

ONE

Introduction: transformations

The Internet could seem like ‘the invention of space travel,’ writes journalist Ta-Nehisi Coates, who came of age alongside the rise of the popular Internet (Coates, 2015). For those of us who became scholars when card catalogs were the search engines of the day, the proliferation of digital technologies and the changes they have wrought can be at once exciting, puzzling and foreboding.

It can be exciting for those of us who became scholars because we love knowledge. The capacity to type any question into a small white rectangle on a screen and find millions of results can seem like the opening of new worlds, as Coates suggests. Being a scholar now means that almost all of us use digital technologies to do at least some of our work. We fully expect, even demand, that we will have continuous digital access to our academic libraries from anywhere in the world. We read, collect, analyze and write up our data within digital environments. Although some of us may remember when card catalogs, punch cards, and typewriters were the most convenient tools available, few of us would choose to return to those over our current scholarly practices. A generation of younger scholars has never known a world where ‘cut and paste’ meant to take scissors, cut paper with paragraphs typed on them, rearrange their order, and then glue them to another sheet of paper. For them, the Internet has always existed, and cut and paste has only ever meant the simple keyboard commands: *ctrl+x*, *ctrl+v*. Of course, this generation fully expects that their scholarly lives will incorporate these everyday technologies and an engagement with a broader world into their ways of knowing. Why wouldn’t they? But, simply accepting this proposition makes it all too easy to minimize the profound transformation in scholarly life that is taking place. As with any change this weighty, it can also be, at turns, confusing and ominous.

‘The only lasting truth is change,’ science fiction writer Octavia Butler observed (Butler, 1993). While we may find comfort in nostalgic ideas of scholarly life as we knew it when we came of age as scholars, such nostalgia only obfuscates what’s happening. The truth is that scholarly life is changing in multiple, and sometimes contradictory, ways.

Scholarly life transformed

The proliferation of digital media technologies is transforming a wide range of scholarly practices (Weller, 2011). If the *sine qua non* of being a scholar is creating knowledge, then this central endeavor is changing in all its component parts. How scholars acquire information to create knowledge, the mechanisms by which we find and read others’ work in our field, the way we manage the citations of that work, where and when we evaluate the work of our peers, the ways we collaborate with each other, where and how (and sometimes what) we publish, how we engage in activism, how we measure success and how we teach are all changing. But these changes generate shifts in best practices for personal research methods as well as for policies and practices for academic review. For one, scholarship is opening, and with that openness comes new ways of working.

‘I have been writing this book for the past four years, mainly through my blog,’ explains Martin Weller (Weller, 2011). For Weller, the process of writing a book in 2009 was quite different from the process of writing a book just five years earlier. For him, the process was transformed through an array of digital tools. Weller details the list of technologies and resources he used for his research including: books – accessed via the library but increasingly as eBooks, and one audiobook; eJournals through databases at his institution’s digital collection; Google Scholar; social bookmarking; more than 100 other people’s blogs; YouTube, Wikipedia, Slideshare, Scribd; his Twitter network; Google alerts; and face-to-face conferences. Weller attributes the change in his scholarly practices in a relatively short timespan to the sheer quantity of tools: ‘There is just more of this stuff around’. He also notes a ‘shift in attitude (at least on my part), in the legitimacy of these other forms of output and their central, vital role in everyday scholarly activity’ (Weller, 2011). Weller was certainly prescient in this regard, but he is by no means alone.

Scholarly publishing is changing. As recently as the early 1990s, when we (the authors) were both still in graduate school, scholarly

publishing meant printed and bound volumes, distributed in hard copy to bricks-and-mortar library buildings for archiving. This is no longer the only, or even primary, way that scholarly publishing works. Across disciplines and fields, we now routinely compose work on computers, submit it to journals electronically, where editors send out papers for review through online content management systems like ScholarOne. Once the article is published, it appears in an online version of the journal, is indexed in an online database that tracks citations to that article and the journal as a whole. Beyond these mundane ways that scholarly publishing is changing, there are more profound shifts afoot that can be challenging to keep track of, let alone make sense of.

The current model of academic publishing is suffering something of a legitimization crisis. Academic authors, like Kathleen Fitzpatrick, are critical of what many see as unsustainable contradictions in our current publishing systems, in which scholars give away their words and copyright in perpetuity to profit-gouging publishers. Much like Martin Weller did, Fitzpatrick began writing her book *Planned obsolescence* on her blog, where she pondered many of the issues she exposed in her book related to the potential of digital technology to reconnect humanities scholars with broader social debates, policy makers and general readers (Fitzpatrick, 2011). Fitzpatrick's practice with the blog-to-book also suggests some of the changes underway in peer review.

