Scholarship in Abundance: Influence, Engagement, and Attention in Scholarly Networks

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ABSTRACT

In an era of knowledge abundance, scholars have the capacity to distribute and share ideas and artifacts via digital networks, yet networked scholarly engagement often remains unrecognized within institutional spheres of influence. The purpose of this dissertation study is to explore the meanings constructed and enacted within the networked practices of 13 scholars actively engaged in both institutional and networked participatory scholarship. Using ethnographic methods including participant observation, interviews, and document analysis, the study investigates networks as sites of scholarship, with the intent of furthering institutional academia's understanding of networked practices. The three papers that make up the dissertation each articulate a specific thread of intersection between institutional and networked scholarship: the first focuses on what counts as academic influence within networked circles, the second on networks' terms of value and reward, and the third on the relationships between attention, care, and vulnerability in scholarly networks. Together, the papers conclude that networked scholarly practices of engagement align broadly with those of academia, yet enable and demand scholars' individual cultivation of influence, visibility, and audiences. Thus networked scholarship rewards connection, collaboration, and curation between individuals rather than roles or institutions, fostering cross-disciplinary and public engagement and a bridging of the personal/professional divide. The study contributes to knowledge by situating networked scholarly practices within the scholarly tradition, while articulating the terms on which knowledge abundance and networked practices open up new spheres of opportunity and vulnerability for scholars.

TABLE OF CONTENTS

ABSTRACT ii
ACKNOWLEDGEMENTS v
PREFACE vii
SCHOLARSHIP IN ABUNDANCE: INFLUENCE, ENGAGEMENT, AND ATTENTION IN SCHOLARLY NETWORKS 1
Background 1
Research Papers 5
Methodological and Theoretical Approaches 6
Findings and Discussions 11
Paper #1 11
Paper #2 13
Paper #3 14
PAPER #1 - OPEN TO INFLUENCE: WHAT COUNTS AS ACADEMIC INFLUENCE IN SCHOLARLY NETWORKED TWITTER PARTICIPATION 18
Abstract 19
Introduction 20
Networked publics and the academy 21
Academic influence and network influence 23
Methodologies and Theoretical Perspectives 26
Methods 28
Selection 28
Participant Observation 31
24-hour Reflection 31
Profile Assessment 31
Interviews 32
Coding and Analysis 32
Rigour 33
Findings and Discussion 34
"She sure has a following" – Metrics matter, but not that much 35
"A rolling stone gathering moss"- Identity at scale 37
"Status baubles" – The intersection of network influence with academic prestige 39
"I value their work, so value by association" – Commonality as credibility and value 40
"Being connected with Oxford adds to the reputation" – Recognizability as a way of making sense of signals 41
"A human who is a really boring bot" - Automated signals indicate low influence, especially in the absence of other signals 43
"My digital networks provide me with some sense of being someone who can contribute" - Identity positions and power relations 44
Conclusions 46
Acknowledgements 47
References 48
PAPER #2 - IN ABUNDANCE: NETWORKED PARTICIPATORY PRACTICES AS SCHOLARSHIP 53
Abstract 54

Introduction 55
Conceptual Frameworks 56
Research Methods 58
Selection 58
Participant Observation 59
24 hour Reflection 59
Profile Assessment 60
Interviews 60
Coding and Analysis 60
Rigour 60
Research Analysis and Results 61
Discovery 62
Integration 66
Application 69
Teaching 72
Beyond the hierarchy of functions 75
Conclusion 78
References 80

PAPER #3 ATTENTION IN NETWORKED SCHOLARSHIP: TWITTER AS A SITE OF CARE AND RISK 85
Abstract 86
Introduction 87
Conceptual Frameworks of Scholarship and Attention 88
Methodologies and Theoretical Framework(s) 91
Methods 92
Selection 92
Participant Observation 94
24-hour Reflections 94
Interviews 94
Coding and Analysis 95
Rigour 95
Findings and Discussion 96
Practices of visibility and connection 96
Practices of attention and affinity 100
Sites of collapse and conflict 101
Sites of institutional deviance 103
Sites of re-inscription 106
The role of Twitter in visibility and risk 108
Conclusion 110
Acknowledgements 110
Funding 110
References 112

CONCLUSION: ONE YEAR LATER 118
Future Research 144

List of Additional References 147

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PREFACE

This dissertation is an original intellectual product of the author, Bonnie Stewart. The fieldwork reported in papers 1-3 was covered by UPEI Ethics Certificate #6005563.

SCHOLARSHIP IN ABUNDANCE: INFLUENCE, ENGAGEMENT, AND ATTENTION IN SCHOLARLY NETWORKS

Background

This dissertation outlines an ethnographic investigation of the ways in which scholars at a variety of career stages understand and enact scholarly engagement within online participatory networks.

Over the last decade, the ways in which people can connect and share ideas online have multiplied dramatically. Social network platforms such as Facebook and Twitter have become commonplace means of communication and interaction. The proliferation of free blog platforms has led to unprecedented self-publishing, and the rise of camera-enabled phones combined with platforms such as Youtube and Instagram has meant that images and videos can be easily shared. Online self-presentation and participation in networked interactions has become a feature of contemporary life.

Forms of networked participation are becoming increasingly visible within academia, as well. Networks of scholars and emerging scholars have developed across social networking sites (SNS), blogs, and other platforms, creating a public, participatory sphere wherein scholars can self-publish, share ideas across various platforms, and engage with emergent issues in higher education and society at large. Many scholars build public bodies of work via participatory media, and engage with peers and publics across geographic and disciplinary boundaries.

There are multiple platforms available for open scholarly networking. SNS such as Academia.edu and ResearchGate have emerged specifically for scholars, while reference tools such as Zotero and Mendeley have gradually integrated networking capacities for scholars to recommend, share, and tag resources. Google Hangouts are utilized to host informal open discussions and learning experiences, and Facebook groups focused on specific disciplinary and research interests enable real-time public discussion of issues and ideas. Twitter serves as a general communications and resource-sharing platform, as well as the central site of observation in this study: Lupton's (2014) study of 711 academics active on social media found that 90% reported using Twitter for professional purposes, while nearly 50% used Academia.edu, 40% Facebook, and over 30% personal blogs (pg. 14).

However, technological platforms themselves are not the focus of this study. I approach emergent academic practices as a specific subset of participatory culture (Jenkins, 2006). Drawing on Veletsianos and Kimmons' (2012) assertion that "[s]cholars are part of a complex techno-cultural system that is ever changing in response to both internal and external stimuli" (p. 773), this investigation of what they term networked participatory scholarship (NPS) expands on a tradition stemming back through Rheingold's (1993) "virtual communities" and Hiltz and Turoff's (1978) exploration of online work relationships. It examines how influence, engagement, and attention operate within the particular techno-cultural system of scholarly networks, and considers what commonalities, distinctions, and relationships exist between this techno-cultural phenomenon and that of contemporary mainstream academia.

The dissertation's context is that of knowledge abundance, and my own curiosity about its implications for scholarship in the 21st century. Prior to the digital era, scholarly knowledge was organized around the premise that knowledge is scarce and its artifacts materially vulnerable. As Eye's (1974) seminal article on knowledge abundance asserts, "[M]aterial can be transformed from one state to another but the original state is diminished…materials are exhaustible" (p. 445). Manuscripts and books as knowledge artifacts are exhaustible, and costly to produce and distribute. The origins of the word university indicate these roots in knowledge scarcity; the university, from the Latin "universitas," meaning "whole" ("University," n.d.), was the site around which the artifacts and community of knowledge could be gathered and protected.

Digital content, however, is persistent, replicable, scalable and searchable (boyd, 2011, p. 46); with the rise of digital technologies, access to knowledge artifacts and channels of distribution has opened up profoundly. As Weller (2011) notes, "with a digital, open, networked approach we are witnessing a shift to abundance of content" (p. 224). Within that shift, tensions around knowledge creation and the role of scholarship in organizing and authorizing specific forms of content *as* knowledge become visible. Digital knowledge artifacts can be distributed with negligible cost to originator or user, and can generally be shared and re-shared without having to confront exhaustibility or decay. Thus this widespread and increasingly mobile access to digital knowledge artifacts speaks to a "fundamental change in the production of knowledge and our relationship to content" (Weller, 2011, p. 233) that contemporary scholarship must grapple with.

The premise of this dissertation is that networked participatory practices have enacted that fundamental change on the margins of institutional academia, creating an overlapping but distinct sphere of scholarly engagement that demands investigation. Both academia and social networks can be said to be "reputational economies" (Willinksy, 2010) in which communications are "the principal mechanism for creating knowledge and establishing reputation" (Hyland, 2003, p. 252). The two spheres have similarities: the user-built growth of the internet as we know it incorporated much from the academic model of knowledge-sharing, and the Google search engine was designed on the same principles as academic citation (Brin & Page, 1998). Terms of entry to the two spheres are not identical, however. While many influential members of participatory scholarly networks are affiliated with universities, others are not, or hold positions of low status in the institutional prestige hierarchy. Networked scholars may post ideas online long before they commit them to an academic format, or may explore particular concepts entirely outside formal publication channels and nonetheless distribute, disseminate, and discuss those ideas with widespread peers. Formal peer review still has a place of privilege within many networked scholars' vitae, but is no longer the sole means by which bodies of work can be shared with media or the public. These shifts in the ways in which content can be circulated as knowledge challenge the terms on which the academy has based its authority and its understanding of scholarship.

> The work we do as scholars is repeatedly subjected to a series of vetting processes that enable us to indicate that the results of our work have been scrutinized by authorities in the field, and that those results are therefore themselves authoritative. But … the nature of authority is shifting, and shifting dramatically, in the era of the digital network. (Fitzpatrick, 2011, p. 16)

Just as "the academy" refers, imperfectly, to a broadly-understood confluence of practices, norms, and outlooks as well as to the historical public concept of the university, so the participatory subculture of scholarly networks – specifically, "academic Twitter" – is invoked in this research to identify both a conceptual space and the practices that distinguish it. Neither term is intended to refer to any single representative entity but rather to a particular form of social imaginary. All scholars who participated in this study were active both in networks and in the academy; overall, while none framed the two spheres as dichotomous, the vast majority of participants articulated key differences between networked and institutional norms of scholarly practice and engagement. Thus while this dissertation traces important commonalities between networked and institutional scholarship, it focuses primarily on distinctions and delineations in an effort to make the premises and lived experiences of networked scholarship explicit and visible.

Research Papers

The study originated as an exploration of reputation and influence in scholarly networks, with the aim of making networked scholarship visible and legible within the academy. The stated purpose of the study in my original proposal was twofold: first, to determine the ways in which and terms on which status positions and influential reputations are developed, circulated, and understood among active participants in scholarly networked publics, and second, to articulate the practices and indicators by which active networked scholars build reputations for open, public scholarly work. The substantive goal of the research was to provide an ethnographic portrait of the ways in which scholarly identities and reputations are formed and taken up within the participatory sub-culture of networks. This goal remained central throughout the eighteen-month process that has led to this dissertation. However, I expanded the study's focus during the data collection process to attempt to account for the themes I saw emerging in participant accounts and in scholarly networks generally. I wanted my analysis to encompass the experiences, perspectives, and practices that dominated the investigation, and these led me beyond reputation and influence to a broader consideration of networked practices. When my committee approved my request to compose my dissertation in three-paper rather than monograph format, I made the decision to analyze and frame my data using three (relatively) separate lenses, each emerging from extensive and ongoing engagement with scholarly networks and participant contributions. Thus, though I continued to draw from the same semi-structured set of interview questions, I gradually enlarged the scope of what I considered noteworthy in my observations, and in my supplementary reading.

My substantive goal remained an ethnographic portrait of scholarly networks, but I expanded the research questions beyond reputation and influence for the second and third papers. The first paper in the dissertation remains an examination of what counts as academic influence within open scholarly circles, particularly on Twitter. It investigates, as noted, the ways in which and terms on which status and influence are developed, circulated, and understood among active participants in scholarly networks, and the practices and indicators by which networked scholars build reputations (though reputation was a term most participants turned out to be uncomfortable using, and thus the paper employs "influence.")

The second paper investigates networked participatory practices in terms of Boyer's (1990) four components of scholarship: discovery, integration, application, and teaching. It asks how scholarly networks operate as a techno-cultural system of scholarship, and explores the boundaries of overlap and distinction between networked and institutional systems against the cultural backdrop of knowledge abundance.

The third paper examines the relationships between visibility, care, and vulnerability in scholarly networks. Its research question focuses on how attention in networks shapes scholars' cultivation of visibility and identity, particularly on Twitter. Each lens of analysis applied to the study explores an aspect of what networks demand of scholars. Together, the three papers comprise an exploration of networked scholarship *as* scholarship; as lived experiences at the boundaries of the officially-recognized cultural unit of the academy.

Methodological and Theoretical Approaches

This dissertation explores and analyses NPS as a phenomenon producing scholars and scholarship in a "differential pattern of matter-ing" (Barad, 2007, p. 140). I used ethnographic inquiry as a methodological approach. All participants were situated within both networks and institutions, and were able to speak to distinctions – and points of intersection – between the patterns of matter-ing shaping practices, identities, and experiences within the two spheres. Since the project approached scholarly networks as a particular subset of participatory culture (Jenkins, 2006), ethnography's cultural emphasis and its focus on systems of meaning within cultures made it an apt methodological choice.

> [E]thnographic research enables the researcher to gain a detailed and nuanced understanding of a social phenomenon…[I]t provides a sense of the lived experience of culture members, as well as a grounded analysis of the structure of their group, how it functions, and how it compares to other groups. (Kozinets, 2010, p. 55)

Unlike Kozinets, however, I did not approach the topic of my research entirely as a social phenomenon, but rather a sociomaterial one (Law, 2009) in which technological infrastructures, differential identity markers, and norms of practice and prestige all combine to form the particular techno-cultural system of networked scholarship. I considered not only participant accounts and actions but the structure of networks themselves – particularly Twitter – as important contributors to the study. This approach, following Fenwick and Edwards (2014), frames networks as sociomaterial assemblages in which "knowing is not separate from doing but emerges from the very matter-ings in which we engage" (p. 43). This emphasis on knowledge as situated and enacted is informed by Haraway's (1988) concept of situated knowledges and its premise of the material-semiotic actor, who – whether human or non-human – actively contributes to the production of knowledge as an "active, meaning-generating" (Haraway, 1988, p. 595) part of the apparatus, or assemblage. All three papers in this dissertation have ontological roots in the concept of situated knowledges, and in the assumption that both human and non-human actors contribute to any understanding of scholarship as a techno-cultural system.

All three papers also draw deeply on Geertz's (1973) classic ethnographic description of cultural practices as "suspended in webs of significance" (p. 2). As Geertz (1973) asserted, "(L)ooking at the ordinary in places where it takes unaccustomed forms brings out…the degree to which its meaning varies according to the pattern of life by, which it is informed" (p. 7). The premise of this dissertation is that open, networked scholarly practices are informed by a different – if increasingly ordinary to many – pattern of life, one whose webs of significance have implications for higher education.

This emphasis on significance and situatedness extends to myself, as researcher, and my relationship to the research context. I initiated the study from a position of long-term immersion within the culture of NPS. In addition to being a doctoral researcher within the academy, I am situated online as a scholar, or at least one of MacFarlane's (2011) public para-academics. I have blogged on issues of identity for nine years, and have been on Twitter for eight. My growing network and reputation have yielded opportunities in terms of visibility and publishing, as well as a valuable forum for working through ideas aloud, in conversation with sometimes-global peers interested in similar issues.

This idea of an embedded, non-isomorphic and multiply-located researcher compromises the premise of what Haraway (1988) would call an unmarked field of vision, or the detached, reductionist "conquering gaze from nowhere" (p. 581) that science has traditionally valourized as signifying objectivity. From a perspective of situated knowledges, however, that neutral research lens is an inherently impossible fiction that reinforces status quo power relations. I have approached my understanding of networked practices as an advantage for this research project, while holding myself accountable to make my processes and premises of analysis visible to participants and to the broader publics in which we circulate. This situates the study in what Boellstorff (2008) frames as the ethnographic tradition of Boas, as opposed to that of Malinowski. The Boasian tradition works against the separation of ethnographic Self and Native Other, embracing researchers who "are similar to (or personally involved with) those they study" (Boellstorff, 2008, p. 69), and seeking "equality and complicity rather than hierarchy and distance" (Boellstorff, 2008, p. 69). Rather than claiming that "view from above, from nowhere" (Haraway, 1988, p. 589), my sociomaterial approach takes up each of the intersecting lenses that comprise this dissertation as webs of significance, interpreted and analyzed through "the view from a body…a complex, contradictory, structuring, and structured body" (Haraway, 1988, p. 589). In the conclusion, I turn my focus to the view from this structuring and structured body a year after wrapping up the research study, and share some of the webs of significance that have emerged within the networks it helped create.

The study builds on a growing tradition of ethnographies related to digital communications and communities. Turkle (1995) examined interactions within early online multi-user environments; Green (1999) conducted an ethnography of virtual reality; Baym (1999) used ethnography to study an online community of soap opera fans. Ethnography in the digital sphere has given rise to neologisms: the work of Hine (2000) is heavily associated with the term "virtual ethnography," while the work of Schau and Gilly (2003) and Kozinets (2010) framed its own ethnographic investigations into online practices as "netnography."

Hine (2000) employed the qualifier 'virtual' in part to signal the partiality and limitations of online ethnography. While I am inclined to see *all* research perspectives and possibilities as partial, from the vantage point of situated knowledges, I chose not to apply the "virtual" qualifier to this research project. This research is not grounded in a binary view of the virtual as a less-whole or less-authentic companion to the "real," nor do I see my methodological approach as fundamentally altered by the fact that my object of investigation manifests online. Participatory online networks are not bounded communities or societies in the original tradition of ethnography (Mackay, 2005, p. 134) and the lines drawn around practices and identity in the context of this investigation are fluid, partial, and arbitrary. My study attempts to avoid the digital dualism (Jurgenson, 2011) that assumes a real/virtual separation between online and offline interactions.

As Boellstorff et al (2012) framed their own rejection of the virtual designation, "the ethnographic research paradigm does not undergo fundamental transformation or distortion in its journey to virtual arenas because ethnographic approaches are always modified for each fieldsite" (p. 4). Perhaps more succinctly, and in keeping with both the growing prevalence of digital technologies and the sociomaterial perspective in which this investigation is rooted, Haraway (2006) asserts, "[T]he virtual isn't immaterial. Anyone who thinks it is, is nuts" (p. 147).

My selection of ethnography as a methodological approach creates some limitations for the study, and was by no means the only methodology appropriate to an examination of networked scholarship. Ethnography's small sample size precludes the study from claiming the breadth and generalizability that could have been achieved through survey methods, for example, and ethnographic methods do not generate the powerful visual and structural data that social networked analysis (SNA) could have offered. However, I decided that the depth of experiential understanding and complexity made possible through ethnography's "thick description" (Geertz, 1973, p. 3) was of more value than generalizability at this early stage of inquiry into networked scholarly practices and understandings. Still, future research into whether this study's findings hold true at a larger scale could be very interesting to pursue. Likewise, SNA visualization would have offered an alternate perspective on the interactions I observed in depth during the research process, and perhaps triangulated some of the findings. Yet while I initially aimed to utilize SNA as a complementary approach within the investigation, the structural focus of SNA alone would not have enabled the same extensive investigation into participatory cultural and material practices as ethnography. I did look into using both Node XL and TAGS Explorer to visualize interactions and relationships between study participants, but as I was working solely on a Mac platform, Node XL was not feasible. I downloaded TAGS Explorer and examine the scale of tweets of each study participant for a couple of consecutive weeks, however, as my study was not designed around any central hashtags, I was not able to use the tool as I had initially hoped. As my goal with the dissertation was to explore NPS' systems of meaning and patterns of matter-ing, I was satisfied that ethnography would suffice as a methodological approach for the investigation. Still, I do want to engage in future research employing SNA as a means of visualizing ethnographic data and interactions in NPS.

Findings and Discussion

Paper #1 – Open To Influence: What Counts as Academic Influence in Scholarly Networked Twitter Participation

The first paper in the dissertation focuses on academic influence within scholarly networks. It explores participants' concepts of purpose, value, and influence within networks, as well as their analyses of the Twitter profiles of other networked peers. In spite of the fact that participants came from a variety of geopolitical locations and academic status positions, patterns emerged regarding the terms on which influence is developed in networks. First among these patterns was the broadly consistent premise that networked participation's value is related to capacity to contribute. Thus, reputation and influence are perceived – to some extent – as measures of capacity to contribute. Moreover, the practices and indicators by which networked scholars built reputations for their own work were tied to this same capacity; participants in the study consistently curated and contributed resources to what they framed as a broader "conversation" in their fields or areas of interest, rather than merely promoting themselves or their work. How participants assessed the profiles of others correlated closely with how they perceived their own purpose and role within this conversation, as well as where they perceived its parameters to be.

While the first paper suggests that metrics – numbers of followers and tweets – are taken up as a general signal of influence, common interests and common ties emerge as or more important than quantifiable measures or credentials when scholars consider who to follow. Institutional affiliation was not taken up as a key signal of network influence, except in the relatively exceptional case in which that affiliation was Oxford University, but some participants did indicate that a profile with overt institutional affiliation may be taken as a promise of civility. While there were no signals that clearly and independently stood out as indicating networked influence, some behaviours were read as stand-alone indicators of *lack* of influence or, at the very least, lack of understanding of networked practice; these included automated tweets and a failure to fill in profile bios or pictures.

Networked scholars appeared to be fully aware both of network and academic terms of influence, and to codeswitch between the two, depending on audience and purpose. For the most part, however, institutional influence factors did not appear to generate the same engagement on Twitter as signals of active networked participation. A participant who tweeted links to a blog post and a peer-reviewed article in the same week – both her own, relating to different aspects of her research – saw much greater engagement on the blog post. In spite of the fact that the journal the article was published in is well-regarded within her field, even fellow scholars from within that field predominantly shared the blog post, indicating that institutional signals of prestige may have less currency in academic Twitter that more networked forms of contribution.

