seen by employers as advantageous for staff – not least for women, traditionally associated with child-rearing and domestic labour – and scholars can undoubtedly take advantage of some of the most flexible working arrangements around, outside their scheduled teaching and meeting commitments. However, presence bleed means that flexible work easily becomes the kind of sacrificial out-of-hours work discussed above. Although Ylijoki (2013) sees this as ‘boundary work’,

situated between work time and private time, any boundary blurs as flexible working arrangements encroach into the non-work side of life. Issues of ‘work-life balance’ become complex when personal identity, pleasure, and sense of accomplishment are closely related to scholarly work. This may be one reason why work-life balance initiatives are largely ineffective, limited to relatively minor changes such as attempting to ban out-of-hours email or introducing relaxation and massage sessions.

There is also a fundamental, and often gendered, inequity in the failure of academic work-life balance: scholars with young children, caring responsibilities, health problems, etc. are disadvantaged in a working environment which normalises – even expects – the bleeding of work hours into private time. Scholars who are seen as not prioritising work, who resist the encroachment of work into their personal life, who are unwilling to engage in sacrificial labour, and who are motivated to switch off their digital presence, will inevitably appear less committed and less productive, with consequences for performance evaluations and promotion prospects. In this way, the technologies experienced and exploited by digital scholars sustain what can be argued to be a corrupted and demoralising form of scholarship. Ylijoki argues that this is ultimately a question of morality:

“The question arises whether the current high-speed university is a generous and benevolent alma mater proving space and time to cultivate the human mind and strive for the truth, or a greedy and ruthless organisation eager to exhaust its inhabitants?” (2013: 252–253).

The problem is worse in a field discipline such as archaeology since research, teaching, and professional development are frequently linked to fieldwork undertaken at some distance from both office and family home. Indeed, a study of anthropologists and fieldwork found higher levels of stress due to an imbalance between career and family alongside gender inequities and intersectionality (Lynn, Howells & Stein 2018).

Clearly a balance must be struck, but the quantity of invisible, sacrificial labour currently undertaken and the inequities as well as associated occupational stress are issues that need to be addressed in digital scholarship. As Gill suggests,

“We ... need urgently to think about how some of the pleasures of academic work (or at least a deep love for the ‘myth’ of what we thought being an intellectual would be like, but often seems at far remove from it) bind us more tightly into a neoliberal regime with ever-growing costs, not least to ourselves.” (2016: 52).

In many respects, therefore, scholars are complicit in their own abuse (Cederström & Hoedemaekers 2012), aided in that complicity by access to digital technologies, and their compliance facilitated by a seemingly romantic view of academic labour (Clarke, Knights & Jarvis 2012: 8–11).

5. Introducing Resilience

It may be that the academic workplace is digitised to an extent that makes it difficult to challenge (Lupton, Mewburn & Thomson 2018, 15), but the impact on scholars demands that an attempt should be made. Resilience thinking has been applied to areas including ecological systems, sustainability studies, climate change, urban planning, organisational studies, economics, and defence studies, focusing on learning and adaptation, the mitigation of risks, predicting and resolving problems, responding to risks as they are realised, and recovering from disruptions. Resilience typically concerns organisations and is frequently seen as desirable in students (e.g. Berg & Seeber 2016: 36) but is rarely discussed relative to scholars. However, Weller and Anderson (2013: 55) define resilience in digital scholarship as using technology to change practices where this is desirable but retaining the underlying function and identity that the existing practices represent, if they are still considered necessary. For example, they suggest that current peer review practice is not the only way to achieve the desired end, so might be changed while preserving the essential function. They suggest that resilience in digital scholarship is best seen at the institutional level, but if – as argued here – there is a degree of alienation between scholars and institutions, the success of such an approach will be limited, or at least treated with suspicion. While scholars might take advantage of institutional support where appropriate and available, the affective nature of much scholarly labour could imply that success or failure will ultimately depend on the individual. Many of the risks and pitfalls are encountered personally by the individual digital scholar, not the institution, and indeed, institutions often place the responsibility for resilience and adaptability on individuals. Individual resilience therefore refers to the individual scholar's capacity to persist and to develop within the changing institutional environment, and consequently a bottom-up approach would seem logical, while recognising that long-term success will likely depend on the institutionalisation and disciplinification of practice. Ultimately, normalisation of practice and its subsequent acceptance and adoption by institutions should primarily be driven by resilient individuals rather than imposed upon them.

At the same time, it is important to avoid a framing within the neoliberal discourse on individualisation and knowledge production (e.g. Feldman & Sandoval 2018). Resilience thinking has been criticised for its incorporation of dominant social values (e.g. Cretney 2014: 628) and its co-option in neoliberal discourses (Cretney & Bond 2014: 21; see also Welsh 2014). Resilience is seen to be conservative in the way it emphasises the stability of a system and its resistance to interference (MacKinnon & Derickson 2013: 254), and it is criticised for lacking human agency (Davidson 2010: 1142; Olsson et al. 2015: 6). Cretney (2014: 633) points to the neoliberal resilience discourse as “encouraging and, in some cases, mandating that communities, departments and projects become increasingly adaptable, flexible and open to change through disruption”. This characterises much institutional change across universities of late – disruptive changes have been introduced through restructuring, reorganisation, performance

management, voluntary severance, curriculum change, casualisation of employment etc., while at the same time emphasising the responsibility of staff to be flexible and adaptable. As a result, scholars experience ‘responsibility without power’ in the way that the institution restricts their actions by retaining power and resources while itself enjoying reduced responsibilities (Cretney & Bond 2014: 22; Peck & Tickell 2002: 386).

