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Negotiating tensions around new forms of academic writing

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ABSTRACT

Almost every aspect of an academic's role involves specialised forms of writing, and the range of digital platforms used to produce this has increased. Core genres such as the journal article and monograph remain central, but the ways they are now commonly produced via file-sharing software and online submission systems are changing them. Digital media also allows academics to stay up to date with their field, connect with others, and share research with wider audiences. Furthermore, academics are increasingly expected to maintain online identities via academic networking sites, and to create and disseminate knowledge via hybrid genres such as tweets and blogs. However, these platforms also represent a potential threat to academics' values and sense of identity.

This paper reports on an ESRC funded research project investigating the writing practices of academics across different disciplines at three English universities. Through academics' accounts of their experience with and feelings about the role of digital media in their professional writing, this paper explores the factors that complicate their engagement with new genres of writing. The findings reveal a tension between the values of social media, which see knowledge as user-generated and decentralised, and the forms of knowledge creation that are rewarded in academia.

1. Introduction

The focus of this paper is on the role of changing technologies in academics' writing and their complex relation to broader change in universities in England. It is part of a larger project entitled The Dynamics of Knowledge Creation: Academics' Writing Practices in the Contemporary University Workplace, funded by the UK ESRC. The project has been examining contemporary changes in academics' writing practices, viewing the contemporary university in England as a work place where the production of knowledge is central, and much of this is through writing.

Researching academics' writing as a social practice, the main approaches informing the project are a sociomaterial perspective and a literacy studies perspective. The former means that we are particularly focused on understanding how social and material resources are networked together to construct writing practices (Fenwick et al., 2011), while the latter means that we are interested in writing as shaped by social contexts, life histories, resources and experiences, all of which are situated within historical dynamics and power relationships (Barton, 2007; Barton and Hamilton, 2000).

The sociomaterial aspect enables us to understand how social and material resources shape academics writing practices, and the role that digital resources in particular play. Satchwell et al. (2013) studied UK academics in arts and social sciences departments, to investigate the effect of material changes such as use of both physical and digital space on academics' lives, and found that many of their participants talked extensively about the need to set boundaries, such as between work and non-work, partly because the affordances of digital technologies enable work to be done more or less anytime and anywhere. Digital technologies can bring more work into the home sphere by allowing academics to access work files and shared folders from home, to answer emails from home, upload teaching materials to VLEs from home, and even to meet with students or colleagues from home via Skype. Looking specifically at technology in academic life, Weller (2011), who referred to "the digital scholar" when comparing the process of writing a book in 2010 with writing one in 2004, and found that every step of the process had changed. For example, in 2010, he accessed electronic books and journals without leaving home, set up Google alerts to track online conversations about his topic, and bookmarked sources using Mendeley, while few of these platforms were available in 2004. This experience of change appears to apply to almost every aspect of academic life, but little is known about how technological shifts might influence academics' writing practices.

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In order to place the interaction between technological changes and writing within its social and historical context, it is important to take into account other changes in the field of higher education. In England, where this study is located, relationships between students and staff have changed partly as a result of a shift since the mid 1980s from an elite system of access to higher education to one with a broader intake of students (Hodgson and Spours, 1999). This now includes many more students from overseas, particularly at postgraduate level, thanks to a policy of internationalisation (Warwick, 2014). The greater 'cultural distance' travelled by students from other countries can mean that academics need to mediate between different pedagogic norms and expectations with regard to, for instance, how information is presented in lectures, or the amount or clarity of written feedback. University students in England now pay tuition fees, which tends to position them as customers whose level of satisfaction is monitored through mechanisms such as the UK's National Student Survey, which in turn feeds into league tables. The combination of digital technology and consumer culture in higher education may mean that students prefer to email their tutors with questions about assignments rather than attending a designated office hour in person, with the implication that academics are inundated with multiple versions of the same query. Students may also expect unreasonably quick responses to their emails, which can lead to academics feeling overwhelmed by volume of emails to deal with.

There have also been a number of changes in English higher education that directly affect academics' research writing. Research activity has been monitored and assessed for some time and the non-academic impact of research is also measured, bringing new audiences for their writing. Along with the more marketised presentation of themselves adopted by English universities, academics are encouraged to take an increasingly entrepreneurial approach to their own research careers, maintaining a searchable online presence and marketing themselves and their work to potential readers (Etzkowtiz, 2014; Greenhow and Gleason, 2014).