Overall, the first paper suggests that networks enact and circulate broad intersecting patterns in what counts as influence, and that these depart from the codified terms of rank and bibliometric indexing on which conventional academic influence is judged. At the same time, in spite of meaningful distinctions between participant perceptions of networks and institutions, especially around networks' lower barriers to participation and contribution, the paper notes that networks do not manifest as any form of idealized democratic sphere but rather an alternate scholarly prestige arena. In networked scholarship, credibility is simply determined by recognizability and commonality rather than credentials, and hierarchies of influence relate to identities and attention rather than rank or role.

Paper #2 – In Abundance: Networked Participatory Practices as Scholarship

The second paper aims to situate networked scholarly practices with Boyer's (1990) framework for scholarship – discovery, integration, application, and teaching – and to explore them as a specific techno-cultural system of scholarship, an assemblage specifically suited to an era of knowledge abundance.

The paper places research-based knowledge at the core of the techno-cultural system of NPS, just as in institutional spheres. Networked scholarship of discovery, however, bypasses the gatekeeping of academic publishing and often includes work that is intended to be iterative, in the sense that it would not qualify as a suitable or complete contribution within the materially-costly medium of peer-reviewed print publishing. Additionally, networked scholars become known for what they share, even if much of that content originates with peers and media. This makes networked scholarship a techno-cultural system in which scholarly artifacts are valued and extensively curated and circulated, not only for their content but also for their capacity to facilitate network ties and identities.

Boyer's components of scholarship of integration, application, and teaching were also in abundant evidence in the study data. I found that participants' networked engagement centered on public discussions and negotiations of meaning, both across disciplinary boundaries and with non-academic audiences. Of 13 participants, all but one engaged actively and regularly across both geographic and disciplinary boundaries, and all engaged with public and media audiences and issues. Moreover, their ongoing negotiation of boundaries around what is known and understood appeared to unsettle the formal hierarchies and categories on which the academic techno-cultural system is based, which has significant implications for teaching and pedagogy. The paper suggests scholarly networks can operate as an open, public conversation on teaching – and learning about teaching – in which teacher and student roles become more blurred. Networks are not presented as being without power relations, some of which are noted in the first paper on influence, but participant accounts nonetheless consistently emphasize the increased access to voice and contribution that networks afford women, minorities, junior scholars, and other marginalized identities. This increased access is not evenly distributed around issues of language, class, and access, among others, but in the dissertation papers I limited this analysis to the boundaries of participants' contributions.

Not only does this second paper find that networked terms of value and reward both align with and exceed the terms of scholarship set by Boyer's model, it suggests that networked scholarship may enact Boyer's initial aim of broadening scholarship itself through fostering extensive cross-disciplinary, public ties and rewarding connection, collaboration, and curation between individuals rather than roles or institutions. However, participants in the study emphasized that networks face growing encroachment from institutional entities and scarcity-based mindsets. Thus, the way this study captures NPS' fledgling enactment of a scholarship of abundance may be particularly important, for scholarly communities seeking to understand how the values of scholarly inquiry can be honoured and aligned within a sociomaterial context of knowledge abundance.

Paper #3 – Attention in Networked Scholarship: Twitter as a Site of Care and Risk

The third paper in the dissertation investigates the relationships between visibility, care, and vulnerability in scholarly networks, by examining the ways attention circulates on Twitter and SNS more broadly. The paper offers a portrait of networked scholars' experiences and practices related to care, connection, and vulnerability, and explores how attention factors into these experiences. This investigation was a direct response to both the data and my own experiences and observation within scholarly networks over the course of the study and later into 2014; it is an attempt to respond to the frequent assertion in participant accounts that "Twitter is changing," and to trace particular aspects of that change even within the broader assumption that sociomaterial assemblages such as NPS are continually "making and unmaking themselves" (Fenwick & Edwards, 2014, p. 38).

The papers intersect and build on each other, of course, and this third paper builds on the suggestion in the first that circulation within networked publics such as Twitter may cultivate and reinforce a nuanced understanding of scale and attention. As in the second paper, I recognize ongoing change within NPS and Twitter in particular, but focus on a different site of exploration than what the lenses of abundance and institutionalization make visible. The paper recognizes that attention is foundational to relationships and status in networks, since users can lurk without making themselves visible but cannot connect with others without signaling some form of identifiable presence. It traces attention within the ever-shifting assemblage of NPS, and examines the effects of devolving responsibility for accessing audiences for scholarship onto individual scholars, via the distributed channels of digital, networked communications.

As the second paper also acknowledged, NPS is a milieu marked by the extensive sharing of knowledge artifacts, and scholars can build visibility and identity within that milieu by sharing others' work as well as their own. Additionally, however, this third paper notes that networked attention and ties are cultivated through the sharing of daily routines and related milestones, which personalize engagement and invite expressions of commonality and empathy. While the sharing of academic work contributes to the cultivation of attention and connections, personal identity signals, humor, and expressions of commonality are found to be the dominant means by which scholars build network ties and visibility. Moreover, not all visibility and identity strategies appear designed to cultivate mass attention; attention as a form of "attending to" was regularly on display in participants' interactions, as was appreciation for the care that networked connections afforded. All participants reported meaningful expressions of attention and care being extended to them as a result of their NPS engagement.

At the same time, attention in networks carries risks, and these become amplified as networks are increasingly used for targeted and instrumental communications purposes. The ways digital communications enmesh individuals, their networked peers, their collective texts, and platform providers such as Twitter together collapses disparate audiences into single communications platforms and can result in casual exchanges being interpreted with the gravitas usually culturally reserved for the written word. The paper also suggests that risks of networked attention include commodification and institutional indictments of deviance, along with the re-inscription of societal biases such as racism and sexism. While participants asserted throughout the study that networks enable scholars to build audiences and ties and influence as academics in spite of marginal identity factors, due to the minimization of gatekeeping and hierarchy, this paper noted that attention in networks can also result in people with non-dominant identity markers having their positions and identities reduced *to* those markers.

Ultimately, the paper shows that networked attention can result in opportunities and affinities that institutional scholarly engagement may not offer, and is marked by signals of care that exceed the commodification implicit in the idea of the attention economy. It suggests that NPS creates complex webs of significance wherein knowledge artifacts and expressions of personal caring assemble with the risks of scale, commodification, and institutional misunderstanding to form new spheres and challenges for scholarship.

Together, these three papers explore lived experiences of scholarship at the intersection(s) of knowledge abundance and institutional inheritances. I approach the constellation of scholarly networks examined here as academic Twitter as both a new public, in Ito's (2008) sense of publics as "reactors, (re)makers and (re)distributors, engaging in shared culture and knowledge through discourse and social exchange as well as through acts of media reception" (p. 3), and an extension of institutional scholarship's techno-cultural assemblage, stretched beyond constraints of print, hierarchy, and scarcity. At least for the present moment, I argue, this constitutes a separate if intertwined techno-cultural system, fostering distinct terms of engagement and opening up new spheres of opportunity and vulnerability for scholars.

PAPER #1

OPEN TO INFLUENCE: WHAT COUNTS AS ACADEMIC INFLUENCE IN SCHOLARLY NETWORKED TWITTER PARTICIPATION

Abstract

Within the academy, signals of a scholar's academic influence are made manifest in indices like the h-index, which rank output. In open scholarly networks, however, signals of influence are less codified, and the ways in which they are enacted and understood have yet to be articulated. Yet the influence scholars cultivate in open networked publics intersects with institutional academia in grant-required measures of "public impact," in media visibility, and in keynote and job opportunities. How do scholars within open networks judge whether another scholar's signals are credible, or worthy of engagement? What counts as academic influence on a platform like Twitter? This paper concludes that scholars employ complex logics of influence to assess the networked profiles and behaviours of peers and unknown entities. Significantly, these logics of influence depart from the codified terms of rank and bibliometric indexing on which conventional academic influence is judged. While some are numeric – participants recognized relatively large-scale accounts as a general signal of influence – recognizability and commonality are as or more important than quantifiable measures or credentials. The paper suggests that the impression of capacity for meaningful contribution is key to cultivating influence and the regard of actively networked peers.

Keywords: networked influence, open scholarship, networked scholarship, networked publics, scholarly reputation, academic influence

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Introduction

At the intersection of the Internet and education, the word "open" signals a broad, de-centralized constellation of practices that skirt the institutional structures and roles by which formal learning has been organized for generations. According to Daniel (2012), "Open education broke open the iron triangle of access, cost and quality that had constrained education throughout history and had created the insidious assumption, still prevalent today, that in education you cannot have quality without exclusivity" (UNESCO, para. 1). This paper focuses on that terrain of quality without exclusivity, and on the ways in which networked scholars understand and enact concepts of credibility and influence as they interact in the participatory academic sphere. Veletsianos and Kimmons (2012) suggest that open scholarship takes "three major forms: (1) open access and open publishing, (2) open education, including open educational resources and open teaching, and (3) networked participation" (para. 6). The study discussed in this paper focuses on that third form of open scholarship, the phenomenon of networked participation. In the paper, I examine how networked scholarship opens up concepts of academic influence, and the logics employed by open scholars in assessing network influence.

Regular surveys of American university faculty members have shown a continuing increase in the professional use of social media (Seaman & Tinti-Kane, 2013) and social networking services (SNS), and the products of scholarly work and collaboration are increasingly available on the open web to the widest possible audience (Pearce, Weller, Scanlon, & Kinsley, 2010). This availability can translate into increased visibility for scholars, and even into forms of academic recognition. Media exposure, increased research citations, keynote and plenary address offers, and jobs can all result from open scholarly practices. As Mewburn and Thompson (2013) note, “Blogging is now part of a complex online “attention economy” where social media like Twitter and Facebook are not merely dumb “echo chambers” but a massive global conversation which can help your work travel much further than you might initially think” (para. 11). Yet these benefits bear little relationship to the democratizing claims of the early open/free software movements from which open education initiatives originated (Veletsianos & Kimmons, 2012).

The paper builds on data and analysis from a participatory research study utilizing ethnographic methods. Working with scholars from diverse locales and academic status positions across the global English-speaking academic sphere, I examine the ways in which and terms on which influence is developed, circulated, and understood among scholars active in open networks. All participants in the study enact some form of open, digital, networked sharing in their scholarly practice, using Twitter, blogs, and other platforms.

The substantive goal of this research study is to offer an ethnographic portrait of open scholars’ academic influence practices, and to consider the implications of these for higher education. The study takes up Selwyn’s (2010) call to “develop “context-rich” accounts of the often compromised and constrained social realities of technology use “on the ground” in educational settings” (para. 6). This account of how openness manifests in the lives and practices of scholars attempts to address material as well as social realities; the ways in which open networks enable scholars to develop both new and conventional forms of academic influence are explored using Haraway’s (1988) concept of diffraction, which she frames as the effort to make a difference in the world.

Networked publics and the academy

Open networked scholarship does not require credentials, but demands the construction, performance and curation of intelligible, public, participatory identities. The core of this identity production occurs via profiles (boyd & Heer, 2006); on blogs and other personal web spaces, “bios” may provide identifying information or link to the individual’s social network profiles. Within the complex, interconnected mesh of searchable discussion and knowledge artifacts that constitute scholarly networked publics, these identities and the artifacts associated with them circulate, creating reputations and differential positions. Weller (2011) notes, “in a digital, networked, open world people become less defined by the institution to which they belong and more by the network and online identity they establish” (Section What is Digital Scholarship? para. 3). Yet, few scholars inhabit a solely digital, networked, or open educational sphere; many engage in networked scholarship while simultaneously working towards institutional academic goals and careers. This means navigating multiple sets of expectations and legitimacy standards at the same time, as well as negotiating institutional relationships with peers, superiors, and students for whom the participatory set of terms may be invisible or devalued.

Just as “the academy” refers, imperfectly, to a broadly-understood confluence of practices, norms, and outlooks as well as to the historical public concept of the university, so the participatory subculture of “networked publics” (boyd, 2011) is invoked in this paper to identify both the complex techno-cultural context of open scholarship and the practices that distinguish it. Networked publics are “the space constructed through networked technologies, and the imagined collective that emerges as a result of the intersection of people, technology, and practice” (boyd, 2011, p. 39). Both material and conceptual, networked publics are enacted via networked blogs and, increasingly, through social networking platforms such as Twitter and Facebook. This study focuses primarily on Twitter as a site of observation due to its prominence in participatory scholarly networks. Lupton's (2014) study of 711 academics using social media found that 90% reported using Twitter for professional purposes, while nearly 50% used Academia.edu, 40% Facebook, and over 30% personal blogs (pg. 14).

Academia and networked publics are not dichotomous; both can be said to be "reputational economies" (Willinksy, 2010) in which communications are "the principal mechanism for creating knowledge and establishing reputation" (Hyland, 2003, p. 252). Terms of entry to the two spheres are not identical, however. In academia, scholarly communications are controlled and legitimated through credentialing and the academic publishing system; in networked publics, digital media's capacities for free replication and networked conversation are harnessed to create a alternate public sphere. This sphere is utilized for multiple purposes, among them connection, establishment of networks, promotion of openness and sharing of information, development and publicizing of research, and support (Weller, 2011; Veletsianos, 2012; Lupton, 2014).

Academic influence and network influence

The traditional terms upon which academic influence is developed are relatively codified. Though they vary depending on a scholar's discipline or area of specialization, there are a variety of indices and signals by which influence – also framed as reputation or academic impact – is judged: rank in the academic hiring hierarchy, grants obtained, prestige of school(s), supervisor(s) and collaborator(s). Primary among these signals and indices, though, is the ranking of peer-reviewed citations from within the commercial academic publishing industry. Bibliometric indexing systems quantify the value of publications and research artifacts hierarchically; the impact factor (IF) of particular scholarly journals is linked to the citation rates of the papers it publishes. The IF measure is often taken up as a proxy for paper quality (Lozano, Lariviere, & Gingras, 2012) in tenure and promotions contexts. Indices like the h-index (Hirsch, 2005) and databases such as Scopus and Web of Science propose to quantify and rank the research output of individual scientists. In all cases, these systems are predicated upon the peer-reviewed publication process, often referred to as the "gold standard" (Herron, 2012) or primary currency of scholarly quality.

Within open educational networks, however, there is no formalized system for judging quality or credibility. Since open publication often takes place outside or in advance of peer review, institutional cues of status and credibility may be neither available nor relevant to the ways given pieces of work are taken up. While many influential members of participatory scholarly networks are affiliated with universities, networked contributions to knowledge extend beyond formal peer review channels to public, collaborative communications (Morris & Stommel, 2014). Networked scholars may post ideas online long before they commit them to an academic format, opening their work to input and comment from peers in an informal, iterative fashion. Peer review still has a place of privilege within many networked scholars' vitae, but particularly in emerging and quick-changing fields, blog posts, videos, slidedecks, and more formal "gray literature" such as reports and policy documents are also heavily-circulated contributions. However, these forms of influence are rendered largely invisible when "scholarly work" is defined primarily in terms of formal academic publishing. The emerging phenomenon of altmetrics[1] does attempt to capture the ways in which scholarly impact operates within social networks, offering a complement to traditional indicators rather than a replacement (Bar-Ilan, Haustein, Peters, Priem, Shema, & Terleisner, 2012). But altmetrics focuses primarily on collating and counting contributions, rather than investigating the ways scholars make sense of each other in open networks.

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[1] Altmetrics are measures which assess the impact of online scholarly activities both within and beyond the realm of traditional academic publishing, including but not limited to the numeric reach and engagement of scholarly outputs.

This study is premised in the idea that open scholars utilize concepts of credibility and value in order to guide their engagement in networked publics. The idea that individuals learn how to read complex reputational cues has precedents both in academia and in networked research. Kling and McKim (1999) have shown that the trustworthiness of scholarship tends to be assessed based on a combination of institutionalized practices and readers' personal knowledge of writers' reputations. Willinsky (2010) asserts that scholars learn to read the status and reputational cues of peers, at least within their own disciplines:

> Those who work within the academy become very skilled at judging the stuff of reputations. Where has the person's work been published, what claims of priority in discovery have they established, how often have they been cited, how and where reviewed, what prizes won, what institutional ties earned, what organizations led? (p. 297).

Research into computer-based interactions has, for decades, suggested that online group members develop signals for status and credibility. Walther (1992) found "electronic communicators have developed a grammar for signaling hierarchical positions" (p. 78). More recently, Kozinets (2010) framed this status differentiation less in terms of hierarchy than "various strategies of visibility and identity expression" (p. 24). The work of both boyd (2010) and Kop (2012) has shown that within networks, reputation functions to allow particular individuals to act as hubs or information brokers, becoming powerful distributors and filters of knowledge within their particular publics. Donath and boyd (2004) suggest articulated or visible peer connections serve as identity markers for profile owners, and are selected in part for impression management purposes.

The conflation of quality scholarship with peer review serves as a barrier both to open access publishing (Edington, 2014) and to the expansion of concepts of academic influence. Neither the potential nor the challenges that open scholarship represents can be explored fully without a more explicit, researched-based understanding of how scholars in open networked publics make sense of each others' profiles, influence, and credibility. Whereas scholars are trained and mentored, implicitly and explicitly, in the process of learning Willinksy's (2010) stuff of reputations, the existence of influence channels that exceed, bypass, or even simply complement peer review are seldom made visible. That is the gap in research that this study aims to address.

Methodologies and Theoretical Perspectives

I chose to conduct a qualitative, ethnographic study in order to explore and detail scholars' perceptions of influence within the participatory cultures of open networks. Ethnography is described by Marcus (2012, in Boellstorff, Nardi, Pearce, & Taylor) as "the premier modality of qualitative research" (p. xiii), emphasizing detailed and situated accounts of specific cultures. I approach scholarly networked publics as a subdomain of what Jenkins (2006) calls participatory culture, in which members of a culture are not merely consumers but also producers, or what Ritzer (2010) calls prosumers.

This study makes no claims of neutral, generalizable knowledge – what Haraway (1988) called "the view from above, from nowhere" (p. 589) – but rather focuses on the ways in which open scholarly influence is experienced and understood by specifically-located individuals. These "situated knowledges" (Haraway, 1988) are perspectives shaped by particular social locations, material realities, and power relations. This emphasis on situated knowledges extends to my own locations and relationships to the research context. I approached the study from a position of long-term immersion within the open, participatory culture of scholarly networked publics, as an established blogger and longstanding Twitter user. I am, in the vein of Star's (1991) ethnography of standards that Haraway (1998) details, a "cyborg" in the relationship between the standardized technologies of academic influence and local experience, who "falls between the categories, yet in relation to them" (Star, 1991, p. 39). This relationality and situatedness is, for me, a form of responsibility to the work I engage in and the multiple realities I engage with.

In exploring the situated knowledges of open scholars with regards to concepts of academic influence, I assume that scholarly networked publics are, in Geertz's (1973) terms, "suspended in webs of significance" (p. 2) that may not be visible to non-members who perceive them through the lens of conventional academic practices and concepts. Haraway's (1988) framework of situated knowledges emphasizes the gaze; from the gaze or perspective of the academy, or an individual acculturated to the practices of the academy, the ways in which influence and position are enacted and circulated within scholarly networked publics may be unaccustomed and even appear arbitrary as compared against institutionally-legitimated concept(s) of academic influence and reputation. Yet as Geertz (1973) noted, "(L)ooking at the ordinary in places where it takes unaccustomed forms brings out…the degree to which its meaning varies according to the pattern of life by, which it is informed" (p. 7). The premise of this study is that open, networked scholarly practices are informed by a different – if increasingly ordinary to many – pattern of life, one whose webs of significance have implications for higher education.

To explore this different pattern of life, I found Haraway's (1992, 1998) concept of diffraction, or "the production of difference patterns in the world" (1998, p. 268) useful, both as a methodological approach and an analytic tool. Haraway (1998) frames diffraction patterns as the effects of differences, and notes "Diffraction does not produce "the same" displaced, as reflection and refraction do. Diffraction is a mapping of interference, not of replication, reflection, or reproduction" (p. 273). I aimed to create a multiply-situated record of histories, perspectives, relationalities, and practices, both material and semiotic, to explore the effects of networked scholarship on concepts of influence. This meant approaching data with an eye to situated, located perspectives and relationships; to ways in which influence in network contexts might not match the familiar patterns of the academy.

Diffraction takes up knowing as a material practice (Barad, 2007, p. 89), and goes beyond reflexivity in actively attempting to create difference, rather than reflect or displace "the same elsewhere" (Haraway, 1994, p. 63). For me, this emphasis on difference spoke to my motivations in taking up the research project. It began from a desire to make visible the cyborg experience of falling between the categories of academia yet – as a graduate student – being nonetheless bound in relation to them. I expected the data to be a site for exploring open networked scholarship as the production of difference in the world of higher education and academic influence. In the research process, however, I have come to recognize that open networked practices also increasingly reflect "the same elsewhere," privileging terms of influence valued by conventional higher education even within open practice.

Methods

The study utilized participant observation, semi-structured interviews, and document analysis as its primary ethnographic methods. I wanted to observe the ways participants interacted with others and managed their own self-presentations, in addition to learning how they thought about open participatory scholars and assessed the self-presentations of others on Twitter. My premise was that influence in scholarly networked publics cannot be understood without a more deeply-situated understanding of the open practices of those publics. As Haraway (1998) claims, "nothing comes without its world, so trying to know those worlds is crucial" (p. 37).

Selection

The study focused specifically on scholars whose networked participation is a central, sustained aspect of their scholarly work, identity, and influence development. I wanted at least twelve participants from a wide range of geopolitical and identity locations within the Anglo-academic world. In order to spread the call for participants as widely as possible, I published the details on my blog, and tweeted the link. The call was shared and re-tweeted on social media over 150 times, resulting in thirty-three formal responses expressing interest in participating. All responses were assessed against criteria for inclusion that required:

1. active institutional affiliation as a scholar
2. active use of Twitter within scholarly networks for at least two years, based in White & LeCornu's (2011) visitors and residents model for online participation, and
3. active sharing of own work and ideas and that of others in open networked publics, based in prosumption (Ritzer, 2010) or produsage (Bruns, 2007) models of production/consumption for participatory culture

As Baym (2010) and Stone (1995) have both noted, our cultural concepts surrounding the accountability and validity of actions are deeply tied to bodies. Since the research was designed to explore intersections of identity and academic influence, participant diversity in terms of geographic location, academic career stages, academic disciplines, gender, ethnicity, sexual orientation, class origins and other markers was sought. However, the focus was not on specific marginalized groups or Others, but on networked scholars within the mainstream of global English-speaking academia.