However, resilience can be turned against the dominant discourse by articulating and practicing it through “... transformative, alternative counter-neoliberal discourses of self, community and society” (Cretney 2014: 635). Alternative approaches to resilience include ‘community resilience’ (e.g. Bonanno, Romero & Klein 2015; Mulligan et al. 2016), ‘grassroots activism’ (Cretney & Bond 2014), ‘resourcefulness’ (MacKinnon & Derickson 2013), and ‘equitable resilience’ (Matin, Forrester & Ensor 2018). All share a community approach and provide reassurance that resilience can subvert established power rather than reinforce it. For instance, equitable resilience is defined as dealing with

“... issues of social vulnerability and differential access to power, knowledge, and resources; it requires starting from people's own perception of their position ... and it accounts for their realities and for their need for a change of circumstance to avoid imbalances of power into the future.” (Matin, Forrester & Ensor 2018: 202).

A community focus emphasises collegiality, altruism, and mutual support networks, and hence fits the scholarly situation, at least in its idealised form. The potential of such approaches for genuine resistance was demonstrated by the UK university pension-related strike action in 2018 where collective action overturned the decision to close the defined benefit element (e.g. Hillman 2019, 39ff). One of the challenges of community resilience approaches, however, is the need to retain sight of the individual. What applies to a community does not necessarily work for all individuals within it – equally, what works for an individual does not necessarily work for the group. Something that is good for a community may be bad for an individual, and vice versa (McNally 2015: 197). McNally (2015: 198) argues that since a community cannot literally possess resilience as such, “we might deem a community resilient if its resources render its members emotionally robust against the effects of traumatic stressors”. This reinforces the importance of developing individual resilience alongside community resilience, as argued here.

Critically, individual resilience is not static – it can be developed but it can also be lost, and resilience may be different at different stages in life so that an individual demonstrating resilience at one time may be less resilient when confronted by later adversity. Indeed, an accumulation of adversity over time may eventually exceed an individual's capacity to cope. Individual resilience is a state of mind which enables the person to readjust and continue their life in the face of adversity (Kimhi & Eshel

2015: 181), but unsurprisingly this is not dependent on any single factor; instead there is a set of unique predictors, each exerting relatively small effects on the outcome (Bonanno, Romero & Klein 2015: 150). Examples of such predictors include a sense of commitment, engagement of support, close and secure attachments, self-efficacy, sense of control, action orientation, flexibility, optimism, and being goal directed (Hobfoll, Stevens & Zalta 2015: 177).

6. A Crisis of Resilience?

Severe damage has been inflicted on the ideals of scholarly vocation and collegiality – however mythical they might be (Hall & Bowles 2016: 31) – by the encroachment of marketisation, surveillance, and competitive practices, supported by digital technologies. For example, a report by the University and College Union (UCU 2016b) found over half of academics employed in UK universities were on a mixture of hourly-paid atypical and short fixed-term contracts. This is coupled with a culture of long working hours with young academics working an average of 70 hours per week and one in six estimated to work 100 hours per week when adjusted to their full-time equivalent (UCU 2016a: 31). In the face of precarious employment, often limited rights, and very heavy workloads, it is difficult to see how such individuals can develop resilience. Worse, they may be exploited by those in more secure positions as many precarious staff provide teaching support to allow valuable research time for established staff. Indeed, a criticism of ‘slow professorship’ (Berg & Seeber 2016) is precisely that decelerating professors might presume that junior staff will accelerate to pick up the slack (Carrigan & Vostal 2016). Such precarity can last for years and it can also raise diversity and discrimination issues in terms of gender and race (Jones & Oakley 2018). So-called para-academics or alt-ac scholars are most affected by gender- and race-related issues of lower pay and lack of security and by the misogyny and harassment that can characterise digital network platforms. Indeed, the digital may make their situation worse. For instance, digital networks and online identities can break down institutional walls (Weller 2011: 4), but while an established scholar might benefit from this, one seeking to develop their academic identity and build their reputation is likely to find it disadvantageous (e.g. Richardson 2015). Similarly, there may be clear differences in scholarly blogging between established scholars in secure employment and those at an earlier stage in their career (Gregg 2009b: 473), with the former able to afford more risks than the latter.

In turn this might suggest that there are digital scholars who – for reasons of age, seniority, gender – have less need for resilience and for whom risk-taking is not especially audacious because of the relative security of their position (e.g. Haven et al. 2018). However, the crisis in resilience is not limited to casualised (and generally young) scholars. For example, a study by *The Guardian* newspaper revealed that two-thirds of staff who had suffered mental health problems saw it as a direct result of workload, and senior lecturers and those aged between 55–64 felt most strongly about this link (Shaw 2014). The deaths of Stefan Grimm in 2014 and Malcolm Anderson in 2018, associated with workload and the level of expectations placed

upon them (Morrish 2019b: 40) highlighted the pressures felt by mid-career and senior staff. While a synthetic study found that younger and newer scholars were more vulnerable to burnout, the risk of selection bias was identified whereby mid- to late-career academics with high levels of burnout had already quit, leaving those who remained as the most successful in coping with demands and stressors (Sabagh, Hall and Saroyan 2018: 143).

Studies of academic burnout suggest a range of inter-related causes, including lack of support and influence, time constraints (Kinman 2008: 831), student numbers (Sabagh, Hall & Saroyan 2018: 144; Watts & Robertson 2011: 47), the indirect effects of administrative paperwork (Záborská et al 2018: 814), value conflict and workload (Morrish 2019b: 27ff; Sabagh, Hall & Saroyan 2018: 144). However, the most consistent factor identified across numerous studies is conflict between work and family/leisure time (e.g. Kinman 2008: 831; Padilla & Thompson 2016: 554; Sabagh, Hall & Saroyan 2018: 144; Záborská et al. 2018: 813). Academics generally indicate that they have little choice in working long hours:

“As one lecturer remarked: ‘If everybody worked strictly on a 9–5 basis, the institution simply could not function’. Another commented: ‘The number of hours I work represents stress avoidance; it enables me to maintain an acceptable standard of work and meet deadlines and targets most of the time.’” (Kinman & Jones 2003: 25).