Before seeking out a publisher for the book, Fitzpatrick moved those early blog posts onto the Commentpress platform, opening it up to peer reviewers. The people who commented on her work-in-progress included high-level experts in her field, who she would typically expect to review her work, to graduate students at other institutions, as well as interested intellectuals and non-specialists from around the world. After a time in the open peer-review phase, Fitzpatrick published the book with a university press. Readers can still see the Commentpress site¹ and Fitzpatrick's earlier blog posts with her ideas in formation. For their part, New York University Press makes one chapter of the book available to everyone through its website.² Fitzpatrick predicts a radical change: 'I am certain that a revolution in scholarly publishing is unavoidable' (Fitzpatrick, 2011, p. 194).

There are multiple new models of academic publishing emerging. Today, scholars can use digital technologies to compile entire books that may (or may not) be subsequently published by well-regarded academic presses. This signals a paradigm shift to a world in which academic writing exists in abundance in many platforms, rather than in narrowly circulated bound volumes, whether books or journals. At this time, it is unclear which economic alliances will best support

scholarly knowledge production in the future. What is clear is that models of scholarly publishing that view writing by academics as a scarce commodity – both difficult to publish and to distribute – no longer make sense in an era of comparatively cheap, digital production and distribution of scholarly work.

Reflecting on her experience, Fitzpatrick writes that these new platforms are changing the way we think about publication, reading and peer review: ‘Distinction is no longer associated with publication, but instead with reception, with the response produced by a community of readers’ (Fitzpatrick, 2011). She contends that digital technologies are broadening the definition of peer-review to include a wider range of specialists from inside the academy, as well as those from outside.

Being a scholar in the digital era means connection to the larger social world. In a recent survey of scholars using digital technologies, when asked what they saw as the benefits of using social media as an academic, many of those responding mentioned the connections or networks they had established with other academics and also those outside academia. Several made reference to the wide scope of these connections, which allowed them to interact with people across the globe and from diverse communities (Lupton, 2014).

The architecture of participation in the digital era has opened up new possibilities of being a scholar-activist. There is a long tradition of being a scholar-activist that embraces both academic rigor and using academic work in the service of the public good, such as W. E. B. DuBois who was both a world-class scholar and a leading activist (Morris, 2015). Being a scholar-activist is changing now, too. For instance, when researchers in Los Angeles observed that one of the top Google search results for ‘day laborer’ was a hate-filled site, they decided to take action. Researchers joined with community activists to create the *VozMob*, a project that utilizes mobile phone and web technology to address inequities that affect recent immigrants. *VozMob* involves community members who work as day laborers in documenting, analyzing, and discussing their own struggles by using a mobile phone to record stories that are automatically uploaded to the web. The narratives collected in the *VozMob* project help to counteract the flood of negative representations of immigrants, especially those who work as day laborers, in mainstream print, TV, radio, and online media (The VozMob Project, 2011). The reality is that when there are pressing social issues, digital media technologies enable scholars to connect their work to activism that is trying to address those issues. It is now possible for scholars to connect their politically committed work to the world beyond the academy in ways that aim to make a difference.

Being a scholar in a digitally networked classroom is changing, as well. Most mundanely, classroom management tasks like rosters, attendance, grades and course evaluations can now be done electronically. When grades are due and the university-wide grading system goes down, or the learning management system suddenly goes offline, the digitally networked classroom can seem like the iron cage of bureaucracy for the 21st century. When these are the primary, or exclusive, way that faculty (and students) engage with digital technologies, these can and do represent a menace. However, beyond managing the tasks of instructional bureaucracy, digital technologies can offer innovative routes to learning. Increasingly, college students enter the classroom expecting to learn in and through digital media. There are other changes to pedagogy that are shaping what it means to be a scholar in the digitally networked classroom.

The pedagogical style of the digital era is one in which the professor is the ‘guide at the side’ rather than the ‘sage on the stage’ (King, 1993). The diffusion of digital technologies means that students can, and often do, look things up on their own and it also means that instructors are learning about new developments in a field along with their students. In the last few years, the assemblage of technologies that make possible massive open online courses (MOOCs) have sparked a renewed interest in conversations about educational technology. Indeed, there has been no shortage of hyperbole about the ‘revolution’ that these promise. However, many critics have pointed out that the ‘sage on the stage’ kind of instruction that most of these courses offer isn’t that different from ‘revolution’ promised by educational television (Picciano, 2014) or indeed, from traditional lecturing (Watters, 2015). There is a great deal of discussion circulating about what kind of difference digital technologies make to learning and how this should transform teaching (Davidson and Goldberg, 2010; Beetham and Sharpe, 2013). What is certain is that students, especially traditional-aged students (18–24 year olds), enter college already immersed in a near ubiquitous digital media environment and expect to encounter those technologies in their courses. Being a scholar in the classroom means guiding students to help them make critical sense of the digitally mediated environment in which we find ourselves.

How we measure scholarly impact is changing. When our scholarly research is shared on and through social media, it leaves a kind of data trail. The number of hits, downloads, shares, and other measures are easy to find on most social networking sites. There are many ways that these new metrics interact with more traditional measures of scholarly impact. For instance, there is evidence that when a scholar

shares their research on social media, it is cited more often in the peer-reviewed literature (Eysenbach, 2011). There is a growing array of digital tools that combine the metrics shared on social media with those in traditional journals. The use of these new tools and metrics is uneven across academic institutions.