I selected 14 participants and eight “exemplar” identities from the volunteer pool. The exemplars were not participants in the research but allowed their Twitter profiles to be observed and assessed by the participants during the research process. Of the 14 participants, two were based in Canada, five in the United States, one in Mexico, one in Ireland, one in South Africa, one in Italy, and three in Australia. 10 were female; four male. Nine self-identified in the initial expression of interest either as “white” or effectively unmarked (ie. no disclosure of racial or ethnic heritage); the others identified respectively as black and US Southern, Malay, Latino, half-Indian, and Jewish. Four identified as gay or queer. One disclosed HIV-positive status during the course of the research. Another found out she had breast cancer the same week we began the research process. One participant withdrew before the completion of the study; only her participant observation data is utilized here.

Three participants were entirely unknown to me before they expressed interest in the research, four were loose ties, four were moderately familiar names, and three were individuals with whom I'd had ongoing direct networked interactions over the previous couple of years. Seven were Ph.D students or candidates at various stages of completion, two of whom also held longstanding administrative or teaching positions within their institution. Three were early career scholars, one on tenure-track. Three were senior professors or researchers within their institutions. Ages ranged from twenties through fifties. The scale of participants' Twitter accounts ranged from a few hundred followers to 15,000 followers; among the exemplar identities, the range of scale was even greater.

Participants all chose to be openly identified in the research by their public Twitter handle, with the exception of the one participant who withdrew. The Twitter accounts of identified participants are all public, as is the @BonResearch account created for the participant observation process; to an extent these serve as open data. Drafts of this research have both been blogged for public input and shared with participants, as an effort to keep the process open and participatory and in keeping with the ethos of open scholarship. Nonetheless, as Boellstorff et al (2012) note in discussion ethnographic feedback, I "do not want to assert that 'the people I studied agree with my interpretation, so no one can disagree with any aspect of my conclusion'" (p. 184). Rather, I conceive of research in the open as a constant iterative process. This contribution represents the most accurate and fair representation of a complex and fluid set of understandings that I am able to construct and offer at this point.

Participant Observation

Participant observation was conducted primarily via Twitter, over a three-month period from November 2013 through February 2014. Participants also made their blogs, Facebook accounts, and other sites of networked scholarly participation available and open to me for observation during this period. I created the @BonResearch Twitter account for observation purposes, as separate from the @bonstewart account I have used since June 2007 and continued to use during the research period. With the @BonResearch account, I followed only the research participants and exemplars, observing and noting the ways in which participants presented themselves, engaged with others, and shared their work and that of others. I tweeted minimally from the @BonResearch account, but sometimes shared public notes on my observations, particularly those regarding Twitter itself and emergent patterns. I also kept offline ethnographic notes about the ways in which participants engaged in conversations with others, paying particular attention to issues of influence and who people engaged with. I utilized the “favourites” button in Twitter to mark daily participant tweets that I saw as relating to perceptions of identity and self-presentation.

24-hour Reflection

Participants were asked to choose a representative 24-hour period for which their networked participation would be closely tracked and examined. They notified me of this period either during or shortly after it ended, so we could both examine the traces of their interactions. Eleven of fourteen participants submitted the requested short document with screen captures of specific actions and interactions and their reflections explaining each.

Profile Assessment

Participants were sent a document containing two questions about their perceptions of engagement norms, power relations, and identity positions on Twitter, and pictures of five different exemplar Twitter profiles. They were invited to respond in writing. They were asked how they interpreted a) the exemplars' influence and b) the exemplars' potential value to their networks. Twelve of fourteen participants completed and submitted this assessment. Results from this aspect of the research study are the particular focus of this paper.

Interviews

I conducted semi-structured interviews with 10 participants via Skype. In one case, I conducted a follow-up interview, also via Skype, some months later. Interviews were recorded. The research instrument for the interviews was a semi-structured series of questions related to the participant's networked practices, relationships, networks, reputation, and scholarly identity. Questions were individuated for each participant depending on the specifics of his or her 24-hour picture of networked engagement. Conversations were encouraged to emerge and diverge from the interview script.

Coding and Analysis

I transcribed the interviews via unfocused transcription technique, "without attempting to represent…detailed contextual or interactional characteristics" (Gibson & Brown, 2009, p. 116) and collated the transcripts with the written data participants had submitted, creating thirteen individual participant documents. In a few cases, relevant participant blog posts were also included in these documents. Drawing on the guiding literature and framework for the research, I then analyzed the situated knowledges represented by each participant document. I identified key emergent themes in the documents and hand-coded them in order to try to trace commonalities, distinctions, and relationships between them. I used open coding, creating categories as I examined influence and identity positioning references in the transcripts and checked them for patterns which might suggest webs of significance and difference patterns. Drawing specifically on the framework of diffraction and knowing as a material practice, I compared these themes and codes against the participant observation data and looked for patterns of difference and relationality.

Rigour

I then condensed each document using emerging themes and codes, and sent documents back to participants for approval or further clarification. Since my intention was for the study to be as open and participatory as possible, rigour in this context meant an overt commitment to accountability, credibility and confirmability to participants, as well as to the research's epistemological and ethical tenets (Guba & Lincoln, 2005). The goal of a qualitative study is believability, based on coherence, insight, and instrumental utility (Eisner, 1991) and trustworthiness (Lincoln & Guba, 1985), achieved through a process of verification rather than through conventionally-privileged quantitative validity measures. In this study, the verification process involved sharing themes, processes, and preliminary conclusions with participants and within scholarly networked publics via email and my blog, inviting discussion, input and critique before publication. All interviewees were sent their coded transcripts and invited to expand, clarify, and reframe them as they wished. Four added more to their reflections based on this invitation and two condensed or anonymized sections where they had identified others in their networks. All participants also approved the full findings section of this paper before it was submitted. Four of thirteen participants commented on my blog about the participant observation process (Stewart, 2014), adding their perspectives to the public record of my own reflections on the experience. Throughout the research process, participants' confirmation of both broad conclusions and statements attributed to them was sought and achieved.

Findings and Discussion

The central theme that ran through participant data was that scholars employ complex logics of influence which guide their perceptions of open networked behaviours, and by which they assess peers and unknown entities within scholarly networked publics. More specifically, all scholars interviewed articulated concepts of network influence that departed significantly from the codified terms of peer review publication and academic hiring hierarchies on which conventional academic influence is judged.

While these concepts diverged, and I've attempted to be responsible to those divergences and diffraction patterns by sharing some breadth of the "history of interaction, interference, reinforcement, and difference" (Haraway, 1998, p. 273) within the space available here, they nonetheless suggest webs of significance specific to open networks. These webs of significance are, of course, situated knowledges, related to the stated and enacted purposes for which specific, variously-embodied participants engaged in open networks and the value they reported finding in them. Yet a number of patterns or logics emerged vividly from the data, in spite of the fact that participants had little in common in terms of geopolitical location or academic status positions. This suggests that alternative concepts of academic influence circulate and are reinforced by the operations of open, scholarly networked publics, particularly via Twitter.

It is important to note that participants' stated reasons for engaging in open scholarly networks generally exceeded the instrumental "this will increase your dissemination and citation count" impact narrative. This may be in part because the study required that all participants had been active Twitter users for at least two years prior to the beginning of the study in November 2013; a review of higher education publications suggests the strategic narrative did not become prominent until after 2011. In any case, participant observation suggested that while some participants did primarily use Twitter in particular for broadcasting their own and others' work, all participants in the study appeared to be engaged in curating and contributing resources to a broader "conversation" in their field or area of interest rather than merely promoting themselves or their work.

Among the 10 participants interviewed and the 12 who completed the profile assessments of other scholars (nine did both), there was consistent indication of an individual logic of purpose and value served by networked participation. In cases where participants reflected on their own changing practices over time, I observed a pattern indicating that an emergent sense of their own capacity *to* contribute to this broader conversation was part of the value participants attributed to networks. Particularly for those marginalized by junior and adjunct status within increasingly rationalized institutions, and for those for whom the academic "role" does not cohere with a full sense of identity, reciprocal networked engagement can be a powerful way to extend beyond institutionally-sanctioned terms of circulation and value. In relation to the influence of others within open networks, participant responses suggested that they were able to perceive and "read" influence outside their own areas of interest or the corners of the "conversation" they perceived themselves contributing to, but were unlikely to follow people whom they perceived as disconnected from that particular part of the conversation, regardless of the apparent influence of those others.

Below are key emergent elements in these webs of significance, outlining what appears to count as a network version of academic influence in open scholarly networked publics. While both participants and exemplars gave permission for me to identify them by Twitter handle in all research publications resulting from the study, I have anonymized specific quotes from participants in relation to exemplars and identifiable others.

"She sure has a following" – Metrics matter, but not that much

A primary finding of the research was that metrics – the visible numbers attached to social media profiles and blogs – are seldom taken up in isolation. Participants showed a nuanced and relatively consistent understanding of metrics; the higher the number of tweets, the longer a profile was assumed to have been active, and the higher the ratio of followers to following (Twitter does not require reciprocal "friending" in the way Facebook does), the more likely the person was to be perceived as influential. Yet equally consistent across the data were caveats of context, in which participants made clear they seldom interpret the metrics of public Twitter profiles as a final indicator of a scholar's influence or potential value to their own network.

@socworkpodcast: "Status does play into my decisions to follow someone, if I see someone with a huge following, whose bio suggests this is a thought leader or a person of influence online/offline. I will look through the feed to see if the most recent 100+ tweets seem like things I could benefit from professionally, or that my followers might value."

@antoesp: "I find it intriguing to discover how we all are able to provide a defined aspect of our multiple self through the micro-portrait in the personal twitter account. Usually I don't choose to follow someone only on the basis of this micro-portrait, but I follow the link to his/her blog/SN profile (if provided)."

Most participants reported scrolling through tweetstreams and looking at blog links before making decisions about following. A few noted that profiles without links to external sites "for ideas in more than 140 characters" are profiles they generally avoid following.

The exemplar profiles with the largest number of followers and ratios indicating a high scale of attention did tend to be assessed as more influential. High tweet numbers indicate longevity on Twitter and appeared to factor into many participants' assessments of others. Some noted they were more likely to invest in following an established profile with many tweets because they could assume ongoing contribution rather than an account that might go dormant. This was particularly true among participants who appear to maintain a cap on the numbers of users they follow; this may indicate impression management regarding their own follower/following ratios, as well as efforts at signal/noise control. However, low tweet counts or relatively even follower/following ratios did not necessarily result in dismissal of influence. It was noted by participants that accounts with smaller followings can simply reflect relative newness within the Twittersphere. One participant noted, of small accounts, "Might just mean they haven't done anything "viral" yet. But I'm more concerned with content and interests." Profiles that had not been adapted or personalized at all, though, were commonly interpreted as signaling a lack of value.

@miken_bu: "I check their twitter profile, read some recent tweets and perhaps check out their blog or web site… I do try to follow folks who have differing views or from differing backgrounds to reduce the echo chamber. I rarely follow anyone who has an egg image and no profile info, though, unless I know them already."

@KateMfD: "Sometimes…I'll choose someone with twenty followers, because I come across something they've managed to say in 140 characters and I think… "oh, look at you crafting on a grain of rice."

In terms of how participants amplify other voices in their own Twitter timelines, however, metrics appear to count to some extent. During participant observation, the majority of participants were more likely to re-tweet (RT) users whose scale of followers was higher than their own. Even where participants clearly made themselves available to engaging in discussions with users of all stripes and sizes, the tendency to amplify larger voices was consistent among all but the largest accounts in the study.

"A rolling stone gathering moss"- Identity at scale

While size or scale of account was not taken up as a direct indicator of influence or value, there did appear to be a critical mass at which those who are visible in open networks become ever more visible. A number of interviews – with participants of varying scale – noted that for large accounts identity and reputation can become "a thing," and reciprocal communications become difficult to sustain.

@catherinecronin: "Large nodes in a social network have more visibility, their network activity gets amplified, and they become larger yet. In Twitter this happens in many ways – through RTs, through publication of "top educators to follow" lists, etc."

@wishcrys: "I think when someone is a Twitter personality with a Twitter reputation, reputation comes to overshadow content. At that point you're no longer a content producer, you're probably just a Twitter personality…everything you say is Gospel Truth. Whereas when you're lower down and trying to gain some form of connection, recognition, some sort of following, your archive and content are what leaves a mark."

Participants who had reached significant scale with their own Twitter accounts, blogs, and digital identities tended not to speak about size of account as a benefit or goal, but more as an identity shift; one that involves challenges, adjustments, and responsibilities, as well as privileges.

@raulpacheco: "(January 2014) –I find when I have conversations on academic Twitter my brain starts absorbing information on data and learning, new ways of looking at things. I'm addicted to my mentions tab – I love hearing people react to what I say." (July 2014: Skype chat) – "I've reached peak tweetage. I can't answer every single @ reply as I used to (related to how much my follower count has grown)."

@readywriting: “I make sure that I amplify a lot of adjunct voices now. I think that’s really important. POC, other marginalized people…I recognize my privilege and want to use it for some good, even if it is just amplification.”

“Status baubles” – The intersection of network influence with academic prestige

The intersection of high network status with lower or unclear institutional academic status was a recurring topic in interviews, in reflections, and in public Twitter conversations. Participants indicated that the opportunities sometimes afforded junior scholars with network influence can create confusion and even discord within the highly-codified prestige arena of academia, because the hallmarks of network influence can’t be “read” on institutional terms. Networked scholars were acutely aware both of network and academic terms of influence and appeared to codeswitch between the two even on Twitter and in other network environments. However, they noted that colleagues and supervisors tended to treat networked engagement as illegitimate, or a signal of “not knowing your place.” Of the alternate prestige economies that intersect with academia, participants reported media exposure as the most coherent to their less-networked academic peers.

@tressiemcphd: “It’s the *New York Times* and the *Chronicle of Higher Ed*…I get emails from my Dean when that happens, when I show up there. With the *Times* I get more from the broader discipline, like a sociologist from a small public school in Minnesota – people not so much in the mix prestige-wise, but they see someone thinking like them, they reach out. But the *Chronicle* gets me the institutional stuff. I’ve got a talk coming up at Duke, and the person who invited me mentioned that *Chronicle* article three times. It’s a form of legitimacy. It shows up in their office and so they think it’s important.”

@thesiswhisperer: “I’ve grown this global network sitting on my ass and it offends people. And I’m really interested in that, in what’s going on psychologically with that, they say “it’s

not scholarly" but it's really just not on their terms. It has success. But when you're the one getting keynotes people who've bought into older notions of success, they feel cheated."

"I value their work, so value by association" – Commonality as credibility and value

When it came to indicating whether they would personally follow a given account, participants appeared to give less weight to metrics and perceived influence than to shared interests and perceived shared purpose. Most participants appeared to be actively attempting to avoid what Pariser (2011) calls a "filter bubble" in their networks. Rather, many reported seeing themselves as responsible to their own networks for some level of consistent and credible contribution, and so sought to follow people who would enrich their participation via relevant resources or discussion topics.

Where commonality appeared even more important to participants, however, was in peers or shared networks. When a logged-in Twitter user clicks on another user's profile, the number and names of followers they have in common is visible. This visibility serves to deploy shared networks as a signal of credibility in an environment where identity claims are seldom verifiable. Many participants spoke to the importance of shared peers over metrics or other influence factors in terms of whether they choose to follow. In assessing a full professor with more than 1,300 followers, one participant noted that the metrics did not sway him; "Looking at the number of followers and tweets, it would seem as if this person has some "gravitas" in the field. Just judging from his profile – I would not be particularly drawn to following him because his field is chemistry. I searched his profile online, and looked at his tweets, and he tweets mostly about non-academic issues e.g., coffee, football, etc." Whereas the same participant then indicated he would follow another profile with only 314 followers, due to shared networks; "she is followed by a number of people whom I respect and follow. So I will give her a try."

Participants tended to look for common interests on top of common peer networks, however. One mentioned, “I often follow people who others I follow also value – after “checking them out” via looking at some tweets, profile, etc.” Another echoed, “I see that we share 65+ followers, so there are obviously many connections. (Her) interests match mine somewhat, she shares resources as well as engaging with many people…I also see that…(her) use of these particular hashtags tells me that (her) interests are closely linked with mine.”

Commonality was also overtly valued where participants used networks as ways of connecting with other scholars for support, encouragement, and specialized information. One PhD candidate reflected on the value of another PhD student account, “As a PhD student, she is a colleague studying topics close to my interest. I am likely to follow her for a sort of…solidarity among peers, beyond the actual contribution she could bring.”

“Being connected with Oxford adds to the reputation” – Recognizability as a way of making sense of signals

The value placed on shared peers reflects a broader pattern observed within the research; recognizable signals have a powerful impact on perceived influence and perceived credibility. In the same way that recognizable journal titles or schools or supervisors serve as signals of conventional academic influence, so do both conventional and network factors of recognizability carry weight in assessments of network influence. Thus, shared peer networks matter, as do visible acknowledgements such as mentions and retweets; additionally, familiar academic prestige structures such as rank and institution can add to impressions even of network influence.

One of the most vivid examples of this was the workplace listed on one exemplar’s profile; Oxford University. The vast majority of participants who were shown this exemplar noted the Oxford name, and there was an overwhelming tendency to rate the account as influential. However, as noted, influence did not carry as much weight as commonality when participants were asked whether they'd follow a user. One participant reflected, "Is based at the University of Oxford – signaling for me a possible gravitas/expertise in the field. Looking at his tweets, he does not tweet a lot about academic issues – so he is most probably not, in my opinion, a very "useful" person in my network."

The Oxford exemplar also raised the issue of reciprocality and the ways in which its likelihood is minimized by scale of metrics and by prestige. One participant was frank; "This person seems like a very successful academic and is doing forward-thinking work at one of the oldest and most prestigious institutions in the world…(but) I have not followed him and couldn't imagine he'd follow me." Another was more overt about the ways in which influence is generally understood to affect engagement; "Clearly a more discerning twitter denizen (note the number of people following him vs. who he follows), which would tell me he might not be big on interaction." Thus, imbalance of scale does not necessarily fit with the purposes of connection and tie-building that many participants asserted as the primary value they find in their networks.

Outside the Oxford example, institutional affiliations or lack thereof did not have much effect on participants' responses to exemplars, presumably because few institutions in the world carry the recognizability and prestige that Oxford does. Still, institutional affiliations can operate as credibility signals even where prestige structures are not involved. *@exhaust_fumes:* "I care a bit about institutional affiliation in profiles…less that the actual university matters or rank matters, but that people are willing to put *any* institutional info up makes me more inclined to follow because I find relative safety in people who are clearly on

Twitter as themselves as academic-y types and therefore aren't likely to be jerks without outing themselves as jerks who work in specific places."

Willingness to openly signal one's workplace can operate not only as a verifiability factor but as a promise of good behavior of sorts. However, signals of institutional academic influence were also read as indicators of identity and priority. In reference to a profile that opened with the word "Professor," one participant commented, "When a profile leads with institutional affiliation, I assume that is his primary role on social media. The rest of the cutesy stuff is there to humanize but he is signaling who and what he is in the traditional power structure." Scholars who emphasize their conventional academic influence signals may limit the level of network – or "born digital" – influence they are perceived to wield.

"A human who is a really boring bot" - Automated signals indicate low influence, especially in the absence of other signals

One indicator that was commonly read as suggesting limited network influence was automated engagement. Three exemplar identities had automated notifications in the screen-captured timelines that were shared with participants; one exemplar's visible tweets were all paper.li links[2]. Responses to the paper.li were universally negative, even where the exemplar was otherwise deemed of interest. "Potential value to my network – she tweets relevant stuff so probably I should follow her! On second thought, she has a Paper.li, and by definition I unfollow anyone who uses that tool." Other participants were equally direct; "The only negative for me was the link to a daily *paper.li*. I tend to find those annoying (almost never click them!)"

[2] Paper.li are collections of headlines and links that are created and published daily as personalized mini-newspapers. They are automatically curated from around the web and broadcast through users' social media channels.

Storify was not interpreted to indicate the same level of low influence or awareness, but its automated tag feature was still a flag that participants mentioned; “This is on the fence for me since Storify takes some effort to be engaged with things and maybe she didn’t get that she can opt out of those tweets informing people that they’ve been “quoted.”

“My digital networks provide me with some sense of being someone who can contribute” - Identity positions and power relations

Participants’ nuanced sense of influence in networks was particularly visible when aspects of marginality and power were explored. While none perpetuated the narrative of open participation as truly or fully democratic, many identified open networked practices as ways of speaking from their own situated knowledges and contributing in ways their embodied or academic lives may not afford.

@raulpacheco: “In a very bizarre way, having a well-established academic and online reputation makes me feel pretty powerful, despite being queer and Latino…both elements which should make me feel handicapped. My thoughts are well received, generally, and my stuff gets retweeted frequently.”

@KateMfD: “Networking online has enabled me to create a sustaining sense of my identity as a person, in which my employment in a university plays a part, but isn’t the defining thing…my networked practice is much more closely aligned to my personal values, and much more completely achieved.”

@14prinsp: “My identity intersects with a particular (South African) view of masculinity and patriarchy – there’s vulnerability here. I’m out as a scholar, and I’m also HIV positive and am out in my department...I was very sensitive when I started blogging that if I said something stupid it would be there til death do us part, but I’m very aware that I manage my

identity, I make very critical choices. It's reputation management, it's brand management, not in a superficial way. There is definitely some authenticity in it but it is carefully chosen."

Particularly among PhD students and early career scholars, the norms of open online participation helped minimize academia's hierarchies for participants.

@andreazellner: "I feel like Twitter is the Great Equalizer. Take a recent back and forth with the Dean of my college…I am too intimidated to talk to him and he has no idea who I am, and yet on Twitter he posted about being at Microsoft Research and I started asking him questions. He ended up tweeting pictures of things I was asking about, etc., and we even traded a few jokes."