The intensification, extensification, and affective nature of scholarship therefore presents a particularly toxic combination for scholarly wellbeing. Despite this, there is at present no national measure of staff wellbeing within UK universities (Hewitt 2019: 5). Amongst individual universities Morrish (2019b: 39) identifies a ‘turn to wellbeing’, with staff offered enhanced access to support services as a means of mitigating institutional liability, and her survey of UK universities found a 293% increase in demand for counselling services between 2009 and 2015 while referrals to occupational health services increased by 165% over the same period (Morrish 2019b: 20–23). However,

“This is not a case of employers admitting that structural problems are the source of employees’ distress. On the contrary, both students and staff have been accused of lacking resilience. As a partial solution, some universities have become advocates of resilience training, along with stress management and mindfulness ... However, many of the proposed beneficiaries are unconvinced about the legitimacy of a solution which seems to place the onus for recovery squarely on the employee.” (Morrish 2019b: 39).

As a result, the introduction of mentoring, coaching, mindfulness and resilience training “recompose a terrain of subordination and conditioning against which there is limited defence” (Hall 2018: 165–6) and such approaches are therefore treated with scepticism by alienated staff.

Similarly, collegiality – sometimes recast as ‘citizenship’ – is beginning to appear in academic promotion criteria, allowing institutions to claim that they are actively encouraging collegiality, but in doing so collegiality is appropriated and becomes metricised as a set of behavioural criteria against which to evaluate an individual.

7. Supporting the Resilient Digital Scholar

Clearly not all the ills of modern scholarly experience can be laid at the digital door; it is simply that those digital technologies accelerate, sustain and are otherwise complicit in many of the challenges facing the modern scholar (e.g. Bacevic 2019: 2), even if they may also be capable of contributing to the solutions.

Alternative approaches tend to focus either on the resolution of organisational issues or on individual action. For example, Morrish (2019b: 45–49) proposes a series of tactics: reducing workloads, adopting a responsible approach to metrics, taking a longer-term view of performance management, and addressing precarity and developing sustainable academic careers. However, such worthy aims are beyond the control of individual scholars, and even those in management positions may be limited to at best frustrating the worst excesses. Alternatively, the principles of the ‘Slow’ movement may be adopted, whereby an individual exerts personal agency to slow down the pace of their academic life (Berg & Seeber 2016: 59). However, believing that changing the self will change the institution and offering individual interventions to what are structural problems is itself a neoliberal trap (Brady 2017: 59; Edwards 2017: 335). The privilege associated with a slow approach that is impossible for early career and precarious staff has also been criticised (e.g. Edmonds 2019: 214; Reed 2018; Scott 2019: 212). Other models suffer from similar drawbacks: for example, Rolfe seeks subversion of the corporate university through the creation of the ‘paraversity’, entailing individual responses such as “being good” (reconciling conflicting agendas by doing things in the right ways for the right reasons) (Rolfe 2013: 62–66), being collegiate (2013: 66–70), and being radical (2013: 70–72), in the process developing new approaches to scholarship (2013: 79ff).

Pursuit of either organisational change or individual action on their own is equally problematic. Institutions have become increasingly dependent on the anxious and precarious scholar and their remedies largely fail to deal with the root causes of the problem (e.g. Hall & Bowles 2016: 39). Meanwhile individual agency, if feasible, is often evidenced in disengagement and absence, with implications for those left behind. This underlines the importance of incorporating both community and individual resilience, addressing challenges at both institutional and individual level, protecting and supporting the individual whilst at the same time taking collective action to bring about change within the organisation and avoiding the (re)appropriation of resilience by the institution. Such a combined approach is not something that has been widely debated, although it is embedded within Hall’s (2018) Marxist critique of the ‘alienated academic’, for example. It is also hinted at in the ‘Slow Professor’ where alongside recommendations for individual action

the affective aspects of collegiality are called upon to help develop a culture of social and emotional support (Berg & Seeber 2016: 81–84). This seeks to balance the risk that a focus on self-care alone may damage the very collegiality that is sought. One approach is to support community and individual resilience through nurturing social capital and social networks, facilitating co-operation and sustainability, and establishing practical projects for mutual support and constructive change. Crucially, such activities based around resilience can challenge the dominant values and norms (Cretney & Bond 2014: 23).

Archaeological digital scholarship has not addressed these issues, although there are several parallel debates which provide insights into managing the scholarly condition and thereby add a particularly archaeological as well as digital perspective. The earliest of these concern aspects of a ‘punk’ archaeology, defined as including a reflective mode of organising archaeological experiences and a celebration of DIY practices (Caraher 2014: 101). Although explicitly rejecting the traditional academy as “committed to a culture of privileged, solipsistic navel gazing” (Schultz 2014: 18), punk emphasises a strongly individual, self-sufficient, resistant, do-it-yourself ethos, akin to the individualistic approaches to academic labour described above. Furthermore, a critique of punk archaeology recasts it as being primarily concerned with the creation of an equitable and politically aware archaeology, a participatory practice (Richardson 2017: 314) which draws in an explicitly collaborative, community aspect. This finds parallels in an emancipatory political archaeology which “is truthful about its political content and confronts power and oppression” (McGuire 2008: 36), advocating a socially responsible scholarship embedded in practice (2008: 37), and an emancipatory digital archaeology defined as a reflexive, politically engaged, activist approach (Morgan 2012: 24).

The ‘Slow’ movement has also been debated within digital archaeology, with ‘slow archaeology’ resisting an emphasis on efficiency, economy and standardisation in digital practice (Caraher 2016: 423). The parallels with ‘slow professorship’ (Berg and Seeber 2016) extend to its critique: it “stands as a privileged indulgence of the white, male, tenured, grant-funded, and secure faculty member” (Caraher 2019: 2). Caraher’s (2019: 2) response is to relocate ‘slow’ into a conversation “that emphasizes a more human, humane, reflexive, and inclusive discipline” which he describes as ‘the archaeology of care’. This is “a natural result of sincere and caring people working with other people in difficult circumstances” (Caraher & Rothaus 2016: 50), and an explicit parallel with university scholarship is drawn (Caraher 2019: 10). Separately and together, these debates concerning a different practice ethos underline the importance of a focus on both community and the individual in supporting a more humane, care-full and inclusive approach to archaeological digital scholarship.