All of these changes interact with technological developments, and serve to influence the writing that academics do. In order to understand how this complex social context is affecting knowledge production and academics' sense of agency in their own writing lives, it is important to see writing in situ; to observe what people actually do with reading and writing, and interview them to understand their perspectives and experiences.

There has been a considerable amount of work in the field of academic writing focusing on students' writing and learning to be an academic (such as Lillis and Scott, 2007; Street, 1995), and this is often what is meant by 'academic literacies'. There is also an important strand of work which analyses the linguistic aspects of academic texts such as the genres associated with particular disciplines, or the structure of academic articles (as in Hyland, 2004; Myers, 1990; Swales, 1990). However, the current study takes a new look at academics writing by focusing on writing done by academics as part of their professional role.

We do this by approaching academic writing as a workplace practice (Lea and Stierer, 2009; Lillis and Curry, 2010), shaped by the particularities of the contemporary context. This includes scholarly writing, but rather than privileging scholarly writing, we view knowledge production in academia as including writing for teaching and administration along with impact activities, such as writing for public audiences. We explore the relationships between these different purposes and examine a wider range of texts than the traditional research genres of monograph and journal article. However, we have not included creative writing done by academics, nor diary keeping and other personal writing. In this paper we focus on what academics said about their technologies of writing, specifically:

1. How are their different sorts of writing shaped by the ways they utilize available technologies?
2. What do their likes and dislikes reveal about agency and the production of knowledge?

The structure of this paper is firstly to describe the context against which the study is set, and the interviewees themselves. The methods of data collection and analysis are then described. The main part of this paper consists of quotes from academics talking about the tools and resources in their writing and how these have changed their practices. Through academics' accounts of their experience with and feelings about the role of digital media in their professional writing, the paper also explores the factors that complicate their engagement with new genres of writing.

2. Methodology

2.1. Context and participants

This paper reports on part of a wider project examining how academics' writing practices are shaped by the sociomaterial aspects of their situation, including the tools, resources, space and place, time, social networks and how managerial practices are shaping writing work (McCulloch, 2017; Tusting and Barton, 2016). The data in this paper are drawn from interviews conducted with academics across three different disciplines at three English universities. The universities consisted of a large nineteenth century city-based, research-intensive university, a smaller campus based, research-intensive university dating from the 1960s and a teaching-intensive urban university. The three disciplines, namely, mathematics, history and marketing, were chosen to include what can broadly be described as a STEM (science, technology, engineering and mathematics) discipline,[1] a humanities discipline and a professional/applied discipline (Becher and Trowler, 2001). We also carried out piloting work in social science departments as the area in which the project team is located.

In choosing these disciplines, we are aware that, although much existing research tends to use rather generic understandings of a prototypical undergraduate essay in social science and or a research article in the humanities, it is impossible to view these disciplines as each representing a single approach. Different subject areas within these groupings have much in common, but also many unique and contrasting features. One could argue, for example, that mathematics is a marginal 'science' discipline, since, unlike some other STEM subjects such as engineering, it is less concerned with practical application. Likewise, Kuteeva and McGrath (2015) have found that the rhetorical patterns in pure maths research articles differ from those in many others in hard science disciplines, as described by Hyland (2005). We have tried to use the academic department as a working unit, but we found a complex relationship between departments and disciplines. The notion of discipline entails an allegiance to a shared set of values or traditions beyond one's department, including links to scholars at universities all over the world, often maintained through professional associations and participations in themed conferences, but, as Trowler (2014) points out, many other factors affect academic culture, including forces such as technology, the marketization of higher education, and evaluation regimes (Page et al., 2014). We found that, in many cases, academics working in different disciplines experienced similar challenges relating to these forces.

[1] The term STEM refers to the educational category of teaching and learning in the fields of science, technology, engineering, and mathematics.