Our personal experience

The *terra firma* of scholarly practice is changing. From knowledge creation, publishing, collaborating and scholar-activism to teaching and measuring scholarly impact, digital technologies are changing the way we do our jobs as scholars. We will have even more to say about this later in the book, in particular about how digital technologies are opening up new types of collaborations with the goal of enlivening the public good. Whether these changes seem exhilarating, perplexing, sinister – or all of these at once – depends on a constellation of factors, such as position in, adjacent, or outside the academy, along with personal temperament and inclination to tinker with things. At the outset, we thought it important to say something about how digital technologies have affected each of us.

For both of us, digital media technologies are transforming the way we engage in scholarship and academic librarianship. I (Daniels) have chronicled the way a tweet at an academic conference became a blog post, then a series of blog posts, and then an article in a peer-reviewed journal (Daniels, 2013). For me, the use of digital media is transforming how I approach being a scholar. Twitter is not simply a tool for disseminating research; it's a tool I think with and through. Blogging is often the way I compose a first draft of a thought that I may develop further for publication elsewhere, which I have done in my scholarly blog, *Racism Review*.³ For me, the blog is also a form of scholar-activism, a way to engage beyond the academy about one of the most pressing issues of our day. Though a generation (or two) older than those referred to as 'digital natives', I enjoy tinkering with technology. At an earlier point in my career, I left an academic post to work in the Internet industry. I came back into academia through a research project based at Rikers Island, New York City's largest jail, whose goal was to help young men returning to their home communities. This rather unconventional career trajectory has led me to consider the ways to join my scholarly work with both digital technologies and social justice.

As an academic librarian, I (Thistlethwaite) deal with the implications of digital media technologies on scholarly work every day. As students enter graduate school with digital skill sets and research interests, their more established, but less digitally fluent, advisors often struggle to understand how new media and tools work and whether what students construct with them bears any resemblance to what they understand as scholarship. The primary product of graduate work, the dissertation, is now a site of contested practice as small publishers, nervous about the threat to their business model posed by open access distribution, warn faculty advisors to caution graduate authors against current digital archiving and public distribution practices (Cirasella and Thistlethwaite, 2016). Such advice reflects an abundance of caution about a publisher's business model with less concern for the public good. In working with faculty, I increasingly serve as a guide on the complicated nuances of copyright and open access to scholarly work. As librarians, we constantly learn new ways of doing things.

The transformation of scholarly life that we have experienced is happening within a broader social and political context that is troubling for academic institutions.

Moving from legacy scholarship to digital scholarship

'When I was a student at Oxford,' scholar-librarian Robert Darnton explains, 'you had to slip between rows of fixed and revolving spikes,' in order to gain entry to the libraries walled inside the colleges (Darnton, 2012, p. 3). In this way, outsiders were kept at bay from the intellectual life inside Oxford through the imposing external architecture. The contemporary versions of spikes and walls are familiar to anyone who has been on a college campus recently, 'from locked doors and turnstiles to restrictive qualifications for entry, payment to obtain a reader's card and an atmosphere of intimidation.' Even beyond these obstacles, now, 'the most important barriers to knowledge are invisible' (Darnton, 2012, p. 4). For those without a university ID card, academic libraries can be forbidding places. The fortress-like quality of academic libraries serves as a useful metaphor for legacy scholarship.

Legacy scholarship is rooted in 20th-century (and earlier) analog practices of print publication, with little focus on conversing with others outside the scholarly world (Stein and Daniels, 2016). Legacy scholarship refers to a set of analog practices shared by academics working across disciplines. Under the legacy model, authors work

in solitude to research and synthesize text for publication in printed, bound books or journals with small print runs made available to other scholars with privileged access to them through university libraries. This model produced knowledge exclusively for consumption by a small circle of academic specialists in the same or similar fields. The legacy model of publishing is concerned primarily with peer scholar-to-peer scholar review and is disengaged from readers unaffiliated with the academy.

Many of our methods of teaching are also rooted in legacy systems and 20th-century models of industrial production. According to Cathy N. Davidson and David Theo Goldberg, the practice of lining up and bolting student seats to the ground, in regimented columns and rows, with a teacher at the helm, was designed to instill the kind of work habits that conform to conditions of industrial capitalism. In the 21st century, we have a generation of students who have grown up with digital technologies, entering a very different kind of workforce. These students, they argue, require a very different kind of learning than the 20th-century version currently on offer (Davidson and Goldberg, 2010).