Alongside these debates digital archaeology scholars have also begun to identify how this might be developed and supported through the construction of digital communities and platforms (e.g. Cook 2019; Watrall 2019). Both Cook and Watrall emphasise aspects of creative making as an objective of a successful community, developing practical outputs as a means of encouraging progress and

debate (Watrall 2019: 144), and, with parallels in maker or hacker cultures, supporting activism through shared resources, experiences, memories, heritage and trauma (Cook 2019: 4; see also Morgan 2015: 134–136). Cook (2019: 6–9) points to the strategic application of technology and media to confront present identities and authority which resonates with the scholarly situation, and notes that “It often emerges most strongly in the face of work action and concerns over equity, inclusivity, and security in the workplace” (2019: 6). Watrall’s (2019: 148–150) framework for a community of ‘thoughtful praxis’ may be adapted to the scholarly situation through fostering an environment that builds confidence in its members, recognising that community members are at different stages and have different needs, understanding the positive value of failure, and creating a culture of generosity, making time to listen, learn, and contribute knowledge and expertise.

Creating such a structure to build resilience at a community level and amongst constituent members is not a trivial enterprise: in particular, energy, effort and commitment are demanded of individuals, which means that they will require support in providing it which cannot be taken for granted (Cook 2019: 10). A further challenge is situating such communities for greatest effect: within disciplines and hence crossing organisational boundaries, or within organisations and hence inter-disciplinary, or in some combination. For example, we might visualise communities sitting within each of the four scholarly scenarios characterised by Papadopoulos and Reilly (2019, 5ff), across two or more, or across all four, and the membership and focus of those resilient communities would change accordingly. There is also a danger that individual communities could become artificially isolated, with members effectively operating within a filter bubble, a limited shared worldview that could become quite negative. Watrall’s (2019: 148–150) framework could aid in establishing a positive and constructive outlook and emphasising the importance of communication within and between communities – sharing opportunities, lessons learned, common activities etc. – as well as engagement with the wider institutional environment and/or discipline.

Ultimately, a community of resilience and the resilient individuals within it practises a form of ‘affirmative disruption’ (Adema & Hall 2016; Hall 2016: 48ff). This is distinct from the kind of digital disruption pursued and practised across industries and institutions. Affirmative disruption is not about emphasising the potential of technology to disrupt practice; instead it seeks to address the human-scale problems experienced because of the ways in which the philosophies and practices of digital technologies have been inserted into the scholarly environment. Affirmative disruption seeks a positive realignment which enables individuals to rebuild their commitment and engagement, regain their sense of control, and recover their optimism and thereby create a new approach to scholarship. This requires the investment of those who find by virtue of their situation that resilience is less of a present necessity, as well as those for whom resilience is a daily requirement. As Cook powerfully argues, the strongly independent

Do-It-Yourself mentality that characterises digital archaeology – and digital scholarship – needs to become a Do-It-Collectively priority (Cook 2019, 13).

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References

- Adema, J** and **Hall, G.** 2016. Posthumanities: The Dark Side of “The Dark Side of the Digital”. *Journal of Electronic Publishing*, 19(2). DOI: <https://doi.org/10.3998/3336451.0019.201>
- Agger, B.** 2011. iTime: Labor and life in a smartphone era. *Time and Society*, 20(1): 119–136. DOI: <https://doi.org/10.1177/0961463X10380730>
- Aitchison, K.** 2019. *State of the Archaeological Market 2018: Archaeological Market Survey 2017–18*. London: Landward Research. Available at <https://www.archaeologists.net/profession/profiling> [Last accessed 11 June 2019].
- Bacevic, J.** 2019. With or without U? Assemblage theory and (de)territorialising the university. *Globalisation, Societies and Education*, 17(1): 79–81. DOI: <https://doi.org/10.1080/14767724.2018.1498323>
- Baker, B.** 2018. Campaigning Against Metrics-based Management. In: Kelly, S, Freedman, D and Ismail, F (eds.), *The University is Ours: How to build an activist union branch*, 73–75. London: Branch Solidarity Network. Available at <https://ucubranhsolidaritynetwork.wordpress.com/branch-activists-handbook/> [Last accessed 11 June 2019].
- Berg, M** and **Seeber, B.** 2016. *The Slow Professor: Challenging the Culture of Speed in the Academy*. Toronto: University of Toronto Press. DOI: <https://doi.org/10.3138/9781442663091>
- Bonacchi, C.** (ed.) 2012. *Archaeology and Digital Communication: Towards Strategies of Public Engagement*. London: Archetype Publications.