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2.2. Data collection

Working with three disciplines in the three universities provided nine different research sites in England. Inspired by Swales' (1998) focus on the textual lives of key participants within contrasting departments, initially there were 16 focal participants across these nine sites, who took part in multiple interviews. In the first phase of the research, which involved working with these core participants, we started with a walk-around interview focusing on their job, their offices and the immediate physical surroundings of their department. This was followed by a techno-biographic interview held in their offices, covering their histories of writing and technology use. Thirdly a day-in-the-life interview was carried out focussing on the writing done on specific days and at particular times. In a later phase, colleagues, line managers and administrative staff in the department were interviewed to provide a broader context for the data and to test out emerging findings. Overall, 56 participants were interviewed as part of the main study, in addition to the pilot interviews carried out in the social sciences, giving a total of 116 interview transcripts. In order to answer our first research question about the influence of technologies on writing practices, the data for this paper come primarily from the techno-biographic interviews of phase one but also includes other places in the interview cycle where academics talked about changes in their writing, alongside researchers' field notes.

2.3. Data analysis

The interviews were audio recorded, transcribed, imported into ATLAS.ti qualitative data analysis software, and coded following a provisional coding scheme based on the research questions of the project. This coding scheme was then applied and refined as further ideas and concepts emerged through working with the data. For example, descriptive codes were applied to the transcripts in order to label instances in which participants talked about different digital tools and platforms, among other things. This enabled us to understand the range of different technologies that academics were using for writing. We also coded parts of the interview data where participants talked about change in relation to the use of technologies.

A second layer of coding was more interpretative and aimed at discovering academics' feelings about the role of technology in their writing lives. Upon examining the data we had coded for digital tools and platforms, and for collaboration in writing, it was striking how frequently expressions of affect accompanied these. These were powerful forms of stance whose significance was pursued in the analysis of affect. Coding was, then, an iterative process so that the initial coding of digital aspects of writing was followed by a stage of emergent coding which examined the affect expressed towards digital writing platforms.

Our participants had, in the interviews, expressed their likes, dislikes and irritations about various aspects of their writing, and about communication technologies in particular. We refer to these expressions of affect as stance taking. The concept of stance taking is useful in sociolinguistics and discourse as it brings together a wide range of work on people's attitudes and positioning in relation to what they are referring to in different contexts (c.f. Jaffe, 2009; Barton and Lee, 2013 for work on stance taking in social media).

Stance is broadly defined as the positioning and evaluation people make of what they/others are expressing at a given time. Jaffe (2009, p. 3) defines stance taking as "taking up a position with respect to the form or the content of one's utterance". The stance expressed may refer to the stance taker, to others, or to the content of the utterance. There are two main kinds of stance: Epistemic stance encompasses claims of knowledge, belief and authority towards stance objects, and is manifest through expressions such as *I think* and *I believe*. The second type, affective stance, reveals the stance taker's feelings or judgement towards a stance object, through expressions such as *I like*. This can entail explicit discourse markers such as *I believe* or *I like*, but much of the time stance taking is implicit and is inferred from the utterance and its surrounding context even without these overt markers. For example, one participant, as discussed below, described the ability to work and access email from home as "a blessing but also a curse", which clearly indicates an expression of stance without using an overt evaluative adjective or verb. Of course, affective stance is common in social networking where users are constantly invited to evaluate and to say what they like or dislike.

The coding process, therefore, involved reading the transcripts and coding instances of affective stance. We also searched the whole data set for examples of specific affect terms such as *like*, *love* and *enjoy* and carefully examined the surrounding context to ensure that we were interpreting the participants' expressions of stance correctly, and that they were indeed referring to the use of technology for writing.

All five members of the research team had access to all the data on ATLAS.ti and analysis consisted of both individual and collaborative interrogation of the data. Our ideas and preliminary findings were discussed at dissemination meetings in three university sites, testing out and deepening our understandings.

The analysis aims firstly to make sense of individual academics' experience of writing and technology, focusing on individual ways of acting and dealing with technological change and tensions in their writing lives. The work aims at sense making and it is interpretative (Mason, 2002). The second important step consists of weaving common themes across individual cases, using both prior themes and emergent ones.

3. Results

3.1. Affect and stance taking

We now turn to our findings on how digital communications technologies are shaping academics' writing practices. Before we address this specific question, it is worth noting that what the academics in this study understood by 'writing' was rather fluid. Research writing such as journal articles, chapters and monographs was often seen as "serious" or "real" writing. However, at the same time, this sort of writing was sometimes described as something personal "for myself" as if it were not a central part of their work. Often what our participants saw as writing included emails, yet at other times emails were talked about as contrasting with "work". This result echoes comments by academics who participated in Pignata et al.'s study (2015, p. 166) into email management in an Australian university.