@tressiemcphd: "My position in the prestige structure didn't always match my ambitions and what I felt I could do, felt compelled to do. (Networks) allowed me to exist without permission; I was never going to get institutional permission, there was no space there."

@wishcrys: "I'm far more likely to tweet to my academic superheroes or superiors: I'm not very likely to walk up to them and go "hey, great book!" I definitely feel much more comfortable doing this on social media…people aren't going to remember my research five years down the road but they may remember that nice PhD student who sent out a nice tweet at 3am."

Finally, it was noted that the relational connections created in open networks nonetheless reproduce many of the power relations of institutions and society, even while challenging some of their hierarchies. Networks were reflected as an alternate status or influence structure that intersects with academia, rather than as truly open fields of democratic interaction.

@readywriting: “I’ve consciously worked to follow people outside the class/race/gender norm. One of the evaluative things I do when I encounter a new person on Twitter is ask myself “is this person a little outside of the norm? Great. I want to learn from him/her.”

@catherinecronin: “Twitter is ‘flatter’ than some other networks/media, but power relations exist on Twitter -- there is no doubt about that. The *online* very often reproduces and amplifies what occurs *offline*. However, open online platforms can also subvert the usual power dynamics. Those without access to conventional public communication channels can use social media to build networks and influence outside of institutional and cultural power structures.”

Conclusions

Overall, results from the study suggest that open, networked scholarly practices do constitute webs of significance that depart or differ from the institutional, peer-review-based model of academic influence. Twitter influence signals are based in open, participatory norms of communications and publishing that build ties across hierarchies and value contribution and open sharing. At the same time, these influence signals also reflect digital platforms’ capacity to track and quantify engagement into metrics, particularly of attention. This research study indicates that while open scholars value networked participation as a means of building ties, accessing resources, and contributing to broader conversations, circulation within networked publics such as Twitter may also cultivate and reinforce a nuanced understanding of scale and attention. This constitutes an alternate form of influence as compared to conventional academic models, but does not necessarily reflect the democratic ideals of the early open education movement. Participation in networked publics – and specifically Twitter, though all participants in this study also blog and are networked on other platforms – thus to an extent diffracts or departs from codified understandings of “what counts” within institutional academia, making a difference in the worlds of open scholars and their relational and material experiences of scholarship. At the same time, openness itself does not so much diffract academic influence on the broad scale, but only displaces it. It brings into being an alternate but intersecting prestige arena in which credibility is determined by recognizability and commonality rather than credentials, and hierarchies of influence relate to identities and attention, rather than role. In this sense, then, network influence can be seen as Haraway's (1994) "the same elsewhere," an extension of academic influence criteria to the world of openness, rather than a separate or entirely different scholarly sphere.

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PAPER #2

IN ABUNDANCE: NETWORKED PARTICIPATORY PRACTICES AS SCHOLARSHIP

Abstract

In an era of knowledge abundance, scholars have the capacity to distribute and share ideas and artifacts via digital networks, yet networked scholarship often remains unrecognized within institutional spheres of influence. Using ethnographic methods including participant observation, interviews, and document analysis, this study investigates networks as sites of scholarship. Its purpose is to situate networked practices within Boyer's (1990) four components of scholarship – discovery, integration, application, and teaching – and to explore them as a techno-cultural system of scholarship suited to an era of knowledge abundance. Not only does the paper find that networked engagement both aligns with and exceeds Boyer's model for scholarship, it suggests that networked scholarship may enact Boyer's initial aim of broadening scholarship itself through fostering extensive cross-disciplinary, public ties and rewarding connection, collaboration, and curation between individuals rather than roles or institutions.

Keywords: networked scholarship, digital scholarship, participatory culture, knowledge abundance, Boyer's model of scholarship

In Abundance: Networked Participatory Practices as Scholarship

Introduction

Scholarly use of online networks and social media is growing (Seaman & Tinti-Kane, 2013; VanNoorden, 2014), enabling new means of scholarly connection, communication, and collaboration. Yet ideas of scholarship often remain based in models that privilege peer review and the scholarly publishing systems that surround it (Weller, 2011). As Harley, Acord, Earl-Novell, Lawrence, and King (2010) assert, "Experiments in new genres of scholarship and dissemination are occurring in every field, but they are taking place within the context of relatively conservative value and reward systems that have the practice of peer review at their core" (p. 13). Thus, even though social media presence has been shown to increase visibility and citations (Terras, 2012; Mewburn & Thompson, 2013), and networked practices help establish reputation and connections with more-established faculty (Hurt & Yin, 2006), digital practices tend to remain on the margins of the tenure and promotions systems by which academia defines itself (Ellison & Eatman, 2008; Gruzd, Staves, & Wilk, 2011). This paper, however, demonstrates how networked scholarly practices align with and even exceed Boyer's (1990) exemplar for scholarship.

The paper outlines an ethnographic investigation of scholarship in digital participatory networks, particularly on Twitter. Drawing on Veletsianos and Kimmons' (2012) concept of Networked Participatory Scholarship (NPS) and their assertion that "[s]cholars are part of a complex techno-cultural system that is ever changing in response to both internal and external stimuli, including technological innovations and dominant cultural values" (p. 773), the study examined the techno-cultural practices of NPS. In the paper, I trace the practices and perspectives of networked scholars from a variety of locales and institutional status positions, in order to suggest that NPS constitutes an emergent techno-cultural scholarly system of its own, separate from – though intersecting with – that of contemporary mainstream academia.

Conceptual Frameworks

Boyer's (1990) empirical study of scholarly practices asserts that knowledge is generated by formal research, but also "through synthesis, through practice, and through teaching" (Boyer, 1990, p. 25). His typology seeks to place these four on equal footing in order to create a more inclusive scholarship. Pearce, Weller, Scanlon and Kinsley (2010) have drawn deeply from Boyer's framework in examining the implications of digital scholarship for academia, and Veletsianos and Kimmons (2012) ground NPS' definition of scholarship in Boyer's model. However, the specific practices of individual networked scholars – and the techno-cultural system they enact – have yet to be assessed and analyzed through the lens of Boyer's vision for the profession. The key gap in knowledge that this paper aims to address is the alignment of NPS practices with Boyer's framework for scholarship. The paper's key contribution is to situate this new techno-cultural system as scholarship *of* and *for* a context of knowledge abundance.

Prior to the digital era, scholarly knowledge was traditionally organized around the premise that knowledge is scarce and its artifacts materially vulnerable. Eye's (1974) seminal article on knowledge abundance asserts, "[M]aterial can be transformed from one state to another but the original state is diminished…materials are exhaustible" (p. 445). Manuscripts and books as knowledge artifacts are exhaustible, and costly to produce and distribute. Digital content, however, is persistent, replicable, scalable[3] and searchable (boyd, 2011, p. 46); digital knowledge artifacts can be distributed with negligible cost to originator or user, and without being consumed or diminished in the process. Thus widespread and increasingly

[3] Content that is scalable has the potential to reach mass audiences by 'going viral.'

mobile access to digital knowledge artifacts in “an abundant and continually changing world of information” (Jenkins, 2006, Networking section, para. 1) marks a shift from an era of knowledge scarcity to an era of knowledge abundance, even though access remains inequitably distributed.

Yet the practices of scarcity do not simply dissipate in the face of abundance. While the research and teaching functions of the university have to some extent incorporated digital knowledge artifacts, many aspects of the techno-cultural system of the contemporary academy remain rooted in the premise of scarcity, or the hierarchies scarcity has fostered. Cope and Kalantzis (2009) frame this fact as a pivotal flaw and breaking point in contemporary knowledge production. Daniels (2013) asserts the persistence and prestige of the scarcity-based ideal of scholarship; “We have our own “legacy” model of academic scholarship with distinct characteristics…analog, closed, removed from the public sphere, and monastic” (Legacy academic scholarship section, para. 3). Weller (2011) frames lecture as a “‘pedagogy of scarcity’…based around a one to many model to make the best use of the scarce resource (the expert)” (p. 226). In peer review and impact analysis, academic publishing retains the false residue of scarcity for the profit of journal monopolies like Elsevier, Springer, and Wiley. Digital technologies make it possible to peer review and distribute scholarly artifacts largely without cost, but practices and prestige are slower to change. As de Zepetnek and Jia (2104) note, “Many “senior and tenured scholars tend to treat open-access publication as complements rather than substitutes to the publication of their work in print journals” (p. 2). This collective residue of scarcity permeates the techno-cultural system of institutional scholarship.

Yet as prices for top journals soar increasingly out of the reach of smaller institutions (Willinsky, 2006; Schmitt, 2014) and the prestige and security of the tenure reward system grows rarified (Clawson, 2009; Munro, 2015), academia's attachment to scarcity begins to appear unsustainable. This research-based ethnographic portrait of NPS practices aims to illustrate an alternative scholarship of abundance.

Research Methods

This study explored the participatory culture of networked scholarship and the meanings constructed and circulated within it, using participant observation, semi-structured interviews, and document analysis as its primary methods. Ethnography emphasizes detailed, situated accounts and the "valuable knowledge of participants as meaning-making actors" (Boellstorff, Nardi, Pearce & Taylor, 2012, p. 19-20). Geertz's (1973) foundational ethnography characterizes cultural practices as "suspended in webs of significance," (p. 2); this exploration of NPS as a techno-cultural system emphasizes the webs of significance and meaning experienced and enacted within the system being investigated.

The study approached scholarship as a sociomaterial phenomenon (Law, 2009) in which technological infrastructures, differential identity markers, and norms of practice and prestige all combine to form distinct if overlapping techno-cultural systems.

Selection

The study sought networked scholars from a wide range of geopolitical and identity locations within the English-speaking academic world. The call for participants was blogged and tweeted; the link was shared and re-tweeted over 150 times, resulting in 33 responses. Criteria for inclusion required active institutional affiliation as a scholar, active use of Twitter within scholarly networks for at least two years (based in White & LeCornu's (2011) visitors and residents model for online participation), and active sharing of scholarly work and ideas in networks (based in Bruns' (2007) concept of produsage, or shared production and consumption within networks).

Using these criteria, 14 participants were selected for maximum diversity of location and identity markers. 13 remained active throughout the study. Participants came from Canada, the US, Mexico, Australia, Singapore, Ireland, Italy, and South Africa. 10 were female; four male. Six identified with an ethnic heritage in some way marked or non-dominant in their location; four identified as gay or queer. Seven were Ph.D students or candidates at various stages of completion; two of these held longstanding administrative or teaching positions in their institutions. Three participants were early career scholars, one on tenure-track; three were senior professors or researchers. They ranged in age from twenties through fifties, and in Twitter followers from a few hundred through 15,000. All participants chose to be openly identified in the research by their public Twitter handles.

Participant Observation

Participant observation was conducted from November 2013 through February 2014, using Twitter as the central site of observation. Participant blogs, Facebook and Instagram accounts, and other platforms that participants deemed relevant to their scholarship were also observed. A Twitter account created specifically for the study was used both as a lens for observation and engagement, and as a platform to share notes regarding emergent patterns. The researcher also kept extensive offline ethnographic notes throughout the observation period, and utilized Twitter's 'favorites' feature daily to mark participant tweets.

24 hour Reflection

All participants were asked to choose a representative 24-hour period during which their networked engagement would be examined in-depth; they notified the researcher shortly after their chosen time frame to enable her to trace back through their interactions to gain contextual perspective. They then submitted short reflective documents with screen captures of their interactions, outlining their perspectives and understandings of their engagement;

these understandings were analyzed against the data from participant observation to verify and contextualize interactions. 11 participants submitted this document.

Profile Assessment

Participants were sent documents consisting of two questions about their perceptions of engagement norms and power relations on Twitter, and screen captures of the Twitter profiles of five networked scholars who had volunteered to have their identities used as exemplars. Participants were asked to comment on their perceptions of the exemplars' influence and potential value to their networks. 12 of 14 participants completed and submitted this assessment.

Interviews

10 participants were interviewed via Skype, and one follow-up interview was conducted some months later. Interviews were semi-structured and recorded. Questions focused on participants' practices, experiences, and perceptions of networked scholarship. Conversations were emergent and individuated based on the 24-hour reflections.

Coding and Analysis

Unfocused transcription technique was used to transcribe the interviews, "without attempting to represent…detailed contextual or interactional characteristics" (Gibson & Brown, 2009, p. 116). Transcripts were collated with the written data participants had submitted, creating 13 separate participant documents. In some cases, relevant participant blog posts were included in these documents as well. Key emergent themes in the documents were identified and hand-coded to try to trace commonalities, distinctions, and relationships. The data was re-read against themes, codes, and subcodes using open coding and a form of axial coding.

Rigour

When participant documents were themed and coded, they were sent back to participants for approval or further input. The study was designed to respect the participatory tenets of NPS, in which rigour was framed as an overt commitment to accountability, credibility and confirmability to participants and to the study's epistemological and ethical tenets (Guba & Lincoln, 2005). In qualitative research, primary goals include believability, based on coherence, insight, and instrumental utility (Eisner, 1991), and trustworthiness (Lincoln & Guba, 1985), achieved through a process of verification rather than through quantitative validity measures. As part of the verification process, themes, coded transcripts, and findings were shared with participants, and input, clarification, and critique were invited. Six participants extended or altered their reflections based on this invitation. Aspects of the study were blogged, as well, and four participants commented on these posts and added their perspectives to the public record. Throughout the research process, participants' confirmation of general conclusions and of statements attributed to them was sought and attained before publication processes were initiated.

Research Analysis and Results

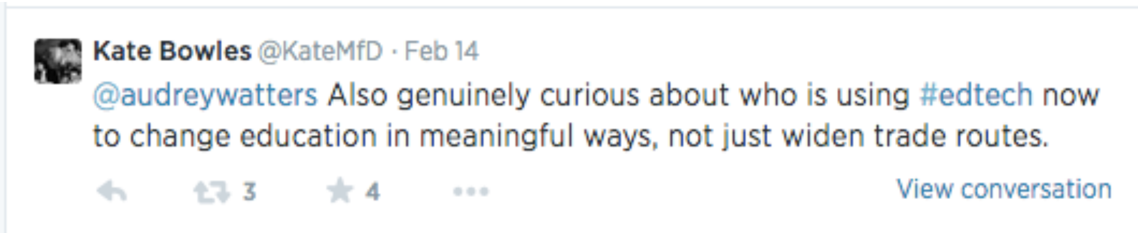
To situate NPS practices as a distinct techno-cultural system of scholarship predicated in abundance, participant documents were first analyzed against the four central elements identified in Boyer's (1990) framework for scholarship, then examined what was not encompassed. While scholars' practices diverged, and distinctions as well as commonalities are represented within the space available here, the webs of significance that emerged show both overlaps and key distinctions between the techno-cultural systems of NPS and the academic status quo. These patterns emerged in spite of the fact that study participants were all situated within both systems, and came from varying academic status positions and geopolitical locations.

Discovery

The scholarship of discovery is the core academic work of building new knowledge through research and investigation (Boyer, 1990). Throughout the course of the study, networked scholars used Twitter and their broader networks to invite and enact contributions to knowledge, through conversations and informal polls as well as through more formal means such as invitations to participate in surveys or other research activities. Participants were actively engaged in informed and intellectually robust public exchanges as well as – in many cases – playful and personal repartee. Twitter served as a space for thinking aloud, sharing expertise, and raising investigative conversations. Participants appeared to carve out regular areas of discussion and investigation for which they become known, in their Twitter circles; peers would then send them links on those topics due to their expressed interests, and signal them into conversations in those areas, thereby extending participants' network reach and visibility. A majority of participants reported that this circulation of ideas and resources not only helped them build new knowledge and become aware of new literature in their fields, but also broadened their understanding of alternate viewpoints in their areas of expertise.

@tressiemcphd:

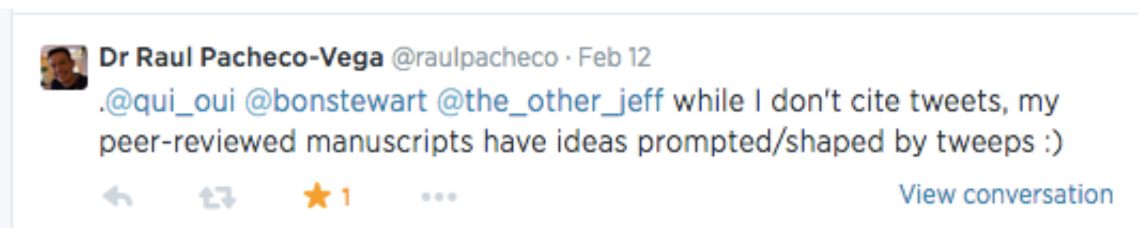
@KateMfD:



Scholarship of discovery – in the literal sense of discovering new and relevant resources and perspectives that influence research and academic production – was part of all participants' NPS practices, no matter their discipline or area of study.

@exhaust_fumes: (field: early modern literature) "I joined because people in my field were on Twitter and I realized there were library fellowships and I wasn't tapped into that – there's a whole world of academic funding that I never knew about. Twitter has been a way of being connected to opportunities."

@raulpacheco: (field: water governance and public policy)



@socworkpodcast: (field: social work) "When G+ came out, I created a social work and technology community. I sent out a tweet; in a week we had a hundred people…it was this vibrant and engaging exchange of ideas. Those of us on Twitter who'd been confined to 140 characters were able to interact more in longform, and out of that community grew multiple scholarly academic products. There have been four articles published, and I organized a thinktank on the use of social media in social work education."

The sharing of research-based knowledge is key to scholarship as a techno-cultural system, whether in NPS or institutional spheres. The distinction is in how and how often scholarship is shared, at what point scholarship is shared, and by whom. In addition to tweeting directly on topics of research and investigation, all participants in the study shared at least one blog post, report, slide deck, podcast or formal publication of their own via Twitter during the three-month course of observation. Two shared over 25 artifacts in the same time frame. The majority of this work was iterative rather than summative, and focused on giving a partial, situated picture of work processes or content as well as conclusions. This type of sharing circulated widely among participants' networks, particularly when topics related broadly to digital technologies, higher education, or other fast-changing sites of scholarship and conversation.

@wishcrys (detailing data from her Ph.D research):

The majority of participants also circulated others' scholarly work on an almost-daily basis. Most stated that they shared content they felt would be of interest to their audiences or would align with the areas of expertise and identity that they had cultivated via networks. This intersection of content and identity is not new to the "reputational economy" (Willinsky,

2010) of academia, but in NPS, the content that counts towards academic identity and influence extends beyond scholars' own work. Networked scholars become known for what they share, even if the bulk of that content originates with others. This creates a milieu in which scholarly artifacts have value and are extensively curated and circulated, not only for their content but for their capacity to facilitate network ties among scholars with shared interests. In such a milieu, a robust network can be a professional asset in hiring contexts (Becker, 2015), signifying a scholar's capacity to bring visibility, influence, and access to wide-ranging scholarly ties to an institution, association or conference.

In the process of using, sharing, and contributing to this abundant and ever-renewing body of resources and ideas, scholars become more visible to each other and their areas of interest more legible (Stewart, 2015). Central to this visibility are forms of citation that have emerged as common practice in networks, but have ties to traditional scholarship of discovery. The user-built growth of the internet drew extensively from the academic model of knowledge-sharing, and the Google search engine was designed on the same principles as academic citation (Brin & Page, 1998). Although Twitter limits expression to 140 characters, study participants often referenced both the author(s) of a resource they were sharing *and* the person through whom they discovered that resource.

@antoesp:

@thesiswhisperer:

Thus networked scholarship of discovery, as a techno-cultural system, shares surface commonalities with the citation practices that mark conventional scholarly dissemination, but both the technical and the cultural aspects of the process are organized differently. While scholarly publishers and institutions have traditionally absorbed the costs of production and dissemination of scholarly artifacts, instituting gatekeeping hierarchies in the process, the digital capacity for replication and distribution minimizes that material cost. This opens up spaces where production and dissemination can be engaged in by individuals regardless of institutional ties, so long as they build the networks necessary to foster exchange. The digital knowledge artifacts that circulate in these networks tend to be more varied and often more iterative than those that have gone through the conventional gatekeeping process, not only because the gatekeeping is bypassed but because digital artifacts need not be finalized as print artifacts must be, but can be continually updated as ideas emerge. Thus, while networked scholarship of discovery still circulates traditional markers of scholarly quality, such as highly-ranked journals or elite brand institutions, it particularly values and rewards iterative, exploratory work and the capacity to assess and curate value from the midst of knowledge abundance. Moreover, it fosters a techno-cultural scholarly system structured primarily around individual connections, rather than institutions.

Integration

In the process of abundant sharing that marks NPS, the boundaries around disciplines become blurred. In Boyer's (1990) framework, scholarship of integration involves "making connections across the disciplines, placing the specialties in larger context, illumining data in a revealing way, often educating nonspecialists too…serious disciplined work that seeks to interpret, draw together, and bring new insight to bear on original research" (p. 17-18). The way Twitter draws scholars from multiple disciplines and geographic areas together via conversations and hashtags emerged as a clear manifestation of scholarship of integration. Participants demonstrated active engagement with multiple audiences, across fields and disciplines. The accounts that participants connected with in their 24-hour reflections were traced, and in all cases but one participants were found to engage across both geographic and disciplinary boundaries.

@antoesp: "Twitter is an opportunity to receive more diversified feedback and have a chance to understand how the approach to solutions changes according to different academic cultures."

@raulpacheco: "I find when I have conversations on academic Twitter my brain starts absorbing information on data and learning, new ways of looking at things…Twitter conversations keep pushing my thinking, I'm able to trace what's going on and react more quickly. I follow across disciplines: geographers, anthropology, sociology, poli sci, people in higher ed, and technologies."

Boyer (1990) emphasizes scholarship of integration as "research at the boundaries where fields converge…[T]hose engaged in integration ask "What do the findings mean?" (p. 18). Thus scholarship of integration centres on public discussions and negotiations of meaning; what distinguishes the techno-cultural system of NPS is that this happens in constant, abundant real-time. This indirectly reinforces the system's emphasis on individual rather than institution; the regular unsettling of the boundaries of what is known or understood makes formal hierarchies and categories – tenets of the techno-cultural system of institutional, disciplinary scholarship – difficult to enact and enforce. In NPS, belonging is de-institutionalized to the extent that individuals without visible institutional connections can nonetheless hold positions of status within primarily-academic Twitter spheres, based on long-term engagement.[4] While power relations in networks demand ongoing investigation, networked participation nonetheless minimizes institutional gatekeeping around scholars' engagement, enabling more horizontal and hybrid connections and fostering scholarship of integration. Since participants in the study were situated in both networks and institutions, they were able to speak to distinctions between the two systems on these fronts.