Digital scholarship, like legacy scholarship, refers to a set of practices rather than a single field of study. It is rooted in modes of knowledge production, distribution, and pedagogy that employ computer and Internet technologies. The digital age facilitates the development of different academic practices and new ways of engaging with publics beyond the walled-in academy (Stein and Daniels, 2016). Moving, remixing, sharing, and circulating information is easier and faster. Just as the *ctrl+x*, *ctrl+v* commands of cut and paste make it quicker to move text around than typing, scissoring, rearranging and pasting, other forms of digital activity allow for easier distribution and redistribution of text and all variety of media. The ideal of openness is intrinsic to digital scholarship. The rise of digital technologies has shaped the open access movement, which seeks to make scholarly books and journal articles available to everyone on platforms discoverable and accessible with an Internet connection. With the open access distribution and interactivity that our contemporary communications infrastructure makes possible, openness becomes not only possible, it is the default. The shift from legacy scholarship to digital scholarship is an important shift within academia, but is by no means the only one.

The contemporary academy is buffeted by two competing tendencies: commercialization and democratization (Darnton, 2012, p. 1). Darnton identified these competing tendencies in his scholarship on the history of books, and we contend that it also applies to the

struggles within education writ large today. The forces that want to commercialize, or privatize, the academy are looking for ways to manage the ‘cost disease’ of higher education (Bowen, 2015; DeMillo, 2015), while those who want to democratize education want to make knowledge more available to more people (Suber, 2012; Giroux, 2014). Within these competing trends of commercialization and democratization, there is ‘a dark side,’ Darnton explains about libraries, and we would extend Darnton to include academia more broadly (Darnton, 2012, p. 2). ‘Far from demonstrating uninterrupted democratization in access to knowledge, it sometimes illustrates the opposite: “Knock and it shall be closed”’ (Darnton, 2012, p. 2). Darnton does not want to be construed as ‘standing on some remote, moral high ground,’ by making this argument (Darnton, 2012, p. 1). Instead, he wants to offer a more pragmatic path through down-to-earth contingencies toward finding a ‘just equilibrium’ between commercialization and democratization (Darnton, 2012, p. 14). We share Darnton’s preference for the pragmatic, and we raise this discussion here because the widely held understanding of tendency toward commercialization in academia interferes with the trend we have set out to discuss here. We, as academics and scholar-activists, too often conflate the competing tendencies of commercialization and democratization with the transformation from legacy scholarship to digital forms of scholarly practice. This makes sense, to a certain extent. Scholars with a highly developed critique of neoliberalism⁴ and an equally honed sense of social justice activism astutely observe the use of digital technologies for the purpose of new managerialism (THE, 2001). Given this critique, academics with an activist bent who want to resist commercialization may do so by steadfastly refusing the digital. “I will not be made to learn the Internet!” as a colleague of ours declaimed when he heard about our project. In our view, this is misplaced and reflects a misunderstanding of the forces at play here. What this misses, we contend, is the opportunity for digital technologies to open up new avenues of resistance to the forces of neoliberalism and corporatization of the academy. In our view, it is not only possible but it is imperative to be a digitally networked scholar who is also actively aligned with democratization and against the forces of corporatization.

Structure of habits for digital scholars

Digital technologies have radically altered the traditional structure of habits in the scholarly workflow. Digital sociologist Mark Carrigan

describes the workflow of this way of doing scholarship as one of ‘continuous publishing’ rather than one with a clearly defined beginning, middle and end that the publication of a legacy project would involve (Carrigan, 2012).

In the appendix to his classic *The sociological imagination*, titled ‘On intellectual craftsmanship’, C. Wright Mills exhorts aspiring scholars to keep a journal and create a ‘filing system’ to reflect on personal experiences, notes about the literature in one’s field, along with charts and diagrams. In this appendix, Mills refers to being a scholar as ‘a choice of how to live,’ he says, ‘as well as a choice of career’. It is, he explains, about being a scholar, ‘a structure of habits’ (Mills, 1959). Mills was certainly a part of the legacy model of scholarship, and the practices he encourages are rooted there, but the advice that Mills offered remains sound, even though the ‘structure of habits’ is changing.

Writing practices are changing. Taking notes, a process that often starts or inspires research and analysis, can now involve digital practices and platforms. These more recent digital practices exist alongside analog practices. For example, when (then) graduate student Nathan Jurgenson got an iPad, he fashioned a portfolio case that held the digital device on the left side and a paper notepad on the right side. With this DIY case, he could take notes with a pen or pencil on the right side, and look up things on the Internet on the left side. His iPad case with a notebook illustrates the way note-taking both is, and is not, digital and analog at the same time (Jurgenson, 2012). More recent digital methods of note-taking sit alongside analog methods of pen and paper, sometimes in the same (modified) portfolio case.

Systems for organizing and archiving notes are changing. Word processing enables quick and easy editing, and linked metadata structures enable changes in one note to properly align with others. Now that academic journals are near fully online, article retrieval no longer requires one to locate printed copies on library shelves and then photocopy the desired pages. Scholars are developing a set of habits for using search engines, making decisions about what information is important and what is not (Löfgren, 2014; Lupton, 2014). Graduate students learning these processes look to faculty for guidance, but often rely on their peer practitioners and librarians to help them shape efficient digital research practices. One of the other basic habits of being a scholar, reading, is changing as well.