Turning to the role of technology in writing, we asked a very revealing question in our interviews: about what annoys people about technology at work. Academics were keen to answer this question, often at length, and were passionate about their likes and hates. They expressed irritation at students using their smart phones during lectures, they loved or hated their own smart phones, and both praised and vilified email. In fact these emotional responses were a useful way to engage people in the topic and have proved very revealing about changes in people's practices.

Expressions of positive affect were common. For example, Verity, a historian, expressed strong positive affect towards her job,[2]

[2] We have used quotations to illustrate our arguments and in some cases have used several quotes from oneperson to build up a picture of individual academics. The names used are all pseudonyms.

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including the demands of writing. Spread over a one-hour interview, she made the following comments:

(1) I do actually like teaching. . ... . . I love the third year course I do... it's just great fun to teach... I quite like lecturing. I mean, I like doing workshops, I like doing seminars, but I quite enjoy lecturing and it's quite nice... and it's lovely using PowerPoint. . .. Research, I really like doing research; it's lovely doing archival research. . .. I actually quite like writing; I find it demanding, but sort of quite exciting.

However, not all expressions of affective stance were positive. We also searched for terms such as *dislike* and *hate*, and this was where the subject of technology used for writing tended to rear its head. The stereotype of an academic working alone in a book-lined office does not appear to match the reality, and in fact the extent to which writing is a solitary activity varies across genres and across the different stages of a piece of work. As we discuss in more detail in Section 3.3 below, academics do often require solitude in order to concentrate on writing. However, academics' writing was also often characterised by interaction with others, which was facilitated and constrained by digital communications technologies.

3.2. Collaborative writing and technology

Most of our participants were working on some form of collaborative writing at the time of the study and often expressed extremely positive affective stance towards this. Even in history, which is often seen as something of a "lone ranger" discipline (Harley et al., 2010, p. 470), scholars worked with other academics, often across international borders. Some of our participants working in maths departments also claimed that co-authorship was becoming more common. Skype was cited as a useful, but sometimes frustrating means of discussing writing in progress and thrashing out the conceptual aspects of an article before or during the writing process. One respondent described his team writing process as one of editing while the team was in the same virtual meeting:

(2). . .then we look at it together over Skype and sort of change whilst we're discussing it.

He expressed positive stance about the discussions Skype made possible, but also pointed to the difficulty of establishing proper eye contact on Skype and added, "Obviously, face to face is much better". In this way, technologies enabled oral and written modes of communicating to be combined, yet sometimes brought its own problems. Likewise, traditional, hard copies of materials were often combined with virtual file sharing when working together on projects. For example, Charles used Dropbox to synchronise documents between different computers, which enabled him to work in different places, including at home and in a favourite cafe on campus. He continued to link this mobility and flexibility to his physical office, however, pointing to piles of papers and saying:

(3) . . .for each pile there that represents a project that we're working on, but like anything most of it's actually in Dropbox.

Collaboration with colleagues on writing was often the stimulus for learning about new tools or changing practices. For example, many academics described using cloud-based file-sharing platforms such as Dropbox or Google docs for the first time because scholars with whom they were collaborating wanted to use them. In this way, technology can facilitate the social side of collaborative writing, but it was often combined with rather a substitute for actually meeting face-to-face. For example, historian Verity describes the challenges of a co-author:

(4) She'd found it hard working sort of always through cyberspace, rather than meeting.

Email was often used to organise the exchange of drafts, but again, as Collin's comment below illustrates, social contact in person remained important and could play a role in securing commitment from co-authors:

(5) You meet someone face to face and you could say, "It really is important that I get your chapter on good time", and it's often easier to say that to someone's face than to say it in an impersonal email which they just delete.

Collin's belief that emails asking for drafts are likely to be deleted hints at some of the tensions around the role of email in academic life, which is the topic we turn to in the next section.