@thesiswhisperer and @tseenster (non-participant, live-tweeting a conference):

@catherinecronin: "I'm reminded of Mary Catherine Bateson's *Composing a Life.* Bateson

[4] One of the exemplars in the study had close to 25,000 Twitter followers and no institutional affiliation at all. Most participants who recognized her name had a sense of her work and perceived her as highly-respected.

chronicled the careers of several successful women, most of whom had multiple and varied careers. Bateson noted how this differed from the stereotypical (predominantly male) notion of a career, where you step forward, ever higher up the career ladder. Bateson observed that these successful women's careers involved moving and connecting across many different spheres. I relate to that. I've always been fine with the fact that the university didn't know all of the work that I did. But being involved in networks means I *can* speak to all my roles, there are fewer boundaries."

@raulpacheco:

Application

NPS' emphasis on multiplicity of audience extends beyond academic audiences to public audiences, aligning with Boyer's definition of scholarship of application. Boyer

(1990) asserts, "…To be considered *scholarship*, service activities must be tied directly to one's special field of knowledge and relate to, and flow directly out of, this professional activity" (p. 22). While not all Twitter engagement is tied to scholars' areas of expertise, all participants in my study engaged in discussions related to their scholarly identities and knowledge at least on a weekly basis. A number referred their NPS practices as a form of knowledge translation or public intellectual engagement, and were explicit about actively managing the breadth of audiences afforded by networked scholarship.

@wishcrys (reflecting on how she shares her work): "I chose to make the blogpost live on a Friday evening, the busiest peak hour all week for my fieldsite ensuring the highest viewer traffic… A couple of days later, I plugged the blogpost on Twitter again but this time pitching to my academic audience."

Boyer's (1990) vision of scholarship of application rests on the use of scholarly knowledge for the greater good; "[s]uch a view of scholarly service – one that both applies and contributes to human knowledge – is particularly needed in a world in which huge, almost intractable problems call for the skills and insights only the academy can provide" (p. 22-23). The techno-cultural system of NPS enables scholars to develop public voice on free platforms like Twitter and connect with like-minded others for activism and awareness-raising, thus applying academic insights publicly to societal issues. Participants emphasized how Twitter enables female scholars, scholars of color, and scholars outside the prestige economy of tenure to contribute and lead.

@readywriting: "One of the things I appreciate about Twitter is the flattening effect in terms of whose voice carries weight. [There are] opportunities like the hashtag #notyourAsiansidekick that point out how academia is a shitshow for women and minorities

in terms of ideas and influence being stolen…[there are] people whose social standing I might not have access to, even people I disagree with."

@14prinsp: "So the real question is – what is my 'professional identity'? Of course I am more than my blog or my tweets. I am more than my qualifications and my publications, too…[I]n my local context there are very few faculty that are online or using Facebook as a scholarly environment – I'm the odd one out and as an activist I'd like to use my own practices as an example of what is possible. I think it's important to be an example of your vision of the profession, not just constrained by what's done around you."

Participants also noted that NPS can be an avenue to media engagement and visibility, thus extending networks' scholarship of application beyond the individual scale to an alternative institutional structure. Media visibility is not new to the NPS techno-cultural system of scholarship; the academy has always had scholarly superstars. The study suggests that NPS diverges, however, both in who is granted media attention and how it is received. The majority of participants who developed a significant media presence due to network scale and visibility were graduate students and early-career scholars, and many initially understood their respective opportunities as signals of success in a profession as reputation-dominated as academia. Yet many reported the decision to invest time in scholarship of application via media had been dismissed by senior faculty as frivolous, or had resulted in in status tensions regarding their place within the academic hierarchy. Thus while NPS opens a new avenue to scholarship of application, the fact that its channels bypass institutional scarcity and hierarchy may render it illegible within the institutional prestige system.

Furthermore, while media emerged as a channel for scholarship of application, and a means by which women, minorities, and junior scholars could engage openly as public thinkers and experts, the risks and payoffs for academics stepping beyond the institutional sphere appear as poorly understood in media circles as they are in institutional academic spheres. As some of the first professionals bridging the tensions of public knowledge dissemination in an age of information abundance, networked scholars offer insights into the challenges of contemporary scholarship of application.

@tressiemcphd:

tressie mc @tressiemcphd · Feb 16
Media folks who do not recognize the risk junior, minority scholars take in being remotely engaged or public.
9 13

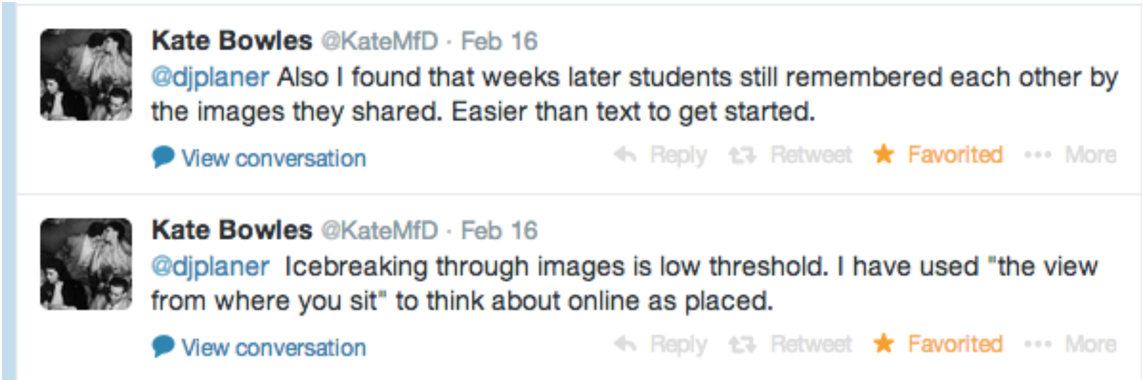
tressie mc @tressiemcphd · Feb 16
Media folks who take your long list of thoughtful comments & introductions to your network. And then crap on both.
5 3

tressie mc @tressiemcphd · Feb 16
Media folks who want you to jeopardize your credibility in your day job to meet their deadline & linkbait quota.
6 8

Teaching

Boyer's (1990) final form of scholarship is that of teaching. Teaching on Twitter can be overt, with scholars sharing syllabi and resources, using Twitter hashtags to coordinate open conversations within and between courses, and participating in endeavours like the #SaturdaySchool hashtag, which explores social justice issues in education. It can also consist of less formalized teaching and learning activities, such as scholars sharing practices and stories to explore contemporary issues, or to offer perspectives on approaches that have worked for them.

@KateMfD: (sharing a photo activity she used in an online course)

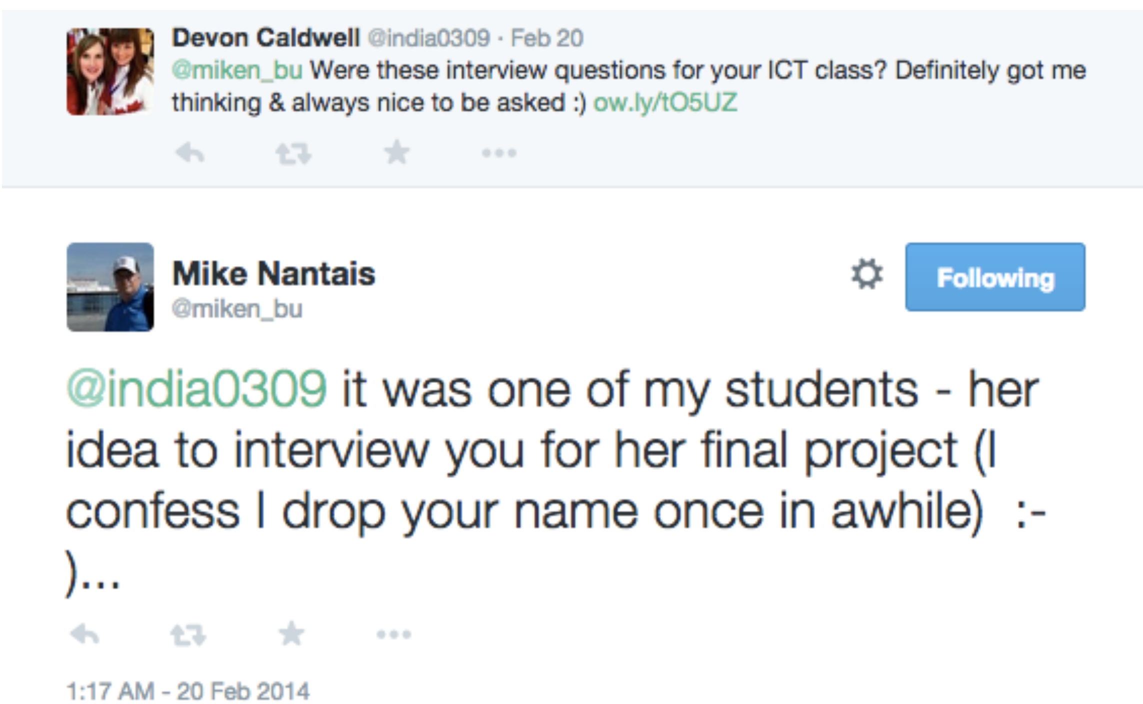


Boyer (1990) frames the scholarship of teaching as an identity as much as an act; "[G]ood teaching means that faculty, as scholars, are also learners…Teaching, at its best, means not only transmitting knowledge, but transforming it and extending it" (p. 23-24). This identity approach to teaching aligns with the public, cross-disciplinary nature of NPS; what scholars share and re-tweet serves as a statement not only about what teaching *is*, in their contexts, but what they believe it should be. NPS thus operates as an open, public conversation on teaching – and learning about teaching – for all interested contributors, regardless of their teacher or student status. This blurring of hierarchy between who teaches and who learns, and the fact that teaching and learning become public acts fostering public engagement, mark the techno-cultural system of NPS as distinct from the scarcity-based system of institutional scholarship.

@catherinecronin:

Finally, both abundance and scholarship of teaching emerge as central to NPS techno-cultural practices in the ways participants enrol networked peers into their teaching discussions and their classrooms. A robust network of cross-disciplinary peers who have some technological capacity opens up instructors' potential to expose and connect their classes to a wide range of online experts and resources. Such connections, evident throughout the research, enable students to engage directly and – after first introduction, individually and independently – not only with various experts but with the extended networks experts provide entry to, at scale and regardless of geographic distance. Through guest lectures, hashtags, public calls for comments on students blogs, and other invitations to engage, participants who were actively teaching offered their students precisely this expanded and accessible manifestation of knowledge abundance in action.

@miken_bu:



Beyond the hierarchy of functions

The techno-cultural practices that constitute NPS, then, align quite closely with Boyer's vision for scholarship in all four components. Networks particularly advantage scholarship of integration, application, and teaching, since as a system, NPS is premised on cross-disciplinary, public, and teaching-focused practices in ways academia is not. However, Boyer's four components did not fully encompass the terms or value of networked scholarship as presented by study participants; rather, their accounts suggest NPS may enact Boyer's initial aim of broadening scholarship's concept of itself by exceeding the scarcity-based limitations of the existing status quo.

Boyer (1990) critiques the increasing restriction of scholarship to a "hierarchy of functions" (p. 15) with research and publication at its top. He situates this hierarchy against the broader historical meaning of scholarship, and argues for the return to a more inclusive, comprehensive and dynamic definition that reflects "more realistically the full range of academic and civic mandates" (Boyer, 1990, p. 16). This is, this paper suggests, the distinct techno-cultural system that networked scholarship represents. While certainly overlapping on many fronts and values with the techno-cultural system of institutional, legacy scholarship and the academic publishing system, NPS opens up this "hierarchy of functions" and releases scholars from the residual prestige of scarcity enshrined in that system, at least at this juncture.

@catherinecronin: "My role is a hybrid admin-academic role – as far as the university is considered I'm half and half but I consider myself an educator, so my networked participation is much more fulfilling, less limiting than my job title… I couldn't live without that network because the way that I work and teach and learn is different from my immediate peers where I sit at the university – the level of exchange and challenge that I get on Twitter is really important to me."

@KateMfD: “For me, being out here is about remaking the university in a different place. My natural companion set as a networked educator has proved to be the people interested in alternative models. There’s a Thomas Hardy poem about sitting in Salisbury Cathedral and not being a believer – and that’s my relationship to higher ed...[M]y networked practice is much more closely aligned to my personal values, and much more completely achieved. My networked identity feels like something that has been allowed to develop in its own time, and to represent things that I really care about, or questions I have been genuinely curious to pursue. So, the irony: I think I am a much better academic in my networked practice than in my actual work.”

@thesiswhisperer: “The network is where my peeps are. They’re not around me physically; there’s no one I really connect with as a scholar here – I’m an academic hobo at my institution because there’s no education or architecture school – and I find that liberating. All my scholarly work goes on collaboratively online.”

@exhaust_fumes: “In the last couple of years I’ve had a concerted social media strategy to make sure I have a community not tied to my particular job…I love conferences but the benefit of Twitter over a conference is the sheer amount of time. It’s ongoing, it’s forever…it enhances conferences because it’s motivating and helps you feel other people are engaged in the same things as you.”

The complex techno-cultural system that is scholarship, then, currently manifests in two overlapping but very distinct sets of practices. Veletsianos and Kimmons (2012) posit scholarship generally as “ever changing in response to both internal and external stimuli, including technological innovations and dominant cultural values” (p. 773), but this study suggests that change responses may have penetrated so differentially that two spheres or systems can be said to exist. Embedded in both, the study’s participants indicate that NPS is indeed scholarship, but a new scholarship premised in abundance rather than scarcity. The techno-culture system of NPS privileges the hybridity, multiplicity, and public boundary work of knowledge abundance in ways that institutional scholarship cannot do so long as it remains bound to traditions of scarcity, particularly around publishing and prestige.

Yet, if NPS currently fosters a breadth of scholarly engagement, connections, and identities that do not align with the practices and outlooks to which much of the academy is still acculturated, what does this suggest for the future of scholarship as a techno-cultural system? Going forward, it seems unlikely that NPS and institutional scholarship will continue to develop in divergent directions. Knowledge production is an economic entity in addition to its many other societal contributions, and while NPS has opened up some avenues to informal professionalization and monetization of scholarship, the institutional system of scholarship still controls and to an extent protects the formal professional avenues represented by concepts such as tenure and academic freedom.[5] Thus networked scholars may value the techno-cultural system of NPS, but many remain economically dependent on the institutional system. As Phipps (2013) notes, a network "does not diminish the importance of the institution to the individual…the structures to support individuals form the platform upon which profiles are built" (p. 14). And while digital networks' convenience and visibility are increasingly acknowledged within the institutional sphere (Mewburn & Thompson, 2013), and scholars are exhorted to "go online" to increase institutional revenue or relevance, this encroachment of institutional presences and premises into networked spaces does not necessarily honor the tenets of NPS as a system of scholarship in abundance.

[5] These economic avenues are admittedly increasingly restricted in the contemporary, rationalized university system, but NPS has no parallel system of professionalization at this juncture.

@tressiemcphd: "Academics would love if they could recreate our institutional prestige hierarchy online but they can't…[W]e are rewarded for not being aware of social media, there's a perverse incentive to not be engaged with it. But there are competitive market pressures to matter to the public…so to resolve that, what senior scholars are doing is "Okay, I'm not going to engage it as an actual social space." When I give talks, the thing I tell them is you can be a broadcaster or an engager; instantly when I say engagement they react like "Nobody's gonna talk back at me." So the way they're managing that is by saying, I will only allow these things that exist in my material world – *The Chronicle* or whatever – to talk back to me. That's the extent of their real digital engagement. That's them trying to manage all that change, to say "No, I'm there" but to have nobody ever talk back at them."

Conclusion

Ultimately, the tensions between practices of scarcity and practices of abundance in knowledge production are made visible in networked scholarship. Approached as a techno-cultural system, NPS aligns with and enacts the terms of scholarship envisioned by Boyer (1990). Networks emphasize sharing and citation, as the academy does, but reward connection, collaboration, and curation between individuals rather than roles or institutions. NPS also fosters extensive cross-disciplinary and public ties for scholars, and encourages scholars to be teacher-learners who engage and speak back in the midst of multiplicity and abundance. Networks extend scholarly participation beyond the walls of university and operate, in effect, as a new techno-cultural system as scholarship *of* and *for* the context of knowledge abundance.

However, this techno-cultural system may be distinct from the institutional model of scholarship – to the limited but meaningful extent to which this research shows that it *is* distinct – only briefly, depending on the future trajectories that knowledge production, networks, and institutions variously take. Participants in the study emphasized that networks face growing encroachment from institutional entities and scarcity-based mindsets. As a backdrop to this encroachment, it is particularly important to note the fact that networks do not function as a separate techno-cultural system of scholarship in the economic sense. Thus, the forms of recognition that NPS is beginning to attract from institutional circles may serve to institutionalize and rationalize the open curation and sharing that this study found at the heart of networked scholarship, while alternative sources of economic support for networked practices may serve – or at least attempt – to monetize them. Future research into the tensions between abundance and scarcity in terms of what counts as knowledge will need to take economic elements into account.

In conclusion, then, this study captures NPS' fledgling enactment of a scholarship of abundance, which may be important for scholarly communities seeking to understand how the values of scholarly inquiry can be honoured and aligned within a sociomaterial context of knowledge abundance. Concurrently, the study suggests that opening up academic practices of scarcity might do a great deal to help scholarly values remain relevant in an era premised in abundance. However, further examination of the economic and prestige drivers of institutional scholarship is needed to assess barriers to the widespread uptake of networked scholarship in the service of abundance. This examination remains outside the boundaries of this study, but will be a rich site of future investigations within distributed and networked education and scholarship.

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PAPER #3

ATTENTION IN NETWORKED SCHOLARSHIP: TWITTER AS A SITE OF CARE AND RISK

Abstract

This paper explores the relationships between visibility, care, and vulnerability in scholarly networks. Using ethnographic methods, it examines how networked attention shapes scholars' cultivation of visibility and identity, particularly on Twitter. It suggests risks of networked attention include commodification and institutional indictments of deviance, along with the re-inscription of societal biases such as racism and sexism. Yet the paper also shows that networked attention can result in opportunities and affinities that institutional scholarly engagement may not offer, and is marked by signals of care that exceed the commodification implicit in the idea of the attention economy. While the sharing of academic work contributes to the cultivation of attention and connections, personal identity signals, humor, and expressions of commonality are found to be the dominant means by which scholars build network ties and visibility.

Keywords: Networked Participatory Scholarship, networks, attention, Twitter, networked identity, networked scholarship, attention economy

Attention in networked scholarship: Twitter as a site of care and risk

Introduction

This paper grapples with the complexities of attention in networked scholarship. Growth in the academic use of online social networks (Seaman & Tinti-Kane, 2013; Van Noorden, 2014) has extended scholarly engagement outside traditional institutional channels. Many scholars now share research, build academic reputations, and connect with one another using online networks, creating a complex mesh of knowledge artifacts and communications that are, like all digital content, persistent, replicable, scalable and searchable (boyd, 2011, p. 46). Yet although scholars are increasingly exhorted to go online to increase citations and impact (Mewburn & Thompson, 2013; Terras, 2012), the effects of networked scholarly practices are only beginning to be formally studied. In this paper, I examine networked attention as a site of care and vulnerability for scholars.

The emerging literature suggests a number of benefits to networked scholarly practices. Digital, participatory networks connect scholars to each other across disciplinary lines, create new opportunities for public engagement with ideas, and offer alternative channels for participation, leadership, and development of scholarly influence (Stewart, 2015). Hurt and Yin (2006) note that networked practices allow pre-tenured scholars to network with more established faculty in their areas of teaching, increasing visibility and reputation. Name-recognition within areas of inquiry can lead to scholars being introduced to others who share their interests, or to invitations that further increase both visibility and network connections. Gruzd, Wellman, and Takhteyev (2011) have found that social media helps scholars strengthen existing relationships and build new ones in their areas of research, while Kirkup (2010) claims that academic blogging offers an opportunity to explore questions in a public but informal atmosphere, allowing scholars to develop voice. All these network advantages may be increasingly valuable in the current climate of narrowing academic opportunity (Clawson, 2009) and the trend towards contingent academic labour (MacFarlane, 2011).

However, while network participation does offer potential advantages to scholars, the visible and pervasive nature of digital communications creates pressures that demand consideration. As network platforms are increasingly recognized as sites of rampant misogyny, racism, and harassment (Duggan, 2014; Nesbitt-Golden, 2014), the opportunities and benefits of networks cannot be the sole focus of research. Drawing on data from an ethnographic investigation of networked scholarly practices, I consider both the value and the vulnerabilities participants experience in networks.

I particularly consider the ways in which the circulation of attention within networks may shape the experiences of scholars. The substantive goal of the paper is to offer a portrait of networked scholars' experiences and practices related to questions of care, connection, and vulnerability, and to explore how attention factors into these experiences.

Conceptual Frameworks of Scholarship and Attention

The practices and perspectives under investigation here are taken up as Networked Participatory Scholarship (NPS), or "scholars' participation in online social networks to share, reflect upon, critique, improve, validate, and otherwise develop their scholarship" (Veletsianos and Kimmons, 2012, p. 766). The same broad constellation of practices is sometimes termed digital scholarship, social scholarship, or open scholarship; the specific tenets of NPS emphasize both the technical and the relational aspects of scholarship.

NPS focuses on the techno-cultural pressures surrounding the use of digital technologies in academia, asserting "whether they recognize it or not, scholars are part of a complex techno-cultural system that is ever changing in response to both internal and external stimuli, including technological innovations and dominant cultural values" (Veletsianos and Kimmons, 2012, p. 774).