‘Throughout the week I scan through the content that comes through to my RSS reader,’ researcher Allan Johnson explains (Johnson, 2013). The problem of ‘data smog’ or the overload of information in one’s field and allied interests can seem daunting, even unmanageable

(Shenk, 1997). Johnson uses Twitter to curate his reading and, in doing this, he has reimagined a crucial part of the workflow of being an academic: keeping up with the reading in one's field of expertise: 'The content is a mixture of my main interests: academia, of course, but also fashion, design, media, culture, theatre, and architecture'. He decides what to read immediately and what to read later based on how long it would take him to read a piece of writing. If he can read the post in less than 2 minutes, then he'll read it in the moment and share it (via social media) if he thinks it's worthwhile. 'But if it will take longer than 2 minutes, I send it straight to Pocket, a read-it-later app' (Johnson, 2013).

Reading is also changing, but in some unexpected ways. A recent survey in the US finds that reading in digital formats is increasing, with some 28% reporting that they read an eBook in 2013, up from 23% in 2012 (Zickuhr and Rainie, 2014). However, few have completely replaced print books for digital versions. In the same survey, only 4% of respondents said they were 'e-book only readers, while most people who read eBooks also read printed ones' (Zickuhr and Rainie, 2014). While we have not found a survey that specifically surveys the reading habits of scholars, our sense based on our own practices and talking with colleagues is that academics are following this general trend of reading a mix of digital and printed formats. As just one example, one researcher explained to us that his typical practice is to purchase the printed version of a book; then, when he needs to reference it again, he uses a digital version of the same book to search for key words and page numbers. Another scholar with failing eyesight explains that he has used text-to-audio converters, such as SpokenText, to convert written documents to MP3 files he can listen to without straining his eyes. Digital technologies are expanding the formats, styles and modes of reading, while printed texts in bound volumes endure.

The expansion of digital technologies means that our habits of accumulating and generating ideas are changing. Hundreds, even thousands, of digital tools like search engines, browser extensions, pdf annotators (for example Adobe Reader, PDF-Notes), databases (for example AcademicSearch, EBSCO, WorldCat), shared calendars, productivity applications (for example Evernote, ToDo), hot keys, code and document sharing platforms (for example GitHub, DropBox), are changing how we manage our scholarly work. Citation management, keeping track of all that work, is also changing. Platforms like Bibloscape, EndNote, Mendeley, RefWorks and Zotero offer new ways to organize and cite information. Some of these platforms go several steps beyond reference management, by enabling collaboration

on gathering research, sharing notes and citations, and creating bibliographies; these citation manager platforms have the potential to change scholarly endeavor from a mostly solitary pursuit to one that is collaborative.

As in Mills' era, we are still likely to have a system of folders to organize our scholarly work, compile reflections, save charts and diagrams, and keep track of professional activities. Now, scholarly work is stored in folder-based paper filing systems that are invoked by icons, drawings on a computer interface we have come to refer to as desktops (Johnson, 1997). The difference in this shift from folders in a desk drawer to folder icons on a desktop is that the digital versions of this academic work can be easily shared with a network of scholars around the world and back again. To be sure, academics in a previous era shared work through postal mail, but it could be slow and, depending on where you lived, unreliable. The Internet speeds up this process and that makes a difference. Whether that is a feature (a good thing) or a bug (a bad thing) for scholarly life is a point of some debate (Carrigan, 2015).

Sharing academic work with colleagues separated by significant distance is part of what prompted the development of the technologies that became today's Internet. The fact that we can share our work across institutions and with those outside the academy is because of the successful and sustained investment in research and development in the information infrastructure of the Internet (Leiner et al, 2012). The earliest recorded description of the social interactions that could be enabled through digitally networked scholarship was a series of memos written by J. C. R. Licklider of MIT in August 1962 discussing his 'Galactic Network' concept, which he imagined as a globally interconnected set of computers through which everyone could quickly access data and programs from any location (Leiner et al, 2012). In practical terms, he envisioned the Internet we use today. Just as Licklider imagined, our 'Galactic Network' – or Internet – allows us to quickly access data and programs from any location. It also makes sharing work fundamentally easier.

However, the emergence of the popular Internet has not done much to change the sharing of work at academic conferences. 'Name badges are the central showpiece of a five-day game of scope and 'sneer,' says Rebecca Schuman (2015). While traditional academic conferences are one of the cornerstones of scholarly communication, they can also be intimidating, insular, and expensive affairs. Schuman references the Modern Language Association for her zinger about the 'scope and sneer' of academic conferences, but the MLA is by no means alone in

the kind of status ritual she describes. Traditionally, such gatherings are only for other scholars, and are as closed off to the outside world as the academic libraries walled off and protected by the ‘fixed and revolving spikes’ that Robert Darnton described at Oxford (Darnton, 2012, p. 3). Further, what happens inside a conference meeting room rarely exists for anyone except those few who can afford to be physically present. While there have been some notable efforts to join activism with scholarly association meetings, these are often the exception that prove how unusual this is as a rule (Strauss, 2016).