3.3. Conflicted stance: the example of email

One form of communications technology that provoked particularly strong affective stance among our participants was email. Email was by far the most talked about digital platform in our data, and academics used it to manage every aspect of their role, including setting up meetings to discuss writing, sharing versions of text with co-authors, sending feedback to students, and sending texts to themselves as forms of back-up. They often had their university email account enabled on every device they used, including their personal phone. Participants mentioned email in passing when discussing other topics and almost everyone wanted to talk about the pressure it exerted on their working and writing lives.

Given that email has been a feature of working lives for at least 20 years, one might assume that shared expectations for working with emails would have developed by now. However, our data reveal an enormous diversity in practices and attitudes, and when email was mentioned in the data, it was often accompanied by expressions of negative affect. Many academics described struggling to keep up with the volume of email traffic and had devised wide-ranging strategies for coping with this. Charles, for example, described book-ending his day with email as though he felt compelled to minimise the period during which his inbox would be unmonitored:

(6) . . .the last thing I do at night is check my emails. The first thing I do in the morning is check my emails.

Many academics described checking their email either directly before bed or sometimes in bed "just in case". A sense of vague anxiety that something may require urgent attention was also expressed by Collin:

(7) I'm not very self-disciplined as I think some people are to say, 'Emails I shall attend to between 6:00 pm and 7:00 pm or 4:00 pm and 5:00 pm. I've never got into that habit. The email beeps or something pops up and I open it [. . .] you never know if something's very urgent or not.

Despite many participants worrying about urgent emails, most admitted that they seldom actually occurred. Thus, despite strong evidence that disaster would not ensue if they went the whole day without checking email, or that it was possible to limit such checks to fixed times, most people found constant checking difficult to resist.

Perhaps as a consequence of this constant 'interruption', email was experienced as something that drew one's attention away from other work, and in particular, forms of writing with longer timescales for completion. Diane's comment illustrates this:

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(8) It's like every time you sit down to do some writing, an email comes in that takes you away from it.

This could lead to the feeling that email was taking over one's working life, or even one's non-working life. Almost every academic we spoke to checked his or her work email outside of normal working hours. As Rebecca put it,

(9) We're expected to be on duty 24 h a day, 7 days a week.

Although a question remains over *who* expects this, the feeling that boundaries between work and non-work were collapsing was commonplace. Academics seem to be getting busier, having more demands placed upon them, and carrying out a wider variety of writing tasks, many of which are organised via email. Email and other forms of communications technology enable academics to be mobile and deal with work anywhere. They appreciated this flexibility, but it came at the psychological cost of feeling somewhat 'hunted' by email. It followed them everywhere and they could not escape. For this reason, many participants expressed a conflicted stance towards email, as seen in Collin's comment: "…working either at home or at work I access email and that can be a blessing but also a curse."

As touched upon earlier, the status of emails as work or not work was uncertain in our data. Rebecca described doing "all writing", which for her included emails, administration and lecture writing, at home because her office was not conducive to work, because people would call in. This contrasts with Satchwell et al. (2013), whose earlier study of academics' working space carried out in 2009 found that articles and monographs might be written at home, but administrative work was more likely to be done in the department. Gareth, a mathematician in the current study, worked one day a week at home in order to carve out time free of interruptions. Others talked about writing in cafes, on trains and at airports. Thus, the prima facie non-digital issue of office space quickly becomes an issue of digital mediatisation, since it is technology which enables academics to answer emails, do marking and so on in many different places, and yet it is technology that also leads work to bleed so easily into non-work time.

3.4. New genres, new identities

The findings so far have focused mainly on fairly traditional genres of writing such as conference papers and research articles, as well as well-established digital technologies such as email. With regard to how technologies are shaping academics' writing, it has demonstrated that a wide range of technologies are used by academics to enable them to manage multiple aspects of the academic role, facilitating flexible work patterns and plentiful collaboration, but also bringing frustrations. Digital modes of communicating in and about writing were often considered most effective when combined with good old-fashioned chats over coffee. However, we also found many expressions of negative affect, which revealed tensions around a set of newer digital platforms associated with knowledge production. This meant that where the genre of writing itself was familiar, the practices around it were in flux, partly due to the influence of technology, which was perceived by many to extend work beyond appropriate boundaries. Boundaries between professional and personal identities also emerged from data in connection with new online genres of writing, and it is these that are the focus of this section.