Attention is key among the techno-cultural pressures differentiating digital culture from past forms of human engagement. Attention literacy tops Rheingold's (2010) list of five social media literacies for the 21st century. Hayles (2007) suggests a cultural shift towards multi-tasking and hyperattention, correlated with the increasing societal role of networked and programmable media. Stone discusses the network phenomenon of continuous partial attention, which is motivated by the desire to connect, or "to be a live node on the network" (Stone, undated, para. 2). boyd contends that, by participating in networks, "individuals find themselves embedded in the attention economy, as consumers and producers" (boyd, 2011, p. 53). This concept of the attention economy originates with Goldhaber, who suggests that scarcity manifests not in material goods but in the commodification of attention, creating an economy in which "getting attention is of primary value to individuals rather than organizations, and attention also flows from individuals" (Goldhaber, 1997, It's Not for Productivity section, para. 2).

In NPS, attention is indeed individualized. In conventional scholarly communications, gatekeeping structures around peer-reviewed publications forge dominant channels for distribution of information. Each discipline has its own prestige channels, and bibliometric indexing systems quantify the value of publications and research artifacts hierarchically. With the proliferation of networked technologies, however, access to channels of distribution is opened up. Research can be blogged, posted iteratively on sites like Academia.edu, or even shared on Facebook. But responsibility for accessing audiences for this scholarship is devolved onto the individuals using these distributed and networked channels.

The issues this distributed model of communications and attention raises are only beginning to be understood. boyd (2010) identifies four core challenges: that switching to an attention-based model is not necessarily democratizing, that sensationalized content garners a disproportionate amount of network attention, and that issues of homophily – or the tendency to pay attention to those most like oneself – and power must be addressed. boyd frames power in networks as “being able to command attention, influence others' attention, and otherwise traffic in information;” (boyd, 2010, para. Power), a capacity differentiated by the structural position an individual cultivates in the network. However, Watters points out that “we do not escape our material bodies online,” (Watters, 2014, para. 47); position and scale of network attention do not transcend the systemic discrimination in which contemporary culture is steeped. Rather, attention online is for many a channel to threats, harassment, and harm from other users; regulations gaps between US and European rights frameworks can make the internet a “haven for hate speech” (Daniels, 2013, p. 12).

Nonetheless, distributed and networked forms of attention can create new channels of connection, as well as risk. Walther’s (1996) exploration of computer-mediated communications (CMC) argues that the intimacy and relationality of CMC can actually exceed that of in-person interactions. Rather than simply reducing social cues, what Walther (1996) calls hyper-personal CMC limits cues, time pressures, and extraneous signals, thus amplifying opportunities for selective self-presentation and increasing idealization of communication partners. In the course of the study, this increase in relational intimacy in networks emerged as a powerful theme that demanded research. As one participant reflected in relation to ongoing discussions about NPS, the attention economy model of scarcity and commodification does not encompass her experience of being attended to within networks:

> [T]he attention economy…isn't just about clicks and eyeballs, but also about the ways we selectively tend towards each other, and tend each other's thoughts – it's an economy of care, not just a map to markets. We came to this through the meaning of attention…a history of thinking about stretching towards, and caring for, that in our world of haste has been reduced to a kind of dumb and exploitable rubbernecking (Bowles, 2014, para. 5).

Methodologies and Theoretical Framework(s)

I conducted a qualitative, ethnographic study investigating scholars' practices and experiences of attention, care, and vulnerability within the participatory culture of NPS. Called "the premier modality of qualitative research" (Boellstorff, Nardi, Pearce & Taylor, 2012, p. xiii), ethnographic research offers detailed, situated accounts of particular cultures, and emphasizes the "valuable knowledge of participants as meaning-making actors…and commitment to understanding the ways larger social considerations or forms of social order shape everyday lifeworlds" (Boellstorff et al, 2012, p. 19-20).

I approach networked scholarship as a sociocultural and sociomaterial phenomenon, drawing from "methods of analysis that treat everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located" (Law, 2009, p. 141). Fenwick and Edwards (2014) frame networks as sociomaterial assemblages wherein "knowing is not separate from doing but emerges from the very matter-ings in which we engage" (p. 43). I employ this sense of entangled matter-ing, along with Haraway's (1988) concept of situated knowledges and Geertz's (1973) classic ethnographic description of cultural practices as "suspended in webs of significance" (p. 2), to make visible relationships between the always partial, plural, and located knowledges of participants and the material contexts in which those knowledges have emerged. Likewise, I engage Crenshaw's (1989) concept of intersectionality to foreground how multiple dimensions of systemic and structural inequality shape situated knowledges. Rather than claiming what

Haraway (1988) called “the view from above, from nowhere” (p. 589), this sociomaterial approach considers new media infrastructures, differential identity markers, and societal and institutional norms as webs of significance by which networked scholars enact concepts of care and vulnerability.

Methods

The study utilized participant observation, semi-structured interviews, and document analysis as primary ethnographic methods. Participants shared records of their daily digital interactions, and I interviewed them about their networked scholarship and its value and challenges. Twitter was the principal site of observation, though participants’ NPS practices were analyzed across all platforms they identified as relevant. However, aspects of this paper focus specifically on Twitter’s material infrastructure and effects; findings can be understood to reflect NPS practices with Twitter at their core, rather than NPS as any sort of monolith.

Selection

To operationalize NPS’ participatory ethos and identify potential participants, I drew from two key concepts of networked practice; White and LeCornu’s (2011) visitors and residents typology for online engagement, and Bruns’ (2007) concept of produsage.

The visitors and residents continuum offers a framework for engagement in digital environments. Drawing on metaphors of tool and place to differentiate the ways users perceive the web and its purposes, White and LeCornu argue that while visitors tend to see digital environments in tool-oriented or instrumental terms, residents operate from a relational sense of place and presence with others. Visitors and residents are differentiated by outlook and usage rather than by age, profession, social location or technical skill level. From resident perspectives, the value of a digital environment is “assessed in terms of relationships as well as knowledge" (White & LeCornu, 2011, IV.2 Residents section, para. 2), with identity, profiles and belonging all foregrounded.

My call for participants focused specifically on resident networked scholars, rather than visitors. It emphasized resident practices, asking for participants who had blogged and used Twitter for at least two years. However, "even Twitter and blogs can be approached in the less-visible visitor mode when people use them to consume rather than produce Internet content" (Connaway, Lanclos, & Hood, 2013, Mode and Mode Combinations section, para. 5). To try to ensure that participants were resident users engaged – at least in part – in participatory, relational sharing, I also drew on Bruns' (2007) idea of produsage, in which production and consumption are collapsed and combined, creating reciprocal audiences via the sharing of communications and artifacts. Only volunteers who actively shared their work, engaged with that of others, and curated relevant scholarly content for their networks were considered for the study.

I published the call for participants on my blog and tweeted the link. I chose 14 volunteers from the 33 expressions of interest; 13 remained active throughout the study. Participants came from Canada, the United States, Mexico, Australia, Singapore, Ireland, Italy, and South Africa. 10 were female; four male. Six identified with an ethnic heritage that is in some way marked or non-dominant in their location; four identified as gay or queer.

All participants had institutional academic roles as well as networked scholarly identities. Three were senior scholars, four early career researchers, and seven – including some of the older participants in the study – were PhD students or candidates. Participants' status within networks varied as well. Two had more than 10,000 followers on Twitter and were relatively well-known even beyond the boundaries of their own disciplines; three had fewer than 500 followers. All opted to be openly identified by their public Twitter handles in dissemination of the research.

Participant Observation

From November 2013 through February 2014, I observed participants daily on Twitter. I created a new Twitter account specifically for the study, following only participants and the eight volunteers who allowed their profiles to be assessed by participants during the research process. I used Twitter's "favourites" option to mark tweets that appeared relevant to my research questions, and screen-captured updates from participants. I tweeted minimally from the research account, but did share notes and observations related to NPS, Twitter, or the research process. I also kept extensive offline ethnographic notes.

24-hour Reflections

I asked participants to choose a 24-hour period of "regular" networked engagement for them, and to notify me of this period either during or shortly after it ended. I paid special attention to their communications during this period, and they created and submitted short reflections of the time frame. 11 of 13 participants submitted reflections in December 2013 and January 2014. The majority focused solely on Twitter interactions; three also incorporated blog posts or blog comments, five, Facebook, two, Google Plus, and four, Instagram.

Interviews

I conducted recorded Skype interviews with 10 participants, as well as one follow-up interview some months after the initial conversation. Interview questions were semi-structured; most were based in part on the 24-hour reflection documents. I encouraged interview conversations to diverge from the script of questions. Most interviews took 60-90 minutes.

Coding and Analysis

I used a technique called unfocused transcription to transcribe the interviews, “without attempting to represent…detailed contextual or interactional characteristics” (Gibson and Brown, 2009, p. 116). I combined participants’ transcripts with any 24-hour reflections submitted, and also added relevant participant blog posts to these documents. All 13 active participants completed either an interview or the 24-hour reflection, so data for the study was comprised of 13 documents plus my notes, favourites, and screen captures from participant observation.

I identified key emergent themes in the participant documents, the 334 screen captures of tweets and other interactions, the favourites, and my notes, and hand-coded them all in order to try to trace relationships and patterns related to practices of connection, care and vulnerability. I used open coding, creating categories that might suggest webs of significance, and then a form of axial coding in which I re-read the data against my themes, codes, and subcodes.

Rigour

I wanted the study to be as open and participatory as possible; I took rigour within this research to mean accountability, credibility and confirmability to my participants and to our respective networks, as well as to the research's epistemological and ethical tenets (Guba & Lincoln, 2005). I sought believability, based on coherence, insight, and instrumental utility (Eisner, 1991), and trustworthiness (Lincoln & Guba, 1985), based in a process of verification. This process involved sharing themes and preliminary conclusions with participants and my blog public, inviting discussion, input and critique. I condensed participant documents based on emerging themes and codes, and invited further input. Seven of 13 participants made small changes or additions to their data. Four of 13 commented on my blog about the participant observation process, adding their reflections to my own. As I wrote the study up for formal publication, participants saw my findings first, and had the opportunity to provide input or suggest changes.

Findings and Discussion

Practices of visibility and connection

Participants in online interactions engage in “various strategies of visibility and identity expression” (Kozinets, 2010, p. 24) in order to establish relationships and status. Scholars in the study tended to refer to an acculturation process wherein their strategies – and their understandings of attention in networks – became more complex as they became more resident within the space. This resonates with the idea of networks as sociomaterial assemblages continually “making and unmaking themselves” (Fenwick & Edwards, 2014, p. 38). This paper traces attention’s role in those assemblages. Attention is foundational to relationships and status in networks; users can lurk without making themselves visible but cannot connect with others without signaling some form of identifiable presence.

All participants’ visibility strategies included sharing signals and artifacts of academic identity. During the observation period, all participants shared at least one blog post, podcast, report, slide deck, or formal publication of their own via Twitter. Some shared significantly more, depending on individual volume of output; one participant averaged 16 tweets per day during the course of the observation period, while two others averaged one. This scholarly content predominantly related to research areas or to current issues in popular culture or higher education. Much of the work shared was iterative or in-process, exploring thoughts that might later be formalized into a peer-reviewed format or a formal presentation. The most resident participants, who regularly engaged in sharing and responding to personal signals, were more likely to invite commentary on their ideas and respond to discussions and retweets of their work.

However, NPS enables scholars to build visibility and identity through others' work as well as their own. Participants regularly tweeted links to peers' posts and to media content, sometimes adding commentary or endorsements. This practice signaled participants' identities and areas of interest just as sharing their own scholarly artifacts did, yet enabled them to engage more frequently and more broadly. Most curated links from a wider range of topics than they tended to write on. Some found it powerful to be able to draw attention to broad issues of concern.

@14prinsp: "I made a conscious decision to establish a scholarly identity on Facebook and that I would use my profile only for scholarly and human rights issues. At first I limited my "friends" on Facebook to people in the field of education, but it soon became apparent that by accepting friend requests of people I have met, I can actually use my Facebook page as an activist space foregrounding issues regarding gender, human rights and learning."

Participants also frequently included the Twitter handles of the authors of linked posts or articles in their tweets, thus making themselves visible to those authors and gradually building ties of collegiality.

@wishcrys: "Since I started using [Twitter] more actively, I've had more visibility up the hierarchy, professors or people whose books I use follow me because I've happened to mention them or their work…and also more PhD students from outside my geographical area."

In the course of one 12-hour period of observation, I counted tweets from 74 different accounts. The research Twitter feed only followed 22 individuals; the rest were retweets circulated by those 22. Perceived breaches of this sharing norm even drew overt critical commentary during the period of observation.

@raulpacheco: "I don't expect anybody to promote my research, but I do expect them to promote others', not only theirs. We are a community of scholars."

Scholarly content was not the focus of all communications observed in the study, however. Other common visibility and identity strategies centered on the public narration of daily routines and related milestones, wherein scholars shared often-mundane aspects of identity. Even when related to work or scholarship, these signals operated to personalize engagement and invite attention by foregrounding individuals and their circumstances.

Some contributions invited celebration, by articulating life and scholarship milestones and making them visible within the network. These signals tended to receive significant positive attention and engagement.

@readywriting: "And so it is the end of an era (sort of): I finally was able to mail my manuscript to the publisher. It's DONE."

Some shared lessons learned, particularly those that might prove valuable for a community of fellow scholars, graduate students, or educators.

@antoesp: "Online, international #3MinuteThesis done. Lessons learned: a good script, supportive advisors, much rehearsal, reliable connection and…keep it simple!"

Some lamented challenges or invited commiseration. These visibility signals often triggered reciprocal expressions of attention, through "favourite" or "like" signals, retweets, or responses. Self-deprecation or humor was regularly used to mitigate the invitation to pay attention, in keeping with Dayter's (2014) findings that attenuation strategies tend to accompany positive self-speech on Twitter. Such strategies, including disclaimers, shifts in focus, self-denigration, references to hard work, and third-party complaints (Dayter, 2014) were employed most often by scholars with highly relational and wryly humorous approaches to NPS.

@andreazellner: “The good news is that I found lots of dongles. The bad news is that none of them fit any of the devices I could present my dissertation proposal on tomorrow. If I weren’t so exhausted from my previous 10 panic attacks, I might have another one. Thanks goodness I can also check out dongles from the College of Education. Commencing Ommmm.”

@thesiswhisper: “Just had to ask Thesis Whisperer Jr to show me how to do a graph in Excel. Not sure if I should feel proud or humiliated…”

Some contributions invited others to work with them in formal or informal ways, creating visibility between the two parties but also extending public respect to the invitee.

@miken_bu: “@kathycassidy Hi Kathy, my EY Using ICT in Ed class is reading your book. Any chance we could get you to Skype in some day in February?”

Public respect was also offered through expressions of thanks or of giving credit where due.

@wishcrys: “Shout-outs are becoming very popular, so this is about people recognizing that social currency on the web. The attempt to make information circulate is more valuable than rank; it’s really valuable in helping the hierarchy of academia reverse. It’s difficult for people who didn’t get it from the start, so shout-outs are one of the more “high-priced commodities” per se in my circles.”

Networked displays of public recognition drive attention to the credited individual(s) in visible and replicable text form. In the study, credited parties consistently retweeted credit-giving tweets more often than other forms of attention directed at them, indicating that sharing the praise of others may, like humor and self-deprecation, constitute acceptable attention-cultivation in networks.

Practices of attention and affinity

Not all visibility and identity strategies appeared designed to cultivate mass attention. Attention as a form of "attending to" rather than mere visibility or scale was regularly on display in participants' interactions, as was appreciation for the care that networked connections afforded. Highly resident participants tended to target tweets directly to other users nearly as often as they broadcast to their entire networks[6], minimizing mass visibility. All participants explicitly indicated that they and others in their circles were attended to and cared for within NPS. Networks were constructed as valuable sites of belonging and meaning, in addition to being sites of commodification; the tension between these two realities appeared to be at the core of participants' situated knowledges about NPS.

@catherinecronin: "I'm closer to these guys than most of the people I work with every day" - @heloukee on the power of online community/collaboration."

@wishcrys: "'I totally understand, Crystal. I have been there not so long ago myself' – assurance from an academic I know online. ☺ #phdchat"

@KateMfD, countering the way cyberbullying is framed for her teen daughter with the assertion that networks are also sites of care: "Have just been chatting to @clembowles who is being taught about cyberbullying at high school…Twitter has also endlessly delivered the care and consideration of others we don't know to us."

A number of participants expressly noted that their networked practice involved looking for opportunities to pay attention and ensure that people are cared for, particularly across status and power differentials.

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[6] A tweet that opens with @(Twitter handle) is a direct communication with another user; only users following both sender and receiver can see these direct signals.

@exhaust_fumes: "I'm a sympathizer and take the opportunity to step in and be the 'good internet'…I try to look for ways to let people know they're not by themselves. I generally don't jump in otherwise, though. If somebody's cat is sick I will reach out across scale because that will make my heart melt and break but overall I probably read from less enfranchised groups."

In participant observation, I noted instances of hyper-personal communications (Walther, 1996), wherein Twitter's asynchronous and profile-based nature enabled participants to zero in on shared attributes or outlooks for the purpose of establishing ties. Often these conversations centered around points of commonality in profile information or recent shared blog posts, enabling individuals to make themselves visible to each other, and creating sites for the explicit establishment of affinity.

@SusannaDW (non-participant, with permission) to *@catherinecronin:*

"Delighted to be connected with you. Galway is one of my favourite places in the world!"

@catherinecronin in response, to *@SusannaDW:*

"…& I see you are a New Yorker too! I grew up in the Bronx, I've lived in Galway many years. That two culture thing? My life. ☺"

Sites of collapse and conflict

Not all signals of visibility and identity fostered affinity, however. Networked participation challenges individuals' capacity to direct self-presentation to a single context, and can open scholars to unanticipated audiences and attention. Networks can collapse diverse, usually-separated aspects of identity such as familial, social, and professional connections into common audiences via shared social media platforms in a phenomenon called "context collapse" (boyd, 2011; Wesch, 2009).

The need for a networked scholar to anticipate the "nearly infinite possible contexts he or she might be entering" (Wesch, 2009, p. 23) before engaging in communications emerged as a key site of perceived risk and vulnerability during the study. The capacity for digital communications to be misheard in terms of tone, taken out of context, or highlight political differences created challenges and tensions.

@exhaust_fumes: "It can be touchy to discuss these things – people sometimes respond to you as a position rather than a person, rather than factoring in what you're actually saying. A couple of times…I've responded to things and been understood differently than I intended. I didn't much enjoy that."

@socworkpodcast: "On Facebook, I had an incredibly active and mostly hostile series of interactions after the Trayvon Martin verdict. I posted in solidarity with Trayvon's family thinking of their loss and all families who've lost children to violence, and how in the criminal justice system in the US young black men generally get the short shrift. Within 30 minutes I had over 100 likes and 30 comments – most of which were critical. Two people hid the post as "negative." I lost the most number of followers ever as a result. Even though I posted in the spirit of a starting a broader conversation, people were responding to me, not the brand or the podcast, as ignorant or radical or unwarranted. And I felt like I'd possibly done some damage to the image of the podcast – the brand – as a place where anybody could go to learn something."

Participants in the study also noted conflict between the persistence and replicability of digital media and the casual nature of many networked interactions. Digital communications enmesh individuals, their networked peers, their collective texts, and platform providers such as Twitter together, collapsing not only contexts but forms and norms of communications. Bounegru (2008) frames Twitter as an audience-focused instance of Ong's (1982) secondary orality, which is participatory but self-conscious in regards to the permanence of text. This consciousness was evident in participant reflections on vulnerability.

@antoesp: "[T]he prevalent written form of communication in social media always implies for me an additional sense of responsibility, augmented by the limited number of characters. Words are stones there, either in academic or extra-academic conversations. They may hurt or be misleading."

Sites of institutional deviance

Perhaps the most prevalent site of tension in responses was the context collapse between networked and institutional audiences. As Costa (2014) observes, digital scholarship can be perceived by the academy as a trajectory of deviance, challenging the identity of the academic profession and resulting in misrecognition. Participants noted that, especially early in their networked engagement, strategies of visibility that drew attention to the personal or mundane created a sense of risk for them. This was due to conflict with institutional concepts of professionalism and academic identity, as well as the ways in which networks devolve responsibility for promotions and attention to the individual scholar, rewarding forms of overt attention-seeking that are more commercial than academic.

@tressiemcphd: "Sadly, tempered enthusiasm doesn't sell well."

Attention paid to works-in-progress or preliminary conclusions was also a source of discomfort for scholars acculturated to the academy. As Rorabaugh (2012) asserts, "social media in general and Twitter in specific encourage a more collaborative and dynamic epistemological approach" (para. 8). Such an approach does not always align well with the discrete, individual, finished-product focus that conventional peer review fosters. Acclimation to extra-institutional practices of scholarship was the aspect of the research in which participants most commonly emphasized change over time.

@KateMfD: “I was very cautious originally, because I wasn’t sure of the parameters that my institution might place around speaking out with candour, especially about my own misgivings about higher education. So I wrote anonymously, and kept very quiet about it at work. But once my name was out there, my sense of risk diminished… [N]etworking online has enabled me to create a sustaining sense of my identity as a person, in which my employment in a university plays a part, but isn’t the defining thing. I realize that my networked identity feels more complete to me, and perhaps more authentic.”

A theme running through participant contributions was that the benefits of networked attention increase with – and to an extent, correlate to – the development of relationships that mark increasingly resident-type behavior in networked spaces. Those who engage more instrumentally, as visitors, may not experience those benefits, yet are still exposed to the risks of context collapse and networked attention.

Some participants inhabited very different positions in the power structures of their networks as opposed to their institutions, or had developed communities of practice and forms of influence that were not legible to colleagues within their institutions. Particularly among the junior scholars and graduate students in the study, opportunities including media appearances, plenary addresses, and even academic positions were credited to NPS and to online visibility.

@tressiemcphd: “My position in the prestige structure didn’t always match my ambitions and what I felt I could do, compelled to do. So these networks allowed me to exist without permission…[B]ut my institutional power is zero. I’m doing research, doing what everyone

else does as a PhD candidate, teaching: when these come into conflict with each other, it is an odd, odd moment for me to live in."