Digital media technologies are changing the experience of some at academic conferences. As an alternative to the expense (and environmental impact) of travel to conferences, some scholars are creating virtual conferences through digital video and web conferencing or following conferences from afar via Twitter hashtags. But these are by no means replacing face-to-face academic conferences, which remain an enduring part of scholarly life. Digital technologies can open conferences to those unable or unwilling to travel. For example, backchannel Twitter communications can be an important mechanism for extending conversations with colleagues, organizing impromptu gatherings and forging new relationships. For those who use them, digital technologies can make academic conferences more open and inviting, both for those attending and for those unable to do so. Scholars who present at conferences can also share their work with the public, not just those attending the meetings, through open access repositories at their institutions or on commercial platforms like SlideShare.

Because so much of our writing and other work exists in digital format, it is far easier to share with others and distribute to large networks of other scholars. Today, academics routinely share work in digital formats as a matter of ordinary scholarly practice. Whether we do this by emailing rogue pdfs of journal articles smuggled out of our libraries to colleagues without access to the same databases, or legitimately post pre-print and pre-formatted versions of our work in an institutional repository or a commercial platform like Academia.edu, easy shareability is transforming what we do. Beyond this, some scholars employ a complexly layered set of digital technologies to collaborate. FemTechNet, for example, is a global network of feminist scholars and artists who work on technology, science, and feminism (FemTechNet, 2015). This group meets regularly online to further a wide range of projects, using video conferencing, cloud-based documents that can be shared and edited in real time, and a website that houses documents, archives videos, and hosts asynchronous discussion boards.

The ever-changing pastiche of digital technologies, alongside the analog of occasional in-person meetings, enables a new level of connectedness among scholars across geographic distance and types of institutions. Sharing research interests and exchanging work among scholars has never been easier. For many scholars, the broadening of networks makes connecting with activists a logical next step, but some have been doing this for decades.

Transformations in context

The rapid expansion of changes wrought by digital technologies can seem quite foreboding given the current landscape of higher education. Public funding of higher education is plummeting. Even though there has been growing student demand for higher education since the mid-1970s in the US, economic investment in higher education has been falling since about 1980. If current trends continue, some predict that state fiscal support for higher education will zero out by the year 2059 (Mortenson, 2012). This sharp decline in funding for higher education in the US is an attack on the very idea of the university as a public good through the market-driven policies rooted in neoliberalism (Giroux, 2014). An array of functions within the university – from food services to human resources – are being privatized, and even faculty positions are being whittled away. In the US, the number of available full-time, tenure-track positions is fewer and fewer each year, while those in precarious adjunct positions now provide the majority of college teaching. Most of the faculty on American college and university campuses are contingent employees (part-time in some form or fashion) (Street et al, 2012). A report by the American Association of University Professors (AAUP) charts the trend in faculty status over the decades since 1975, when 57% of all faculty positions were tenured or tenure-line,⁵ and 43% were contingent. By 1993, those numbers had exactly reversed, with just 43% of all faculty in tenured or tenure-line positions, and 57% in adjunct or non-tenured positions. By 2011, the AAUP finds that only 30% of faculty hold tenured or tenurable positions, while the overwhelming majority, 70% of all faculty, are in contingent positions (AAUP, 2013). Some adjuncts, it's difficult to say what percentage, may have full-time jobs in their field and genuinely desire to teach only part-time. This scenario is more common in professional schools – law, business, medicine, and public health – but it is less common in humanities, arts and social sciences. The fact is that those who labor in non-tenured lines often shuttle

between multiple campuses, must take on far too many courses in order to survive economically, and often work without benefits, including health insurance. The pay gap between tenured (and tenure-track) faculty and contingent faculty is widening (Lewin, 2013).

Stepping into the arena of the discussion surrounding higher education are a bevy of marketers, philanthropists, columnists, and writers without much experience but with lots of predictions about the changes wrought by digital technologies. Marketing guru Seth Godin argues that higher education is about to face an epic meltdown due to the rising cost of tuition and the wide availability of courses and information online (Godin, 2010). *New York Times* columnist Thomas Friedman claims that the ‘MOOC revolution’ will end world poverty (Friedman, 2013). In fact, as critic Audrey Watters points out, most of the promises and predictions for academia from such commentators have not borne fruit (Watters, 2015).

Politicians and university administrators increasingly demand business-style reporting from faculty about their teaching and scholarly productivity. In the context of austerity economics, college and university administrators must raise funds for their institutions to survive. Their jobs are tied to their fundraising, as deans at many institutions are evaluated on how much revenue they (and the faculty in their division) generate through fundraising. Administrators, in turn, pass along this pressure to full-time faculty, who must often raise part of their salary through grants. Institutions of higher education increasingly rely on business logics such as ‘return on investment’ and ‘demonstrated economic need’ to evaluate the worth of degree programs and research impact. In the UK, the funding regime of the Research Excellence Framework (REF) has institutionalized new measures of research impact with far-reaching, sometimes devastating, consequences for individual lives and careers. This expansion of an administrative class in higher education raises serious concerns about costs and neoliberal-style management practices.