- Bonacchi, C.** 2017. Digital media in public archaeology. In: Moshenska, G (ed.), *Key Concepts in Public Archaeology*, 60–72. London: UCL Press. DOI: <https://doi.org/10.14324/111.9781911576419>
- Bonanno, G, Romero, S and Klein, S.** 2015. The Temporal Elements of Psychological Resilience: An Integrative Framework for the Study of Individuals, Families, and Communities. *Psychological Inquiry*, 26(2): 139–169. DOI: <https://doi.org/10.1080/1047840X.2015.992677>
- Borgman, C.** 2007. *Scholarship in the Digital Age: Information, Infrastructure, and the Internet*. Cambridge: MIT Press. DOI: <https://doi.org/10.7551/mitpress/7434.001.0001>
- Brady, J.** 2017. Review. The Slow Professor: Challenging the Culture of Speed in the Academy. By Maggie Berg and Barbara K. Seeber. *Radical Teacher*, 107: 57–59. DOI: <https://doi.org/10.5195/rt.2017.365>
- Brink, C.** 2018. *The Soul of a University: Why excellence is not enough*. Bristol: Bristol University Press. DOI: <https://doi.org/10.2307/j.ctv56fgwf>
- Caraher, W.** 2014. Toward a Definition of Punk Archaeology. In: Caraher, W, Kourelis, K and Reinhard, A (eds.), *Punk Archaeology*, 99–101. Grand Forks, ND: Digital Press at the University of North Dakota.
- Caraher, W.** 2016. Slow Archaeology: Technology, Efficiency, and Archaeological Work. In: Averett, E, Gordon, J and Counts, D (eds.), *Mobilizing the Past for a Digital Future: The Potential of Digital Archaeology*, 421–441. Grand Forks ND: The Digital Press at the University of North Dakota.
- Caraher, W.** 2019. Slow Archaeology, Punk Archaeology, and the 'Archaeology of Care'. *European Journal of Archaeology*. DOI: <https://doi.org/10.1017/eaa.2019.15>
- Caraher, W and Rothaus, R.** 2016. An Archaeology of Care. *On Second Thought: Magazine of the North Dakota Humanities Council*, 50–51. Spring.
- Carrigan, M and Vostal, F.** 2016. Not so fast! A critique of the 'slow professor'. *University Affairs/Affaires universitaires*, 22 April 2016. Available at <https://www.universityaffairs.ca/opinion/in-my-opinion/not-so-fast-a-critique-of-the-slow-professor/> [Last accessed: 11 June 2019].
- Cederström, C and Hoedemaekers, C.** 2012. On dead dogs and unwritten jokes: Life in the university today. *Scandinavian Journal of Management*, 28: 229–233. DOI: <https://doi.org/10.1016/j.scaman.2012.05.007>
- Clarke, C, Knights, D and Jarvis, C.** 2012. A Labour of Love? Academics in Business Schools. *Scandinavian Journal of Management*, 28: 5–15. DOI: <https://doi.org/10.1016/j.scaman.2011.12.003>
- Cohen, D and Scheinfeldt, T.** (eds.) 2013. *Hacking the Academy: New Approaches to Scholarship and Teaching from Digital Humanities*. Ann Arbor: University of Michigan Press. DOI: <https://doi.org/10.3998/dh.12172434.0001.001>
- Cook, K.** 2019. EmboDIYing Disruption: Queer, Feminist and Inclusive Digital Archaeologies. *European Journal of Archaeology*. DOI: <https://doi.org/10.1017/eaa.2019.23>
- Costa, C and Murphy, M.** 2016. Theorising digital scholarship – introducing the new edition. *Journal of Applied Social Theory*, 1(1): 1–4. <https://socialtheoryapplied.com/journal/jast/article/view/45/5>.
- Costopoulos, A.** 2018. Limiting the damage of disengaging from the journal system. *ArcheoThoughts*, 3 May 2018. Available at <https://archeothoughts.wordpress.com/2018/05/03/limiting-the-damage-of-disengaging-from-the-journal-system/> [Last accessed 11 June 2019].
- Cretney, R.** 2014. Resilience for Whom? Emerging Critical Geographies of Socio-ecological Resilience. *Geography Compass*, 8(9): 627–640. DOI: <https://doi.org/10.1111/gec3.12154>
- Cretney, R and Bond, S.** 2014. 'Bouncing back' to capitalism? Grass-roots autonomous activism in shaping discourses of resilience and transformation following disaster. *Resilience*, 2(1): 18–31. DOI: <https://doi.org/10.1080/21693293.2013.872449>
- Daniels, J and Thistlethwaite, P.** 2016. *Being a Scholar in the Digital Era*. Bristol: Policy Press. DOI: <https://doi.org/10.1332/policypress/9781447329251.001.0001>
- Davidson, D.** 2010. The Applicability of the Concept of Resilience to Social Systems: Some Sources of Optimism and Nagging Doubts. *Society & Natural Resources*, 23(12): 1135–1149. DOI: <https://doi.org/10.1080/08941921003652940>
- Dyson, L.** 2015. The knowledge market. *Soundings: A journal of politics and culture*, 60: 57–70. DOI: <https://doi.org/10.3898/136266215815872962>
- Edmonds, J.** 2019. Book Review Symposium: Maggie Berg and Barbara K Seeber, *The Slow Professor: Challenging the Culture of Speed in the Academy*. *Sociology*, 53(1): 212–214. DOI: <https://doi.org/10.1177/0038038518787950>
- Edwards, M.** 2017. Review: Maggie Berg and Barbara K Seeber, *The Slow Professor: Challenging the Culture of Speed in the Academy*. *Humboldt Journal of Social Relations*, 39: 334–36. <http://www.jstor.org/stable/90007888>.
- Eve, M.** 2014. *Open Access and the Humanities: Contexts, Controversies and the Future*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9781316161012>
- Feldman, Z and Sandoval, M.** 2018. Metric Power and the Academic Self: Neoliberalism, Knowledge and Resistance in the British University. *tripleC*, 16(1): 214–233. DOI: <https://doi.org/10.31269/triplec.v16i1.899>
- Gawande, A.** 2018. The Upgrade: Why doctors hate their computers. *The New Yorker*, 12 November 2018, 62–73. Available at <https://www.newyorker.com/magazine/2018/11/12/why-doctors-hate-their-computers> [Last accessed 11 June 2019].