3.4.1. New practices for familiar genres

We counted the different types of text our participants talked about in their interviews, and found that they mentioned 84 different genres, most of which involved some sort of digital technology in their production. The 10 most frequently mentioned genres are listed below, with the number of mentions of each in the data given in parenthesis:

1. Journal articles (67)
2. Feedback to students (40)
3. Lecture slides (30)
4. Conference papers (27)
5. Monographs (25)
6. Lecture notes (19)
7. Reference letters (19)
8. Reports (19)
9. Notes (on meetings) (16)
10. Course descriptions (13)

Many of these genres fitted clearly within the traditional division of academic labour into research, teaching and administrative work. For example, research-related genres included journal articles and monographs. Teaching-related genres included feedback to students and lecture slides and notes. However, the ways in which these texts were produced had changed partly as a consequence of technological changes and partly as a consequence of some of the changes in higher education discussed earlier. For instance, academics spoke about online systems for submitting manuscripts for publication or registering to attend a conference. Most academics we spoke to were expected to provide feedback to students online using a virtual learning environment and sometimes using grading software such as Grademark. These changes lead to new practices, in which relationships are implicated. For example, the role of administrative staff may change when feedback is created or posted online by academics themselves. Where feedback used to be a personal communication between teacher and student, online systems enable greater oversight of the marking process and other actors in these practices have access to the feedback.

3.4.2. Autonomy of content over form

The use of virtual learning environments has shifted since work carried out in 2009 by Satchwell et al. (2013), when using a virtual learning environment had been effectively optional at the institution where the study was set. In the current study, conducted in 2015–17, there was a greater degree of compulsion in the use of virtual learning environments and around communicating with students more generally, driven by requests from the university administration. Most of our participants felt that they had significant control over *what* they wrote, particularly when it came to research writing, but were subject to relatively strict controls over how this writing was produced and stored, as shown for example in online form filling and other systems.

3.4.3. Visibility and online identity

As well as influencing prototypical academic genres of writing, social media have also in many cases generated new forms of writing that involve addressing new audiences and participating in new monitoring processes. In our data, academics' engagement with these new genres has been complicated by a number of factors. Firstly, most academics felt they were expected to produce online representations of themselves and their work. An official profile on the university's website was obligatory and it was often fairly tightly controlled in terms of the type of information that could be included, leading to considerable uniformity in staff web pages. Furthermore, academics were increasingly encouraged to maintain an online identity via other non-institutional academic networking sites, as well as to create and disseminate knowledge via hybrid genres such as tweets and blogs. These platforms require users to create a basic profile and contribute to an online footprint, meaning that eventually they become highly visible in

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a space where their lives are searchable and their words replicable. We describe them as "hybrid" genres, following Bizzell (1999) who described "hybrid discourses", because they combine elements of two or more genres.

Specifically, blogs were traditionally thought of as journal entries, with a personal, autobiographical or even confessional nature, but the sort of blogs that academics write tend to combine some personal or diary-like elements with more professional content (Mauranen, 2013; Kuteeva, 2016). Academics often blog and tweet about their research, about academic life, or about disciplinary issues in general (Greenhow and Gleason, 2014), but may also include personal thoughts, mixing spoken and written registers. The purpose of blogs and tweets may include making research available, getting feedback, increasing visibility, and building one's reputation (Luzón, 2012).

In this sense, academics need to present a professional self in a far more public manner than before, and this may take on an element of self-marketing or marketing for one's institution that not everyone was comfortable with. We explored the differing values and affective responses expressed by the academics in our study around presentation of their professional selves on social media. Many of our participants expressed discomfort with the values of social media, particularly around self-publicity, describing blogs as "self-indulgent" and preferring to stay out of the limelight, as Charles said:

(10) . . .it's nice for you to say nothing and for people to be pleasantly surprised

Social media promotes a focus on the individual rather than – or as well as – the work itself, and this was at odds with the values some academics held dear. David, a mathematician, did not engage with social media at all, saying:

(11) I've rather let my output speak for themselves

When discussing issues about resisting providing personal information about themselves, Emma in marketing said:

(12) I guess it's my identity thing. I am an academic, and that's all you need to know right now