“There’s just a mind-boggling amount of money per student that’s being spent on administration,” says Andrew Gillen, a researcher who studies higher education. “It raises a question of priorities.” According to a recent study by Gillen and colleagues, between 1987 and 2012, universities and colleges in the US collectively added 517,636 professional employees, which is an average of 87 academic administrators added every working day (quoted in Marcus, 2014). While there is debate about whether or not this rise in the administrative class is directly or indirectly driving the rising tuition

costs, the fact is that this new layer of administrators is part of the larger political economy of higher education (Woodhouse, 2015).

The cuts in public funding, the trend toward privatizing services, the decline of full-time faculty and the rise of the ‘precariat of adjunct labor’ taken together have prompted cultural critic Henry Giroux to dub the time we are living through a ‘neoliberal war on higher education’ (Giroux, 2014). Take the growth of the administrative class in higher education, for example. It isn’t simply a boondoggle (unnecessary, wasteful or fraudulent project) for would-be associate deans, but rather one more symptom of a larger shift in the economics of higher education. In addition to the thousands of regulations that govern the eligibility for, and distribution of, financial aid to students, the institutions themselves must generate income. Thus, there are entire administrative departments devoted to marketing to prospective students, recruiting and enrolling students (as tuition payers or loan qualifiers — on which the university takes a percentage), fundraising with private donors and chair endowers, grant writing, and managing physical space.

The buildings themselves, the physical space, are the focus of profit mining in higher education. The Educational Advisory Board, a consulting firm to higher education institutions in the US and Europe, identifies ‘maximizing space utilization’ as a ‘top strategic priority at higher education institutions of all sizes’, critical to ‘stability of finances’. Increasingly, faculty are seen as standing in the way of the profit-centered goals around the physical space, for as the Educational Advisory Board describes it, ‘faculty hoard facilities, refusing to give up or share space they do not need for fear they will not be able to get it back when needed’ (Educational Advisory Board, 2010). It is common practice for institutions of higher education in the US to rent out the physical space of the university to paying customers from outside the university. Indeed, faculty and students who may believe they should be able to access their campus during off hours (when classes are not in session) may quickly realize that they are on a waiting list behind the paying customers who are using the space.

The rise in the administrative class of workers required to manage the physical space of the university is necessary if the goal is to implement the neoliberal vision of extracting profit from learning institutions at a time of decreased state support. The issue here for those who care about colleges and universities is not simply about the use of space or the cost of hiring people to administer these building efficiency schemes. The neoliberal logic that propels the need to maximize space, eliminate ‘inefficiencies’, and generate revenue becomes the script for

how to run the university, including both the faculty and the students. In the neoliberal university that is low on public funding and heavy with administrators, the institutional logic is one driven first and foremost by the imperative to find and generate revenue. In the service of this goal, there is less faculty autonomy and shared governance as these get in the way of the efficiencies of the neoliberal capitalism. For teaching and learning, the neoliberal university places increasing focus on consistent curricula, delivered to as many students at a time as is possible, in order to move them all to degree completion as quickly as possible, so that they might enter the labor market as workers. Within this formulation, the university is no longer about fostering critique or engaging in a democracy as fully informed citizens. Rather, taken to its logical conclusion, the neoliberal university is a corporation, run by managers, with faculty are merely employees, processing the raw material of students (Savio, 1964).

Surveying the landscape of the neoliberal war on higher education, many observers mistake the rise of digital scholarship with the neoliberal impulse to commercialize the university. While it is tempting to dismiss the rise of digital scholarship as just another victory for the forces of neoliberalism, or, to get swept away by the rhetoric of the disruptive potential of digital technologies to transform all of higher education ‘with just one click’, both views are too facile. Understanding the complicated landscape of what it means to be a 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.

In academia, as elsewhere, we are faced with competing forces of commercialization versus democratization. The forces of commercialization, another name for the ‘neoliberal war’ that Giroux describes, compel higher education toward the ‘maximizing of space utilization’, the hiring of private security guards, cleaning and food services, and the ‘adjunctification’ of faculty, living at the margins of academe (Kraft, 2013). Simultaneously, the rise of the popular Internet has made open sharing of scholarship possible in ways that were inconceivable previously (Darnton, 2012). This broad conflict between forces of commercialization and of democratization is too easily conflated with the transformation from ‘legacy’ to ‘digital’ forms of scholarly practice. Not every form of digital technology is part of the long march to the neoliberal university.

This shift to digital scholarship is incomplete, uneven and entangled with the colliding forces of commercialization and democratization. Indeed, digital media technologies may be one of the best mechanisms

for students and faculty who want to resist the forces of neoliberalism in the university and elsewhere. In our view, it is possible to both embrace the digital transformations in scholarship while also resisting the commercialization of academia. For many academics trained in the art of critique without the benefit of activism, it can seem inevitable that we concede defeat to the larger forces of neoliberalism and commercialization of the university and the demise of legacy scholarship. Instead of giving in to this nihilism, cultural critic Henry Giroux calls upon public intellectuals concerned about the future of democracy to speak out and defend the university as a site of critical learning and democratic promise (Giroux, 2014). The project we describe in this book, JustPublics@365, takes up Giroux's admonition and goes a step further. Our attempt at defending the university is also an effort to transform it.