- Gill, R.** 2016. Breaking the silence: The hidden injuries of neo-liberal academia. *Feministische Studien*, 34(1): 39–55. DOI: <https://doi.org/10.1515/fs-2016-0105>
- Columbia, D.** 2016. Marxism and Open Access in the Humanities: Turning Academic Labor against Itself. *Workplace: A Journal for Academic Labor*, 28: 74–114. DOI: <https://doi.org/10.14288/workplace.v0i28.186213>
- Gornall, L** and **Salisbury, J.** 2012. Compulsive Working, ‘Hyperprofessionalism’ and the Unseen Pleasures of Academic Work. *Higher Education Quarterly*, 66(2): 135–154. DOI: <https://doi.org/10.1111/j.1468-2273.2012.00512.x>
- Grand, A, Holliman, R, Collins, T** and **Adams, A.** 2016. “We muddle our way through”: shared and distributed expertise in digital engagement with research. *Journal of Science Communication*, 15(4): A05. DOI: <https://doi.org/10.22323/2.15040205>
- Grealy, L** and **Laurie, T.** 2017. Higher degree research by numbers: beyond the critiques of neo-liberalism. *Higher Education Research & Development*, 36(3): 458–471. DOI: <https://doi.org/10.1080/07294360.2017.1288710>
- Gregg, M.** 2009a. Learning to (Love) Labour: Production Cultures and the Affective Turn. *Communication and Critical/Cultural Studies*, 6(2): 209–214. DOI: <https://doi.org/10.1080/14791420902868045>
- Gregg, M.** 2009b. Banal Bohemia: Blogging from the Ivory Tower Hot-Desk. *Convergence: The International Journal of Research into New Media Technologies*, 15(4): 470–483. DOI: <https://doi.org/10.1177/1354856509342345>
- Gregg, M.** 2011. *Work's Intimacy*. Cambridge: Polity Press.
- Hall, G.** 2016. *The Uberfication of the University*. Minneapolis: University of Minnesota Press. DOI: <https://doi.org/10.5749/9781452958439>
- Hall, R.** 2018. *The Alienated Academic. The Struggle for Autonomy Inside the University*. London: Palgrave Macmillan. DOI: <https://doi.org/10.1007/978-3-319-94304-6>
- Hall, R** and **Bowles, K.** 2016. Re-Engineering Higher Education: The Subsumption of Academic Labour and the Exploitation of Anxiety. *Workplace: A Journal for Academic Labor*, 28: 30–47. DOI: <https://doi.org/10.14288/workplace.v0i28.186211>
- Haven, T, Tjink, J, Martinson, B** and **Bouter, L.** 2018. Perceptions of research integrity climate differ between academic ranks and disciplinary fields – Results from a survey among academic researchers in Amsterdam. *PsyArXiv*. DOI: <https://doi.org/10.31234/osf.io/543hw>
- Hay, I.** 2017. *How to be an Academic Superhero: Establishing and Sustaining a Successful Career in the Social Sciences, Arts and Humanities*. Cheltenham: Edward Elgar Publishing.
- Hewitt, R.** 2019. *Measuring well-being in higher education*. Higher Education Policy Institute Policy Note 13. Available at <https://www.hepi.ac.uk/2019/05/09/measuring-well-being-in-higher-education/> [Last accessed 11 June 2019].
- Hildebrandt, K** and **Couros, A.** 2016. Digital selves, digital scholars: Theorising academic identity in online spaces. *Journal of Applied Social Theory*, 1(1): 87–100. <http://socialtheoryapplied.com/journal/jast/article/view/16/10>
- Hillman, N.** 2019. *The USS: How did it come to this?* Higher Education Policy Institute Report 115. Available at <https://www.hepi.ac.uk/2019/02/07/the-uss-how-did-it-come-to-this/> [Last accessed 11 June 2019].
- Hobfoll, S, Stevens, N** and **Zalta, A.** 2015. Expanding the Science of Resilience: Conserving Resources in the Aid of Adaptation. *Psychological Inquiry*, 26(2): 174–180. DOI: <https://doi.org/10.1080/107840X.2015.1002377>
- Holliman, R.** 2010. From analogue to digital scholarship: implications for science communication researchers. *Journal of Science Communication*, 9(3). DOI: <https://doi.org/10.22323/2.09030305>
- Holmwood, J.** 2018. Damned Metrics. In: Kelly, S, Freedman, D and Ismail, F (eds.), *The University is Ours: How to build an activist union branch*, 70–71. London: Branch Solidarity Network. Available at <https://ucubranhsolidaritynetwork.wordpress.com/branch-activists-handbook/> [Last accessed 11 June 2019].
- Jarvis, H** and **Pratt, A.** 2006. Bringing it all back home: The extensification and ‘overflowing’ of work. The case of San Francisco’s new media households. *Geoforum*, 37(3): 331–339. DOI: <https://doi.org/10.1016/j.geoforum.2005.06.002>
- Jones, S** and **Oakley, C.** 2018. *The Precarious Postdoc: Interdisciplinary Research and Casualised Labour in the Humanities and Social Sciences*. Durham: Working Knowledge/Hearing the Voice, Durham University. Available at http://www.working-knowledgeps.com/wp-content/uploads/2018/04/WKPS_PrecariousPostdoc_PDF_Interactive.pdf [Last accessed 11 June 2019].
- Kimhi, S** and **Eshel, Y.** 2015. The Missing Link in Resilience Research. *Psychological Inquiry*, 26(2): 181–186. DOI: <https://doi.org/10.1080/1047840X.2014.1002378>
- Kinman, G.** 2008. Work stressors, health and sense of coherence in UK academic employees. *Educational Psychology*, 28(7): 823–835. DOI: <https://doi.org/10.1080/01443410802366298>
- Kinman, G** and **Jones, F.** 2003. ‘Running Up the Down Escalator’: Stressors and strains in UK academics. *Quality in Higher Education*, 9(1): 21–38. DOI: <https://doi.org/10.1080/13538320308162>
- Lawless, B.** 2018. Documenting a labor of love: emotional labor as academic labor. *Review of Communication*, 18(2): 85–97. DOI: <https://doi.org/10.1080/15358593.2018.1438644>
- Lupton, D, Mewburn, I** and **Thomson, P.** 2018. The Digital Academic: Identities, contexts and politics. In: Lupton, D, Mewburn, I and Thomson, P (eds.), *The Digital Academic: Critical Perspectives on Digital Technologies in Higher Education*, 1–19. London: Routledge.