For some, then, these hybrid genres represented an unacceptable erosion of what it means to be an academic, and they resisted using them, with comments such as the following from Rachel, a historian:

(13) I absolutely refuse to involve myself in any social networking

For others, the affordances of technologies in this regard were an opportunity. Some individuals, particularly early career researchers, used social media strategically to advertise publications and events or to increase their visibility. Dan, another historian active on social media, explained:

(14) I started using Facebook and Twitter in 2012 with the explicit purpose to try and publicise a book and to increase its sales

3.4.4. Boundaries between the personal and professional

The excerpts above show that, for many academics, the line between their personal and professional online profile was often experienced as somewhat blurred and some respondents talked about the challenges of maintaining boundaries between them. This is linked to the finding discussed earlier that our participants often struggled to set boundaries, such as between work and non-work more generally, partly as a result of the flexibility offers by digital technologies. For academics in particular, their personal and professional identities may be closely intertwined because working in academia can be experienced as something of a "calling" (Stöckelová, 2014) rather than simply a job like any other.

Although many academics, including some of our participants, maintain their own twitter accounts and blogs, sometimes with the disclaimer that views expressed there are personal, other participants told us that they maintained or contributed to a blog or Twitter account to promote their department, attract students and improve morale. These forms of writing do not fall into the category of scholarly or pedagogical activity, but have a primarily marketing purpose which may constitute part of universities' 'digital strategy'.

For individual academics, these new hybrid genres of writing enabled them to stay up to date with their field, to connect with others, and to share their research with wider audiences. For instance, Dan used Google Scholar to find out who was citing him, and realized that his work was being cited beyond his discipline by sociologists. This then affected his future writing, in that he considered his audience in new ways and gave thought to targeting journals outside his own discipline. Likewise Brian, a mathematician, used ResearchGate as a means of discovering how other scholars had taken up, applied and built on his work.

3.4.5. Perceived value of hybrid genres

Other tensions in the use of blogs and other social media were not concerned so much with professional identity, but with the purpose and value of such writing. Some academics held the view that the availability of short pieces of writing, pre-publication drafts and other provisional texts provided a space to try things out and learn to write, albeit in a rather public space where others can be watching. For example, Collin reported:

(15) A lot of the active bloggers are also active in terms of writing their research up into articles, because they're learning to write.

However, the perceived acceptability of learning academic writing by blogging appeared to vary across both discipline and career stage. Evidence emerged from our data of academics, particularly those at the earlier stages of their career, needing to feel expert enough to have something worth saying in a blog post, as illustrated by the following comment from Emma, who was in her first post as a lecturer in marketing (although, like many marketing academics, she had a professional career before joining academia):

(16) . . . when I feel suitably informed to talk about stuff. . . I feel at the minute that it's all still a bit new. I haven't done anything for long enough to really call myself an expert in it. So it would just be my opinions that were in a blog. So why would I write them?

The understanding of these forms of writing as works in progress is also somewhat at odds with the fact that whatever is 'published' online tends to persist and is subject to measurement via alternative metrics – altmetrics – (Zahedi et al., 2014). Technologies enable the uptake or impact of social media to be measured, and such means of assessing academics' influence are gradually becoming more important and may be used in promotion cases, for example. The perceived contradiction between the pressure to publish peer-reviewed work and the expectation that one should also engage with these arguably less rigorous forms of writing persisted, with Josh, one of the pilot interviewees and a mid-career academic in a social science discipline commenting:

(17) At the end of the day, it doesn't matter how good your blog is, you've got to deliver on your papers.

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This is a similar view to that expressed by some commenters in Mauranen's (2013) study on comments on science blogs, who argued for peer review as the most appropriate mechanism for advancing knowledge in the field. In the current study, social media in general appeared to be used more by academics in marketing and history than in maths. One mathematician, Ian, acknowledged that the audience for maths research was limited, making social media less useful as a publicity tool:

> (18) I know this is quite popular now, for academics. They're using social media as a way of publicising their research. I mean, for mathematicians, hardly anybody can understand what our research is about.

Thus, many people were balancing this kind of writing with other kinds of writing, more highly valued in the academy, and sometimes using hybrid genres to publicise traditional publications.