Our experiment

JustPublics@365 was launched in January 2013 as an experiment in bringing together academics, activists and journalists, to address social justice issues through the use of digital media. It began in January 2013 at the Graduate Center, City University of New York (CUNY) (located at 365 Fifth Avenue in Manhattan). Several of us wondered if we might be able to collaborate in ways that fostered greater social justice by sharing it in the public sphere. This discussion took as its starting point the reality that we live in an era of rampant inequality. Media reports on inequality often gain little traction in a 24-hour news cycle dominated by the trivial. Activists work to address inequality in a myriad of ways, online and on the ground, but often lack connections to research or media that could further their causes and increase their ability to effect change. Key research produced by academics can help anyone grasp and combat the causes and consequences of the growing problem of inequality, yet this potentially impactful scholarship often remains disconnected from activism and locked within volumes and journals unread by the broader public.

JustPublics@365 was motivated by the notion that in order to fulfill its goal to obtain impact on the social movements of the 21st century, scholars must change their ways of distribution and communication with public audiences. Our experiment sought to leverage the reciprocal power of social activism and the connected platforms of digital media to meet demands for accessible and impactful information that retains the integrity and authority of scholarly research. We struggled, in various

ways, with how to incorporate digital media technologies and social activism into an academic institution that is not necessarily designed to accommodate either of these. Despite our success at some of these attempts, we also failed again and again at what we attempted. In the chapters that follow, we will try to address both the successes and the failures of such a large, multi-faceted project.

Why write a book about a project that is steeped in digital knowledge production? Our goal here is to offer a vision about what is possible in scholarly practice if we take seriously both the capacity of digital technologies and the public good within the context of current debates about higher education. We do this in book format because we do not believe that books are dead. On the contrary, long-form writing in printed format will continue to be one element among many that bears scholarship into the future, enjoyed by academics, thinkers, and readers of all kinds. Books offer a particular permanence and transferability that born-digital formats still struggle to achieve. We thought there was value in bringing together the widely disparate elements of our experiment into one cohesive narrative that could anchor the project, and perhaps offer a guide for others in the *terra incognita* of what it means to be a scholar in the digital era.

While a good portion of the books written about higher education and digital technologies these days focus on how technologies may prove to be disruptive (or not) to the economic viability of colleges and universities, we take a different approach. Our focus is on the practices at the heart of being a scholar in the digital era. What follows in this book is a survey of the current landscape of higher education, a guide to what we've done, and a vision for what could be possible. For those who find these changes exciting, we offer a guide. For those who find these changes confusing, we hope to shine a light that makes a path forward a little clearer. For those who find the prospect of being a scholar in the digital era foreboding, we hope you find some solace here. Whether we embrace change or resist it, the ground beneath us in academia is shifting.

Structure of the book

This book is organized into chapters that can be read in the order we designed, or remixed in an order that suits the reader's interests. The order we put them in suggests our conceptualization of the project we describe, but you may want to skip ahead or back to read in a different order. In Chapter Two we look at the changing 'structure of habits' and

explore how digital media technologies expand the possibilities — and necessities — of creating, collaborating, and connecting.

In Chapter Three we challenge the dominant MOOC paradigm and describe our attempt at doing something radically different and truly open.

In Chapter Four we take a look at the debates around open access and how digital technologies are changing the flow of knowledge outside and beyond the academy.

In Chapter Five we consider the unmet need of those who want to acquire digital media skills, and what it might look like to provide established and early career scholars with those skills.

In Chapter Six we explore the scholarship of engagement, trace the origins of the current system for assessing impact, examine the rise of ‘altmetrics’ and consider whether social justice metrics are possible.

In Chapter Seven we reflect on what the future holds when the digital is simply part of scholarly practice, and what is at stake in the battle over those practices within the political context of austerity.

Throughout, we begin each chapter with an overview of the current debates, move to a discussion of what we did in our project, and we end each chapter with a section called ‘Forward thinking’, to chart a vision for what might be possible if we truly reimagine being a scholar in the digital era with the public good in mind.

Notes

- ¹ MediaCommons Press, at <http://mcpres.media-commons.org/plannedobsolescence>
- ² NYU Press, at <http://nyupress.org/books/9780814727881>
- ³ See www.racismreview.com
- ⁴ Throughout the text, we use the term ‘neoliberalism’ to refer to a particular form of late stage capitalism associated with privatization, fiscal austerity, deregulation, and reductions in government investment in public goods and services, in particular, higher education. For more, see Brown (2015); and Giroux (2008).
- ⁵ Tenure-line faculty are those who are employed full-time, typically with benefits like pensions and health insurance. Typically, after an extensive review period of six to seven years, tenure-line faculty are eligible for tenure, meaning that their positions are more or less permanent.