@catherinecronin: "In performance reviews and mentoring conversations I've been asked about things I might like to get involved in, whether I was interested in exploring particular areas. But I have those conversations all the time in my networks. It made me realize, again, that these two tracks are very distinct. In my head, I integrate them, my networked work and my institutional work, but the people at my institution have little or no idea of anyone's influence outside institutional identity."

Others experienced carry-over from their network positions to their institutional roles.

@14prinsp: "I can say "Here are my citations, here is an alternative footprint in an academic community" and if however many people read my blog in the UK and US surely I have a voice – so in my institution I offer a new way of looking at research footprints."

@thesiswhisperer: "My boss is scared of my social media presence because it's a form of soft power. They're scared to lose me because it would be so visible and that's the marketing sensibility coming out."

Yet power positions in networks were not framed as operating entirely outside of institutional or material power structures. Rather, networks were presented as complex spaces where attention is increasingly institutionalized as well as distributed beyond institutional boundaries. Participants were acutely aware of the vulnerability of networks to shifting practices and presences.

@tressiemcphd: "I'm not about making this economy a necessary part of academic work…I think we do not yet fully understand or conceptualize how "real" world power intersects with Twitter relationships, networks and exchanges…Senior scholars, embedded in traditional power dynamics, can absolutely control Twitter spaces. A well-timed or worded tweet by

someone who "matters" can shut it down. On the more positive side, people can drag their power into Twitter spaces in ways that protect and bolster more vulnerable scholars."

@KateMfD: "The formal attention economy of academic publishing trades in a currency that can deflate…so the alternate economy of social attention proposes itself as another currency, and in a climate of uncertainty it feels as though it's irresponsible not to shift some investment into it. This makes it very difficult to preserve the cultural practices of sharing and collaborative or cooperative care that [networks] represent."

Sites of re-inscription

A final area of vulnerability emerged around identity, and the differential ways attention is paid and authority assumed within networks. Systemic societal biases such as racism, sexism, heterosexism, classism, and able-ism intersect and shape human perceptions of others in networks, just as they do in embodied spheres. The conflation of identity and content in networks means that all individuals take on some risk when they express public opinions. However, vulnerabilities are differentially distributed and more likely to affect those who identify outside dominant power structures in some way.

@wishcrys: "I've had a handful of trolling comments on my blog. Sometimes people see my pictures and my friends and alignments and they make assumptions, "Oh you went to this school and you're thinking this way, you have this skin color therefore you're thinking this"…it does upset me when people don't understand the diversity of Asia and are surprised I speak English and I tell them my country uses English."

@catherinecronin: "Large nodes in a social network have more visibility, their network activity gets amplified, and they become larger yet…White male voices, offline as well as online, signal authority in a culture steeped in sexism and racism. The *online* very often reproduces and amplifies what occurs *offline*."

@raulpacheco: "We recognize intersections of status and power and societal identity markers and they're complicated. Last winter when a tenured, queer, female scholar publicly took on the adjunct narrative emerging, her engagement with me was not as nasty as with some of the junior female scholars. Now I'm a male who is also openly queer, so if we fight, we fight head-on and there is no trump minority status to play. But maleness apparently trumps in power terms; she still accorded a level of power to my speech without being able to play the minority card…she just gave me the male card. I was floored."

Study participants noted that amplifying non-dominant voices is an important way for networked scholars to try to mitigate sexism, racism, able-ism, heteronormativity and other structural biases within their networks[7]. At the same time, participants also noted that amplification can increase vulnerability and risk for those whose voices are shared.
@readywriting: "I check in on people…I recognize my privilege and want to use it for some good, even if it is just amplification. I'm also very aware of how much amplification people may want…I'm conscious of situations like the sexual assault conversation a few months back when private tweets were put on Buzzfeed, and those who tweeted felt exposed."

Attention in networks can, for people with non-dominant identity markers, result in having their positions and identities reduced *to* those markers. As Sierra (2014) notes, threats based on identity markers are not disagreements but negations; "[T]he most dangerous time for a woman with online visibility is the point at which others are seen to be listening, "following", "liking", "favoriting", retweeting…apparently, that just can't be allowed" (para. 8). I observed this relationship between visibility and negation in the study; while bodily

[7] This may not be a representative sample for NPS; in selecting study volunteers, I made an effort to secure participants identifying outside the dominant group on identity markers of race, sex, class, academic status, ability, and geographic location (outside North America). The study sample may be more sensitive to issues of inclusion and intersectionality than the NPS population in general.

threats of rape and violence – famously called "the internet's festering sore" (Lewis, 2011, para. 2) – were minimal, negations need not include a bodily component to re-inscribe status and power positions. In the NPS circles observed, gaps between perceived academic status and network visibility resulted in overt displays of dismissal, particularly in media and blog comments and participants' notifications in their own Twitter accounts.

@tressiemcphd: "People write to tell me they don't read me. I'm like, join the club? What's that compulsion about? LOL."

The role of Twitter in visibility and risk

Scale and visibility were asserted as major risk factors for commodification and defamation. Some participants actively avoided growing their networks, while others emphasized strategies for managing vulnerability in a fraught public sphere.

@tressiemcphd: "Unless you're Justin Bieber where your currency is attention…you stop looking but you live with the effects. You're very much a thing…I've had a whole group of people who are hard-core dedicated haters who follow me from platform to platform, and none of them have ever met me. They think the person in the machine is the person, they think what I'm doing online is a performance, an affect, and they want to be the ones to prove it to people. I usually quietly unfollow people they go to and let that tie go…I have the right to hold the space."

Twitter as a platform can be understood as contributing to this vulnerability. Twitter's non-reciprocal following structure tends to reward high levels of visibility with higher numbers of followers, privileging public accounts and public forms of attention. Private or locked Twitter accounts minimize risk of context collapse, but they also minimize visibility in general, and therefore the connections that foster care and attention. Yet when public accounts face overt harassment or abuse, Twitter's "Report Abuse" feature has been criticized (West, 2014) for failing to deal with offenders or create a climate that protects individuals from stalking and hate speech.

Twitter's design assembles with norms of usage to reward particular versions of sociality, as well. Reyes, Rosso, and Veale (2010) note that irony is pervasive in many online texts and contexts, and that Twitter circulates non-literal social texts as a common connective device. Neuro-diverse scholars, such as those with autism, may be disadvantaged in terms of engaging with the extensive and subtle social cues of these social texts, as are those who do not speak or write English with facility. Many scholars are excluded by these dominant norms of engagement on Twitter.

@raulpacheco: "I deliberately tweet in English. I have confronted complaints from other academics in Mexico about this, but a lot of Mexican students and Mexican scholars follow me even though they know I tweet in English. I'd choose to begin again in English even now. The size of the network is higher – the drawback, of course, is criticism for reinforcing the hegemony of English…it's sad, but that's where the power relations are. English privilege is seldom discussed."

Twitter's default to public visibility also opens users to judgment based on the limited identity metrics that the platform presents. Twitter profiles display users' followers and accounts followed; many participants in the study noted this conflation of their networked identities with those of their networked ties. Some framed this 'known by the company you keep' phenomenon in terms of risks to self and privacy, while others suggested it represents a deep shift to new, non-individuated identity structures for which the public/private binary does not suffice.

@grollman (non-participant, with permission): "Increasingly I see self-promotion as just as much promotion of my communities as it is promotion of myself. They are linked!

@raulpacheco, in response: “This was key for me when I was a faculty member in Canada, where I was Latino and queer. #DoubleWhammyAtTheMargins”

Conclusion

The study found that both care and vulnerability are often amplified for scholars who are visible in networks, and on Twitter in particular. Participants used networks to cultivate forms of attention that enhanced their lives and scholarly identities in meaningful ways. Yet while boyd (2010) frames power in networks as the capacity to command and influence attention, participant narratives and interactions in this study suggest that users’ experiences with networked scholarship are more complex. While all participants reported experiencing care from others in their networked engagement, and some gleaned personal and professional benefits from the visibility they cultivated, attention did not distribute power equally by network scale or position. Rather, systemic biases were re-inscribed on Twitter via the material and conceptual structures of the tools and platforms themselves, and by the discursive and social norms shaping their use. Still, this study suggests that attention in networked scholarship is not entirely commodified or subsumed under the concept of the attention economy. Scholars’ communications and visibility signals create complex webs of significance wherein knowledge artifacts and expressions of personal caring assemble with the risks of scale, commodification, and institutional misunderstanding to form new spheres and challenges for scholarship.

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CONCLUSION: ONE YEAR LATER

One Year Later

It is February, 2015. It has been twenty months since I began designing the study that forms the backbone of this dissertation; almost a year since I wrapped up the interviews and document collection and daily Twitter observation that comprised its data collection process. My papers have been written and submitted to journals; the first is in proofs with the publisher. All three articles are gathered here to speak to the work I have done.

A conclusion serves to bring something to a close; to sum up scopes and themes and to tie these as tidily together as is possible. The abstract for this thesis states, "[T]he three papers that make up the dissertation each articulate a specific thread of intersection between institutional and networked scholarship." Those threads are influence, value, and the relationships between visibility, care, and vulnerability. But the themes that run *through* those threads are the ones I want to explore here, as threads in their own right, as weft weaving the three papers together.

The distinctions this dissertation asserts between networked and institutional systems of scholarship become particularly visible in two tension pairs: the personal/professional divide, and the public/private one. Throughout the research, boundary collapse within these tension pairs is the key commonality that runs through networked practices. To close the study, then, I want to tease out some of the effects and implications of these increasingly blurring binaries, from my own situated location both as researcher and member of the broader culture under investigation.

There is perhaps less here to close or tie up than I had imagined there might be when I embarked on this process. I may believe – I do believe – that we are all ever-changing sociomaterial constructs, yet when I look back on the year and a half or so in which I've been embedded in envisioning, conducting, and writing this research, my days look little different at the end than they did in the middle, or at the start. I am still on Twitter, watching and contributing and trying to make sense of things, much as I was on Twitter throughout the thesis process and for years before I ever even imagined this dissertation. I am still reading and learning and sharing in broader networks, though my neglected blog – spurned for months as I try to discipline myself to the craft of publishable academic papers – might beg to differ. My study has ended, and my Research Ethics Board approval has expired. But there has been no particular sense of closure or leave-taking in the process. I have not left my ethnographic field.

This thesis, then, does not have a proper origin story, in the sense that there is no one point of departure from which I can begin this narrative of conclusion. Haraway (1991) says, "An origin story in the Western, humanist sense depends on the myth of original unity, fullness, bliss and terror, represented by the phallic mother from whom all humans must separate, the task of individual development and of history" (p. 151). There is no particular unity that I can offer up as the site from which this investigation marks a separation or a trajectory of development. I was on Twitter. I researched Twitter. I am still on Twitter. Without that foundational origin story, how to weave the convenient fiction of conclusion?

All I have, at this strange, almost hallucinatory juncture where the finish line begins to materialize as a possible actuality, are threads. The boundaries and binaries of public and private, personal and professional – these wove their way into this construction most insistently. Some were snarls that snapped in my hands and left me…troubled, still worrying. Others were silky or homey or comforting, beautiful to work with. I find myself sitting with them all, here at the end, almost afraid to launch them into the world.

My wariness amuses me. One of the papers for this thesis has already gone to proofs, and the body of the dissertation is submitted. It is only these last threads that I hesitate to try to sum up, to work into some kind of final form. It's not the ending in the temporal sense that bothers me; the research process has been wrapped for months, and yet I have not lost ties and communications with most of the people who generously accompanied me through it. This has been, in my experience, the nature and great gift of networks. What unsettles me is the pretense of closure. All the days and nights and direct messages and transcription hours and efforts to understand across gaps and space will need to be boiled down to a few key messages, a pithy "so what?" And then we will all call it done, and that will do. That is the social contract – of the dissertation as a form; of print, as a medium. To an extent it is the price of asking for an audience in *any* medium, though what I love best about the iterative format of blogging is that no one artifact is ever asked to carry so much weight on its shoulders. Perhaps that is why I feel compelled to write this ending as much like a blog post as a formal conclusion. It still will not do justice to all that happened in this research process, but it will allow me to articulate pieces that might otherwise remain hidden between the lines. It will allow me, I hope, to weave something whose threads will stretch back out into the world, and thus offer something back to the techno-cultural system of networked scholarship that inspired it.

BOUNDARIES OF PUBLIC/PRIVATE COMMUNICATIONS

A good conclusion should be a story of change, and it is *this* thread that bears the responsibility of that thrust within this narrative. I had the privilege – and discomfort – of researching and analyzing my small subset of participants through a period of relatively dramatic shift in Twitter as a participatory culture. As networks are distributed rather than monolithic or centrally-controlled, the social norms and memes that constitute in-group behavior within academic Twitter and Twitter more broadly shift constantly. However, occasionally these shifts alter the constitution of the platform as a public, and winter 2014 was a period in which Twitter's norms of interaction and boundaries of public speech changed visibly. I observed this shift quite vividly within academic Twitter during my study, as I will unpack here shortly. By spring, as my research wrapped up, mainstream media articles began to emerge with analysis and backlash and eulogies for Twitter itself (Cooper, 2014; LaFrance and Meyer, 2014; Yang, 2014). In September, in the wake of both the powerful #Ferguson protests and Twitter's almost immediate announcement that feeds would become more algorithmically-determined[8], I wondered aloud on my blog "[W]ill my dissertation end up being about the Twitter that *was*, rather than whatever it is in the process of becoming? Can a person become an historian by accident?" (Stewart, 2014, para. 4). Another half-year down the road and I deem the eulogies premature, yet sense this tension pair of public/private and its effects on how and what we speak will continue to shape the future of networked public engagement for some time to come.

I draw on the tension pairs not as binaries, but as ways of framing and analyzing distinctions between networked and institutional scholarly systems. I see the public/private tension pair as a conceptual spectrum against which questions of what is speakable and unspeakable can be situated, and networks' versions compared with that of institutions. Networked identities, as paper #3 explores, become less individuated as scholars become known not only for their own work but for the curation and sharing of that of others. Networked audiences, too, become collapsed and blurred. In networked publics, multiple audiences co-mingle within and across platforms, and unknown audiences of exponential size

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[8] A shift to algorithmic feeds, in the style of Facebook, would likely have precluded the Twitter groundswell that drove the #Ferguson hashtag towards mainstream attention only weeks before the announcement.

are only ever a re-tweet or two away. Institutions have strict procedural and hierarchical processes governing the ways in which knowledge artifacts go public, whereas the networked platforms currently used in scholarship tend to operate as “public by default, private by effort” (boyd, 2010) and rely on public visibility to generate audience, as I showed in paper #3.

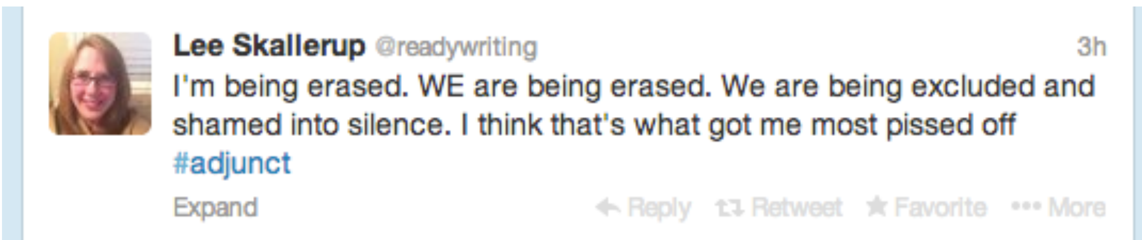
Even networked communications intended for a limited or ephemeral audience are still persistent, replicable, scalable, and searchable (boyd, 2011). Where the collapse between public and private boundaries becomes particularly important is that the potential consequences of these traits – context collapse, virality, identity theft – can be experiences even long-term users never encounter. This lack of reinforcement can result in users treating public networks as intimate or private audiences, wherein communications are targeted to the limited, known audience and not to the potentially exponential public. This collapse in how the public/private tension pair is navigated by network users creates potential for significant risk.

Networks also collapse the protective distance that institutional structures place between scholars and the consequences of scholarly communications. The academic tradition of scholarship relies on authoritative vetting and dissemination processes that absorb some of the responsibility affiliated with making research-based claims. When a journal or university press makes research results public to the “appropriate community” (Fitzpatrick, 2011, p. 41) in which it has currency, it implicitly vouches for the validity of the research processes behind that publication, taking the burden of responsibility from the individual scholar or scholars behind the work. Within that system, only public figures individually subject to media attention or researchers suspected of in some way gaming the gatekeeping system by falsifying their research tend to be held publicly to account for errors or disagreements with their claims.

Open networks, on the other hand, present an inherent challenge to the established communications practices of the academy and the forms of academic identity they cultivate. Where participation in the institutional techno-cultural system of scholarship is centralized through gatekeeping structures, the structure of participation in a network is decentralized. So long as a scholar is willing to engage publicly and in a sustained fashion as an individual, open networks serve as an avenue to participation and visibility at scale. However, networks have their own corrective and gatekeeping mechanisms, which tend to operate post-publication rather than pre-publication. This means that instead of being kept *out* of a conversation due to lack of status, preparation, quality, or consideration of the norms of acceptable speech, networked scholars contribute publicly – and often iteratively or on the fly – and then bear the public consequences after the fact. Decentralized, distributed network identities and whatever status or influence they have accrued can be pilloried or declaimed – potentially at a very significant scale of attention – without any formal recourse. This absence of an institutional safety net can make public engagement as an individual very different from public engagement within the boundaries of an academic role.

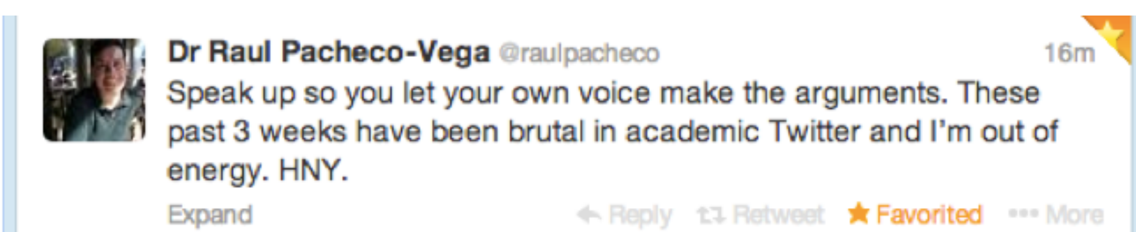
Distinctions in how networks and institutions navigate concepts of public – and by implicit extension, private – are at the core of the three papers that make up this thesis, then, but this thread explores ongoing changes in what it *means* to be public in networks. My first ethnographic notes on these shifting boundaries date back to New Years Day, 2014. Since academia runs on the Christian calendar and thus the majority of academic Twitter contributors are neither tweeting nor grading during the post-Christmas week, I had expected the final week of the old year to be a busy period in my participant observation. I hadn't, however, expected to see my research timeline erupt in fraught and widespread back-and-forth exchanges around adjuncts and advocacy and how tenured academics should – and should not – speak to the untenured. Commentary, response, analysis, re-tweets and further contributions on the issue spread out to constitute more than half the discussion in my research feed during that week surrounding New Years 2014. Engagement was predominantly earnest and emotional, as these tweets from January 1st illustrate:

@readywriting:



The high level of intensity and polarization was also exhausting, in a participatory space that had previously generally tended towards relatively collegial and even intimate forms of expression and interaction. This Happy New Year message was echoed by a number of similar sentiments that made their way through my timeline:

@raulpacheco:



The details of the controversy were less important than the fact that it was very public and sustained, and that it aligned a group perceived to have power and privilege against a group without. Specific scholars were called out by name, on record, for the implications of their words and positions, and in turn called out others; because the fracas had its origins in a public dispute between two individuals, it was difficult to engage without effectively "piling on" to a heated and highly-personalized debate. Yet the conversation was so pervasive, amplified through re-tweet and commentary, that to be present within the network almost demanded a public staking out of position, at risk of otherwise appearing oblivious or insensitive to the issue at hand. This struck me as significant, in terms of a shift in what it meant to be public within this scholarly networked sphere. While my interviews were already showing that to belong to academic Twitter was, in effect, to participate, this dispute felt as if it turned those terms inside out. "If one does not participate or signal," I mused in my January 1st, 2014 notes, "can one still belong?"

Most of my participants – particularly the active ones, those who generally tweeted in their own voices – signaled. As new commentary on the issue rippled out, new issues arose; the January 1st publication of a blog post (Kelsky, 2014) deploying racism as a comparative framework through which to analyze tenured privilege resulted in a whole new set of critiques of power relations, sloppy analogies, and the challenges of deploying networks politically.

@tressiemcphd:

@KateMfD:

None of the above tweets were particularly remarkable or out of character for my participants. Together, however, against the context of a holiday Twitter feed dominated by divisiveness and demands for political performativity, they point to a shift in the boundaries of being public as a networked scholar. Essentially, adjunct identity politics trended over New Years 2014 to such an extent that to be an engaged and aware participant in academic Twitter at that time was to be embroiled – whether willingly or not – within a contested realm of speech, and one with public, ethical implications. My notes from January 1st, 2014, continue: "speaks to an alteration of academic Twitter's implicit social contract?" It was the first time that I noted the equation of silence – or refusal to engage publicly – with tacit support for a status quo; in the ensuing year, I've seen this connected stated explicitly and repeatedly. The circles in which this research took place have become a site wherein public performance of ethical positioning in relation to trending issues is now overt, though this expectation – or my awareness of it, at least – was only emerging during the period in which the study took place.