- Lynn, C, Howells, M and Stein, M.** 2018. Family and the field: Expectations of a field-based research career affect researcher family planning decisions. *PLoS ONE*, 13(9): e0203500. DOI: <https://doi.org/10.1371/journal.pone.0203500>
- MacDonald, R.** 2017. 'Impact', research and slaying Zombies: the pressures and possibilities of the REF. *International Journal of Sociology and Social Policy*, 37(11–12): 696–710. DOI: <https://doi.org/10.1108/IJSSP-04-2016-0047>
- MacKinnon, D and Derickson, K.** 2013. From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography*, 37(2): 253–270. DOI: <https://doi.org/10.1177/0309132512454775>
- Matin, N, Forrester, J and Ensor, J.** 2018. What is equitable resilience? *World Development*, 109: 197–205. DOI: <https://doi.org/10.1016/j.worlddev.2018.04.020>
- McGuire, R.** 2008. *Archaeology as Political Action*. Berkeley: University of California Press.
- McLean, P and Wallace, D.** 2013. Blogging the Unspeakable: Racial Politics, Bakhtin, and the Carnivalesque. *International Journal of Communication*, 7: 1518–1537. <http://ijoc.org/index.php/ijoc/article/view/1698>
- McNally, R.** 2015. People Can Be Resilient, But Can Communities? *Psychological Inquiry*, 26(2): 197–199. DOI: <https://doi.org/10.1080/1047840X.2015.1010421>
- Mišík, M.** 2018. A call to arms for established researchers. *The Research Whisperer*, 7 August 2018. Available at <https://theresearchwhisperer.wordpress.com/2018/08/07/a-call-to-arms-for-established-researchers/> [Last accessed 11 June 2019].
- Morgan, C.** 2012. Emancipatory Digital Archaeology. Unpublished thesis (PhD), University of California, Berkeley.
- Morgan, C.** 2015. Punk, DIY, and Anarchy in Archaeological Thought and Practice. *AP: Online Journal in Public Archaeology*, 5: 123–146. DOI: <https://doi.org/10.23914/ap.v5i0>
- Morgan, C and Winters, J.** 2015. Introduction: Critical Blogging in Archaeology. *Internet Archaeology*, 39. DOI: <https://doi.org/10.11141/ia.39.11>
- Morrish, L.** 2019a. The Accident of Accessibility: How the Data of the TEF Creates Neoliberal Subjects. *Social Epistemology*. DOI: <https://doi.org/10.1080/02691728.2019.1638991>
- Morrish, L.** 2019b. *Pressure Vessels: The epidemic of poor mental health among higher education staff*. Higher Education Policy Institute Occasional Paper 20, 23 May 2019. Available at <https://www.hepi.ac.uk/2019/05/23/pressure-vessels-the-epidemic-of-poor-mental-health-among-higher-education-staff/> [Last accessed 11 June 2019].
- Muellerleile, C and Lewis, N.** 2019. Reassembling knowledge production with(out) the university. *Globalisation, Societies and Education*, 17(1): 1–10. DOI: <https://doi.org/10.1080/14767724.2019.1602352>
- Mulligan, M, Steele, W, Rickards, L and Fünfgeld, H.** 2016. Keywords in planning: what do we mean by 'community resilience'? *International Planning Studies*, 21(4): 348–361. DOI: <https://doi.org/10.1080/13563475.2016.1155974>
- Olsson, L, Jerneck, A, Thoren, H, Persson, J and O'Byrne, D.** 2015. Why resilience is unappealing to social science: Theoretical and empirical investigations of the scientific use of resilience. *Science Advances*, 1(4): e1400217. DOI: <https://doi.org/10.1126/sciadv.1400217>
- Oracle.** 2015. *Campus Solutions*. Available at https://docs.oracle.com/cd/E52319_01/infoportal/cs.html [Last accessed 11 June 2019].
- Padilla, M and Thompson, J.** 2016. Burning Out Faculty at Doctoral Research Universities. *Stress and Health*, 32: 551–558. DOI: <https://doi.org/10.1002/smi.2661>
- Papadopoulos, C and Reilly, P.** 2019. The digital humanist: Contested status within contesting futures. *Digital Scholarship in the Humanities*. DOI: <https://doi.org/10.1093/llc/fqy080>
- Pausé, C and Russell, D.** 2016. Sociable scholarship: The use of social media in the 21st century academy. *Journal of Applied Social Theory*, 1(1): 5–25. <http://socialtheoryapplied.com/journal/jast/article/view/29/6>
- Peck, J and Tickell, A.** 2002. Neoliberalizing Space. *Antipode*, 34(3): 380–404. DOI: <https://doi.org/10.1111/1467-8330.00247>
- Perry, S.** 2014. Digital Media and Everyday Abuse. *Anthropology Now*, 6(1): 81–85. DOI: <https://doi.org/10.1080/19492901.2013.11728421>
- Perry, S.** 2015. Changing the Way Archaeologists Work: blogging and the development of expertise. *Internet Archaeology*, 39. DOI: <https://doi.org/10.11141/ia.39.9>
- Perry, S and Beale, N.** 2015. The Social Web and Archaeology's Restructuring: Impact, Exploitation, Disciplinary Change. *Open Archaeology*, 1(1): 153–165. DOI: <https://doi.org/10.1515/opar-2015-0009>
- Reed, P.** 2018. Review: Maggie Berg and Barbara Seiber, *The Slow Professor: Challenging the Culture of Speed in the Academy*. *Logos*, 17(1). <http://logosjournal.com/2018/review-maggie-berg-and-barbara-seeber-the-slow-professor-challenging-the-culture-of-speed-in-the-academy/>.
- Richardson, LJ.** 2015. Micro-blogging and Online Community. *Internet Archaeology*, 39. DOI: <https://doi.org/10.11141/ia.39.2>
- Richardson, LJ.** 2017. I'll give you 'punk' archaeology, sunshine. *World Archaeology*, 49(3): 306–317. DOI: <https://doi.org/10.1080/00438243.2017.1333036>
- Rocks-Macqueen, D and Webster, C.** (eds.) 2014. *Blogging Archaeology*. Landward Research. <http://www.landward.eu/publications>.
- Rolfe, G.** 2013. *The University in Dissent: Scholarship in the Corporate University*. Abingdon: Routledge. DOI: <https://doi.org/10.4324/9780203084281>