4. Discussion and conclusion: negotiating tensions

In relation to our first research question about how the writing academics do is shaped by their use of digital technologies, the data discussed here have demonstrated that technologies change many aspects of writing, from the collaborations researchers enter into and how knowledge is shared on these joint projects, to where and when writing gets done. File-sharing software and video-conferencing allow more and faster collaborations, whether between colleagues on the same corridor sharing a document or a multi-sited international team project. However, digital tools such as email engender a sense for many academics of being unable to escape from interruptions and multiple demands from students and management.

With regard to the second research question, analysis of how people talk about the technologies they use to write and, in particular, the stance they take towards it, reveal a certain loss of agency and autonomy. For example, our participants' frustration and anxiety around the use of email demonstrates that, despite the ubiquity of email in academic life, a widely shared set of understandings and expectation around how emails should be used has yet to emerge. Like Pignata et al. (2015), many of our participants over-monitored their email and, like the mobile knowledge workers in Jarrahi et al. (2017), struggled to maintain a separation between personal and work life partly because digital technologies enabled flexibility in where and when work could be done. Although the flexibility of work time and space is enhanced, greater management oversight of what is placed on a VLE, for example, or the types of social media academics engage in and for what purposes may also bring a certain loss of autonomy. Further research could, therefore, usefully investigate this issue, specifically the extent to which academics' perceived sense of autonomy has changed over time, and where such feelings stem from.

With regard to hybrid genres of online writing, which institutions may see as directed at public engagement, but which academics may see as an expression of their own identity, there were tensions around how to use these and what they were for. Some saw the ability to share nascent ideas and get feedback as a legitimate way of learning, while others saw the sharing of non peer reviewed writing as unnecessary or even risky, and resisted engaging with blogs, tweets and the like. Some academics in this study used social media in a spirit of "academic entrepreneurialism" (Deem, 2010) as a means of marketing themselves or their work, while others, particularly early career academics lacked the confidence to use such public forums in this way, feeling that they needed to establish their reputation first.

Like Jarrahi et al. (2017), we found a diversity of practices in individuals' deployment of digital tools and resources both within and across disciplines, which suggests that the academics in this study enjoyed some control over the particular configurations of the devices and software they used. Likewise, they were not *forced* to engage with social media, and often opted not to for fear of loss of control over one's 'brand' or reputation once writing was placed online. The findings have also revealed a tension between the values of social media, which see knowledge as user-generated and decentralised (Greenhow and Gleason, 2014; Selwyn, 2011), and the forms of knowledge creation that are rewarded in academia.

Understanding how digital communications technologies are shaping academics' writing practices needs to be understood within the context of a point made at the beginning of the paper, that whilst there has been a focus on technological change, this always needs to be discussed in the context of other social changes, such as massification, internationalisation, and increased managerial control, since these are in turn shaped by digital possibilities. For example, the expectation that academics demonstrate the impact of their research on non-academic audiences is closely linked to the role that new media can play in how this is achieved. Similarly, the perceived acceleration of academic life (Vostal, 2016) is not simply an artefact of new technologies, but also reflects longer-term government policies within the public sector. Thus, this study represents a snapshot of a particular point in history and this has highlighted the pervasiveness of digital technology and its relationship with wider issues shaping academic writing.

Finally, this paper has argued for the need to look at individuals acting within technological and institutional spaces. As actors, academics implement change in their own environment and practices, but these are constrained by the resources and relationships available to them. As Jarrahi et al. (2017) talk of "artefact ecologies", and Barton (2007) discusses the ecology of writing, we have found that digital technologies are not used in isolation, but are combined in overlapping and complex ways, so that the ways they shape academics' writing practices is best understood in relation to contextual and interpretative factors, such as the expectations of their institutions, students and colleagues with whom they collaborate. There have always been differences between the steps people take to get writing done, but the proliferation of technologies and tools for doing this opens up choices, dilemmas and tensions around which forms of academic knowledge production are valued and supported. These tensions are evident in the expressions of affect and stance taking in the data analysed above. They can be seen, for instance, in relation to technologies such as Skype, which facilitated collaboration but sacrificed the pleasures of face-to-face interaction, with email, which was perceived as at best a distraction from the real business of knowledge creation, and at worst, a relentless source of stress, and with online forms of writing, which were both embraced and resisted.

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