- Rustin, M.** 2016. The neoliberal university and its alternatives. *Soundings: A journal of politics and culture*, 63(1): 147–170. DOI: <https://doi.org/10.3898/136266216819377057>
- Sabagh, Z, Hall, N and Saroyan, A.** 2018. Antecedents, correlates and consequences of faculty burnout. *Educational Research*, 60(2): 131–156. DOI: <https://doi.org/10.1080/00131881.2018.1461573>
- Schultz, P.** 2014. Collingwood's Goo. In: Caraher, W, Kourelis, K and Reinhard, A (eds.), *Punk Archaeology*, 15–20. Grand Forks ND: The Digital Press, University of North Dakota.
- Schwarz, B and Knowles, C.** 2018. The scandal of contemporary universities. *Soundings: A journal of politics and culture*, 69: 4–14. DOI: <https://doi.org/10.3898/SOUN:69.editorial.2018>
- Scott, S.** 2019. Book Review Symposium: Maggie Berg and Barbara K Seeber, *The Slow Professor: Challenging the Culture of Speed in the Academy*. *Sociology*, 53(1): 211–212. DOI: <https://doi.org/10.1177/0038038518787948>
- Shaw, C.** 2014. Overworked and isolated – work pressure fuels mental illness in academia. *The Guardian*, 8 May 2014. [online access at <https://www.theguardian.com/higher-education-network/blog/2014/may/08/work-pressure-fuels-academic-mental-illness-guardian-study-health> last accessed 11 June 2019].
- Sperlinger, T, McLellan, J and Pettigrew, R.** 2018. *Who Are Universities For? Re-making higher education*. Bristol: Bristol University Press. DOI: <https://doi.org/10.2307/j.ctv56fgxx>
- Stewart, B.** 2016. Collapsed publics: Orality, literacy, and vulnerability in academic Twitter. *Journal of Applied Social Theory*, 1(1): 61–86. <http://socialtheoryapplied.com/journal/jast/article/view/33/9>
- Suiter, T.** 2013. Why 'Hacking'? In: Cohen, D and Scheinfeldt, T (eds.), *Hacking the Academy: New Approaches to Scholarship and Teaching from Digital Humanities*, 6–10. Ann Arbor: University of Michigan Press. DOI: <https://doi.org/10.2307/j.ctv65swj3.4>
- TUC.** 2017. *Workers in the UK put in £33.6 billion worth of unpaid overtime a year*. Press Release, 24 February 2017. Available at <https://www.tuc.org.uk/news/workers-uk-put-£336-billion-worth-unpaid-overtime-year> [Last accessed 11 June 2019].
- UCU.** 2016a. *Workload is an education issue. UCU Workload Survey Report 2016*. Available at https://www.ucu.org.uk/media/8195/Workload-is-an-education-issue-UCU-workload-survey-report-2016/pdf/ucu_workloadsurvey_fullreport_jun16.pdf [Last accessed 11 June 2019].
- UCU.** 2016b. *Precarious work in higher education*. November 2016. Available at <https://www.ucu.org.uk/article/8154/Precarious-contracts-in-HE---institution-snapshot> [Last accessed 11 June 2019].
- Veletsianos, G and Kimmons, R.** 2012. Assumptions and Challenges of Open Scholarship. *International Review of Research in Open and Distributed Learning*, 13(4): 166–189. DOI: <https://doi.org/10.19173/irrodl.v13i4.1313>
- Watrall, E.** 2019. Building Scholars and Communities of Practice in Digital Heritage and Archaeology. *Advances in Archaeological Practice*, 7(2): 140–151. DOI: <https://doi.org/10.1017/aap.2019.1>
- Watts, J and Robertson, N.** 2011. Burnout in university teaching staff: a systematic literature review. *Educational Research*, 53(1): 33–50. DOI: <https://doi.org/10.1080/00131881.2011.552235>
- Weller, M.** 2011. *The Digital Scholar: How Technology is Transforming Scholarly Practice*. London: Bloomsbury. DOI: <https://doi.org/10.5040/9781849666275>
- Weller, M.** 2017. The Digital Scholar revisited. *The Ed Techie blog*, 20 December 2017. Available at <http://blog.edtechie.net/digital-scholarship/the-digital-scholar-revisited/> [Last accessed 11 June 2019].
- Weller, M and Anderson, T.** 2013. Digital Resilience in Higher Education. *European Journal of Open, Distance and e-Learning*, 16(1): 53–66. <http://www.eurodl.org/?p=archives&year=2013&halfyear=1&abstract=559>
- Welsh, M.** 2014. Resilience and responsibility: governing uncertainty in a complex world. *The Geographical Journal*, 180(1): 15–26. DOI: <https://doi.org/10.1111/geoj.12012>
- Woodcock, J.** 2018. Digital Labour in the University: Understanding the Transformations of Academic Work in the UK. *tripleC*, 16(1): 129–142. DOI: <https://doi.org/10.31269/triplec.v16i1.880>
- Ylijoki, OH.** 2013. Boundary-work between work and life in the high-speed university. *Studies in Higher Education*, 38(2): 242–255. DOI: <https://doi.org/10.1080/03075079.2011.577524>
- Zábrodská, K, Mudrák, J, Šolcová, I, Květon, P, Blatný, M and Machovcová, K.** 2018. Burnout among university faculty: the central role of work-family conflict. *Educational Psychology*, 38(6): 800–819. DOI: <https://doi.org/10.1080/01443410.2017.1340590>

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