Looking back over the year since January 2014, I now recognize that the way in which the adjunct controversy played out had its roots in changing norms around public speech and speakability within Twitter more broadly. Mikki Kendall's August 2013 hashtag #solidarityisforwhitewomen and Suey Park's December 2013 #notyourasiansidekick, among others, had called out exclusion and inequities in representation, opening up Twitter as a site of concentrated political action around issues of identity and speech. Relatedly, the now-infamous firing of Justine Sacco in December 2013, framed by Ronson (2015) in the *New York Times* as "How One Stupid Tweet Blew Up Justine Sacco's Life," had demonstrated the capacity of mass Twitter outrage to generate swift real-world effects. These newly-tactical uses of Twitter were fresh and reverberating in January 2014, and their capacity to catapult small-scale tweets to extremely large publics was just beginning to have effects on the participatory culture of Twitter more broadly. As Ronson's recent NYT headline shows, these effects have been taken up in the interim predominantly in terms of victimization. This frame, however, fails to interrogate the operations of racism, sexism, and privilege in determining what is speakable and by whom. As study participant @tressiemcphd succinctly noted in a post on this phenomenon, framing Sacco as a mere hapless victim of the collapse between (intended) private speech and mass publics contributes to reinforcing the sorts of casual, privileged dehumanization of others that many tactical uses of Twitter push back against:

> I get why people would not like that. Being stripped of your personhood to stand in the gap for a group of people against your will is rage inducing…You are ceaselessly primed for every implication that you have become another tick mark when you were busy living and laughing and being a wholly fallible human being. It is horrible to lose a job for that. It is a privilege to have never before lost a job for that. (MacMillan Cottom, 2014)

What has changed in the year since I conducted the research, I think, is not that networked publics have become more public, but that their capacity to turn into full-scale publics at any moment has become increasingly recognized. Academic Twitter over 2014 has become a space less tolerant of speech unwilling to account for its own power relations and assumptions, and the performative staking out of identity positions has become a norm. Admittedly, the tactical use of Twitter as a means to leverage internet shaming and vitriol cuts in all directions, as evidenced by 2014 hashtags as opposed as #gamergate and #NotAllWomen. What MacMillan Cottom calls “standing in the gap,” above, involves the reduction of an individual to stereotypes and symbolism; this almost complete collapse of public and private into a tool of identity combat is the backdrop to much of the risk I discuss in paper #3.

But it is important, in the various tactical uses of Twitter as an extreme public, to examine whose bodies are made to stand in the gap. MacMillan Cottom points out above that for many people, standing in the gap is nothing new. I grew up below the poverty line, the child of a single mother in a small, parochial, predominantly-white town in the 1970s. I learned early what it is to be seen as a charity case, and lost out on jobs and opportunities because I had only ever learned to present myself *as* a charity case. I have not forgotten what it is to stand in the gap for the “broken home” or other, less speakable epithets. Twitter’s increasing tendency towards calling people out lends alarming scale and reach to that experience of identity reduction, and this collapse of public and private is not something to be taken lightly. But when it is framed, as in Ronson’s (2015) NYT piece, primarily as a spectre haunting unmarked bodies, threatening supposedly-innocuous white people like Justine Sacco with standing in the gap for reasons that amount to little more than schadenfreude, more complex analysis is needed. Twitter as a tactical public allows for abuses, and for defenses of power and privilege. It also allows for bodies marked by race, gender, class, queerness, disability, and intersections of these and other identity facets to publicly resist being made to stand in the gap. It forces a reckoning with the ways that casual, even ephemeral public speech can reinforce the marginalization of others.

I have learned a great deal within the contested and collapsed sphere of networked identity publics this past year – a choral if occasionally gladiatorial education. The expansion of Twitter as a tactical awareness-raising platform has given me access to myriad first-person perspectives on the impacts and implications of public speech and privilege. Some are brutalizing and dehumanizing, and I block them, but I learn nonetheless about the kinds of discourses and narratives being roped into service by those with status quos of patriarchy and misogyny and white supremacy and capitalism to protect. And little by little, I train my own thinking and speech to better push back against these status quos, to seek, as Haraway (1988) puts it, the partial connections of the knowing self, "able to join with another, to see together without claiming to be another" (p. 586).

Hence, the tension pair of public and private weaves through the three papers as a thread tracing shifting norms and changing understandings of the consequences and boundaries of public identity. It may be the thread that dates the papers most, in years to come. It may also be the thread that secures ongoing relevance for the dissertation, as a series of historical snapshots of particular techno-cultural versions of scholarly identity and audience. It will, at the very least, I believe, extend out from these closing words to broader conversations and future inquiries, thus collapsing some of the boundaries imposed by this pretense of conclusion.

BOUNDARIES OF PERSONAL/PROFESSIONAL IDENTITY

Situated knowledges are about communities, not about isolated individuals.

The only way to find a larger vision is to be somewhere in particular.

(Haraway, 1988, p. 590)

If the thread of how networks shape concepts of public and private is the thread of change that runs through this reflection, its counter-thread is the personal/professional tension pair. In this second thread, I trace again the ways in which networked practices collapse the false binary of the tension pair, but this narrative is neither one of surprise nor uncertainty. Rather, it is primarily a story of what this research has brought me.

My curiosity about networked scholarship comes from lived experience. If there is an origin story to this project at all, it weaves its way back nine years to the day I took my first steps into the world of blogs and RSS and fledgling networks. I was a scholar on hiatus then. I was two weeks from the birth of my second son, barely a year out from the death of my first, and I was trying to write my way into some form of coherent, speakable identity. But I could not see this place, this destination, from there; there was no tidy thread from A to B. Rather, I wrote for six years, in that space, and opened a second blog as my focus and my audience and my need for input moved back towards scholarship. I first theorized networks in the mommyblog community, long before I went back to school. I wrote myself into a whole new phase of life astraddle those worlds, and had my words – the raw ones and the loftier ones – received and commented on and made more meaningful to me in the chorus. Thus while the public consequences of networked speech and scholarship are a relatively new question, for me, the collapse of the personal and professional is a site I've inhabited since long before this dissertation began.

The tension pair of personal and professional is, like that of public and private, not a binary but a spectrum along which the practices that constitute particular forms of scholarship can be situated. Conventional scientific concepts of objectivity overtly attempt to remove the personal – what Haraway (1988) calls the always situated, always embodied self – from the professional work of scholarship. Institutional roles reinforce an implicit division between the personal or domestic sphere and the professional; academic hierarchies attempt to make an orthodoxy of this division. And while, as I have tried to make evident throughout the thesis, participatory networks such as Twitter *do* reflect and enact societal power structures and differentials, they do not have the top-down organizational structure to invest networked status positions with the relative security or wide-ranging legibility of hierarchical roles. Scale and connections signal influence, as I explored in paper #1, but these are fluid signals rather than titles; their value is situated in the eye of the beholder. And in order to cultivate the level of attention required to *build* scale and connections, paper #3 points out personalized engagement and sharing as a common and successful strategy, even among scholars with high institutional status. Thus the collapse between personal and professional is part of the broad norm of engagement within networks, just as retaining some division between the two across differential status positions is part of the norm and techno-cultural system of institutional scholarship.

As noted, I began the research process from within the collapse of personal and professional, blogging my way iteratively through the proposal and communicating the Call for Participants via my Twitter network and Facebook. I never had a relationship to this research outside of the networked norm wherein professional ties are cultivated through the kinds of personal sharing discussed throughout the papers. Thus, while it was imperative that my research meet all institutional and ethical standards, it was also important to me that it be both participatory – in keeping with the ethos of networked engagement – and that it be personal, to some extent.

When I selected my study participants from the pool of volunteers, a few of them were at least moderately well-known to me. Since a key part of my research involved observing scholars' networked engagement, I suspected that altering our generally casual networked interactions to suddenly reflect more professional or scholarly norms would only serve to increase self-consciousness. Participants who knew me were accustomed to a particular – relatively personal – version of me as a part of their audience. As one means of signaling the maintenance of that personal tone even as I added the research lens to our relationships, I tweeted the screen capture below from my personal account near the outset of participant observation. It did the dual work of poking fun at me – a necessary deflation of formal boundaries given the extensive and intimate trust my participant observation process relied on – while also signaling my implicit and enacted understanding of networked and participatory behaviours.

In some institutional contexts, this effort to collapse personal and professional boundaries would have been welcomed as well, but in the networked one, it felt necessary.

To engage as a networked scholar, then, is to adapt across different sets of boundaries around personal and professional expressions. It can also involve engaging in what are sometimes called "flattened" communications with entities of significantly greater power or status, whom one might otherwise never encounter or interact with. In the absence of the communications structures that govern hierarchies, it can be possible to communicate relatively personally or casually with people whom one otherwise would have to go through formal and professional channels just to access. I experienced a few of these types of encounters, in a very cursory sense, during my research process over this past year and more. In one discussion with a participant and another peer, I included the Twitter handle of a senior scholar who authored a number of the ethnography texts that guided this study. I included his name as a form of citation, since the participant and I were discussing the very form of research we were both engaged in, and I had just read about the concept earlier that day. It was simply a scholarly courtesy, but he apparently saw the signal and chose to engage. In writing back to the group of us, he added further suggested readings to our conversation.

In another instance, I responded wryly to a peer's tweet about the uncertain future of Twitter as a platform, directed at the then-deputy editor of *The Atlantic*. I anticipated a reply from my colleague, but not from the person with 171,000 followers. To my surprise – and in illustration of the intersection between the public/private tension pair collapse and the professional/personal one – I not only got a reply from *The Atlantic*'s deputy editor but a personal reply, in keeping with my own wry tone. I'd intended my tweet, in essence, as a private communication to Liana, but was reminded that even the audiences one does not expect to hear back from are nonetheless present and real.

But even though Twitter allows for brief individual communications with people one otherwise wouldn't have access to, the most powerful site of personal and professional boundary collapse within networked participation is in the sustained connections it helps foster. While, as noted, I knew a few of my research participants through network previous to the start of the study, others I knew minimally or not at all. @KateMfD, an Australian scholar of cinema, was in the "minimal" category; her name was familiar due to a couple of reciprocal blog comments we'd exchanged over the year or so previous, related to our shared critical interest in Massive Open Online Courses (MOOCs). Though I'd gathered an impression of her as a thoughtful writer and thinker, she was not a close tie. I had a rather sizeable proportion of female volunteers from Australia; had the one male volunteer from Down Under actually *had* a blog – one of the criteria for selection – Kate might not have been part of this dissertation at all. That would be my profound loss.

When I first wrote to confirm Kate's participation in the study and to let her know what I'd be asking for, I got an email noting she'd be away from her desk for a few days. A few days later, this communication arrived:

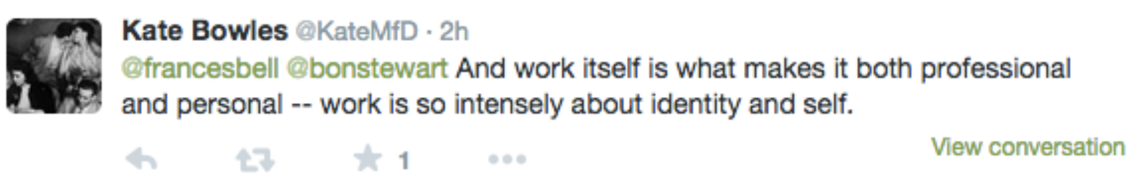
@KateMfD: "I had a very unexpected biopsy which has been diagnosed as early stage breast cancer. This is really out of the blue, so I've been away from my desk having further tests etc. Such an amazing journey.

I'd still really like to participate in your study, perhaps even more so, because what's relevant to me here is that strange blurring of self for networked educators. I'm about to write a blog post setting this out a bit, because I'll also need to talk this over with students, and colleagues."

It is in Kate's participation in this research process that the two tension pairs threading through this conclusion and the investigation itself come together. The blurring of self that she refers to is public and private, personal and professional. Even in that first short exchange, she frames all the intersections of identity and communications and audience that this research navigates. To identify oneself to colleagues as having cancer is a different identity boundary to cross than doing the same with students, as doing so with – or for? To? – blog and network colleagues and connections is a different communication again from one bounded by institutional norms. I think of Kate's email as the first real exchange of the research; in it she affirmed her commitment not only as a participant but as a co-inquirer of sorts, with her own questions about being a scholar and an educator and a self. I was unsure at the time why she extended such trust to me, but I was deeply appreciative. As noted throughout the various methodologies sections that comprise this dissertation, the whole project was guided by Haraway's (1988) concept of situated knowledges, which emphasizes partiality and multiplicity of perspective. I was excited by the promise of another pair of companion eyes, looking at the project from a very differently situated set of coordinates, in geography, academic status, and embodiment.

Kate has been, in the fifteen months since that first exchange, a generous co-inquirer. She interviewed with me the day before her mastectomy. She reflected on comparisons between institutional identity in higher education and in hospital systems. She drew ongoing connections between the production of the embodied self in health care and in academia, and critiqued – though always with empathy for the people *in* the systems involved – the culture of overwork and rationalization that has infiltrated higher education. True to her initial expression of interest, she explored the blurring of self in an ongoing manner, and regularly invited others into the conversation. When relevant, she would signal me, either at my personal or my research account.

@KateMfD:



Kate also explored issues of self and personal boundaries through forms of expression other than text. Throughout her chemo and radiation, she shared photos from her treatment bearing wry and poignant witness to the process of navigating cancer. The capturing and sharing of these shots enabled Kate to bring a support network with her into intimidating and unfamiliar settings, marked by long periods of inactivity. I sensed they also provided a focus, through which she could attempt to keep her own narrative of self intact and in view throughout. For those of us in her audience, they offered a glimpse into a behind-the-scenes world that many of us had no experience with. This privileged access allowed us to accompany Kate, in a sense, beyond hospital boundaries that even family members are not permitted to cross.

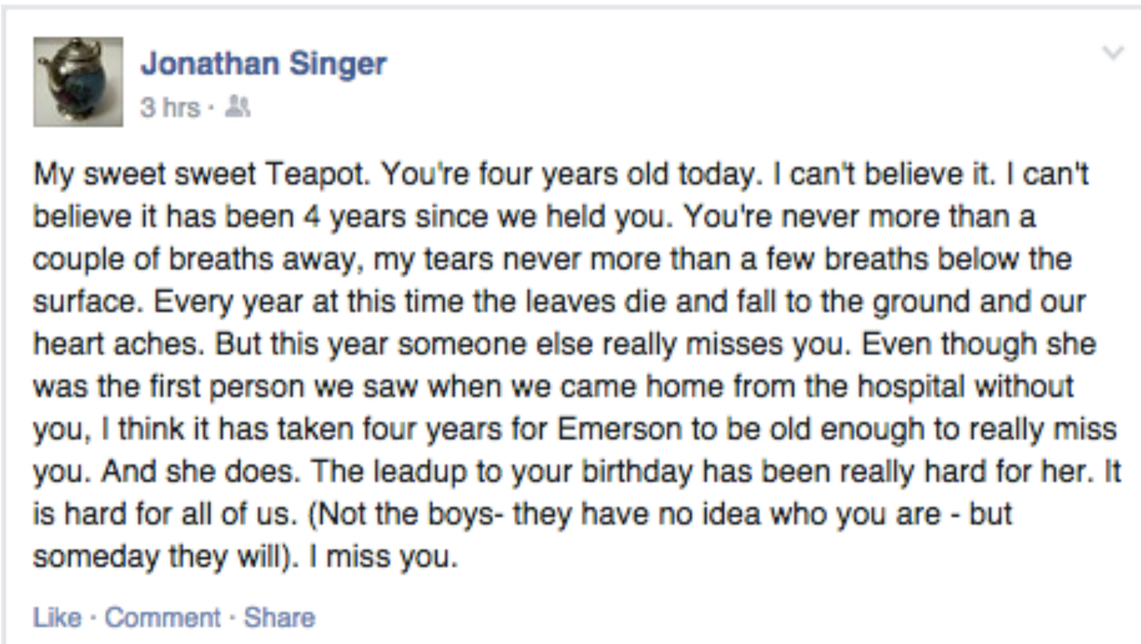
But the reason Kate is here as a thread unto herself in this conclusion is because somewhere, early in the process, shortly after that first email and my stumbling attempt at a polite and appropriate and professional response, she and I collapsed the boundary between personal and professional, as well as between private and public. She sent me a direct message (DM) on Twitter confirming her cancer. I did not know what to say. I have not had cancer. But, again, I believe, following Haraway (1988), in the partial connection of joining with another “without claiming to be another” (p. 586). And by my understanding of networks as a techno-cultural system, a DM is an intimate communication. It is private, one-to-one, and personal. And so I responded not to a senior scholar, nor to a research participant, a network acquaintance, or someone just like me, but as I would to an intimate, wrapping up empathy and concern and anger and resolute presence as best I could: “f*ck.”

And thus, in so many words, we became friends. In collapsing the boundaries around my research process, I not only gained Kate’s friendship – we will meet this spring when she and her eldest daughter visit Canada – but an unconventional avenue of support and feedback with*in* my study, and the mentorship of a Senior Lecturer willing to write a letter of reference and support for me this past fall when I applied for a post-doctoral position. The mentorship and input of my committee and my networks has been a huge part of this dissertation, but to be mentored by participants as well – speaking from situated knowledges within the project as well as from institutional locations senior to my own – is powerful and humbling and deeply motivating in accountability terms. I wanted to legitimately involve my participants as co-researchers and co-framers, and I was extraordinarily lucky in that Kate was not the only one who offered such generosity within the sustained connection and collapse of boundaries that this project's structure enabled. Nonetheless, her critical eye and encouragement have been a steady part of the shaping of all that is here, and her stance of curiosity – the one that enabled her to frame a cancer diagnosis as "such an amazing journey" – has been a part of the shaping of *me* in the process, for the better.

What I did not know, when Kate first joined this research journey, was that she had found my blog – my first blog, my personal blog – long before I was reciprocally aware of hers, or, frankly, of her at all. In the summer of 2010, I wrote a post that went as viral as anything of mine ever has, about sitting at a red light one morning and seeing the woman in the car beside me weeping. It was a post about the unspeakability of grief, and public identity, and time. Kate had read it, six months before I even *had* a scholarly blog. And three and a half years later, when my expletives and I were present in her direct messages, she extended her trust to me to sit alongside her, in a space marked by its own unspeakabilities. And somewhere in the complex sociomaterial constitution of that exchange and of her interest in my study in the first place sat that old post, vouching for me without my even knowing. My blog, public by default, had blurred the boundaries between my personal and professional identities, and had circulated to audiences I had no idea existed. In a roundabout way, the collapse of personal and professional and public and private that made me a networked identity long before I embarked on this dissertation ended up enabling a cooperation and friendship that I hope will be one of the study's most enduring legacies.

There is one final story for this thread to weave. In addition to participants of whom I was vaguely aware or who knew me through my blog(s), there were a number of participants in the study that I didn't know at all before we began, and who had never heard of me until my Call for Participants came across their feed. One of these was Jonathan, a Professor of Social Work in the United States, who runs an educational podcast and a sizable Twitter account under the handle @socworkpodcast. Jonathan was an outlier in the participant group. His networked presence – as @socworkpodcast – was large and longstanding but more bounded than that of anyone else in the study; his Twitter feed seldom collapsed the boundaries of personal and professional. He was the only participant in the study who did not follow me reciprocally during participant observation. He was frank and friendly about it and I totally understood; his focus was on cultivating trust and providing value to a social work audience, and my small research account met neither of those criteria. As a discipline-specific broadcast account, his patterns of engagement differed enough from the other participants that his contributions didn't always make it into the papers to the extent that I would have liked to include them. He was nonetheless generous with his time and reflections, and responded with thoughtful feedback each time we emailed privately about the research and the emerging articles. Beyond an ambient Facebook friendship that was a legacy of the participant observation period, however, we had few network interactions once the study wrapped up. Our relationship, while collegial, had been marked by firm personal/professional boundaries.

And then, one day in November, I opened Facebook one morning and saw Jonathan's name in my feed, and the salutation "My sweet, sweet Teapot." If you spend time in circles populated by parents who have lost babies at all stages of gestation and infancy, you learn that it quite common for families who suffer the sudden stillbirth of an infant, in particular, to retain a baby's fetal nickname as a final, loving appellation. I saw Jonathan's opening line, and I knew.



Jonathan Singer
3 hrs ·

My sweet sweet Teapot. You're four years old today. I can't believe it. I can't believe it has been 4 years since we held you. You're never more than a couple of breaths away, my tears never more than a few breaths below the surface. Every year at this time the leaves die and fall to the ground and our heart aches. But this year someone else really misses you. Even though she was the first person we saw when we came home from the hospital without you, I think it has taken four years for Emerson to be old enough to really miss you. And she does. The leadup to your birthday has been really hard for her. It is hard for all of us. (Not the boys- they have no idea who you are - but someday they will). I miss you.

Like · Comment · Share

I read the post, and I blinked rather hard, and I thought, "I need to tell Jonathan how I first came into networks at all." Our exchanges to date, at that point, had been entirely focused on Twitter, and networks, and scholarship and institutions. And yet I opened up a message window on Facebook and breached all boundaries of privacy and professionalism and told him, one parent to another, that I had had a son named Finn. I sent him the link to a birthday blog post, not so different from his own, that I had written years before. And in that moment, many of the threads that I have tried to tie together here came into relief for me. Even in the most formal and professional relationship that stemmed from the study, there was ultimately an opening that collapsed all the boundaries of public and private and personal and professional. If Kate's email stands for me as the moment this research project really began, the short note I wrote to Jonathan stands as the point at which it came full circle. A stream of thoughtful collapsed-boundary exchanges has trailed out behind the two of us ever since…but while that stream focuses mostly on scholarship, it is Haraway's (1988) sense of partial connection and shared personal experience – of seeing together – that enables its depth.

At this point of closure, then, these tension pairs of public/ private and personal/professional serve as the threads through which this dissertation is woven into broader significance. I see it as the job of scholarly curiosity to turn its gaze towards the knots and scabs of what is speakable in a world of knowledge abundance. The three individual papers that comprise this thesis each make a contribution to knowledge in framing how influence, value, and care and vulnerability are understood as lived experiences within scholarly networked publics. But these contributions and lived experiences are situated in a context wherein institutions no longer control nor authorize many of the channels by which content – framed here as speech – becomes knowledge. I believe scholarship must reckon more broadly with the channels and the publics to which it purports to matter. I have been lucky enough to experience networks as a site for making my own human collection of unspeakable things smaller, and this work stands as a situated testament to much that can be seen as positive in the collapse of boundaries and gatekeeping structures. Yet as networks and institutions continue to negotiate their own boundaries and blurs against the larger backdrop of knowledge abundance and vested interests, the structural protections of institutions may be as necessary as the collapses and openings of networks in the next iteration of the battle for what counts as speakable. Thus, I hope that some of what I have tried to tease out and examine here can be put to use as scholars try to understand the limits and implications and overlaps between the two techno-cultural systems. I hope these threads find some work to do in the world.

Future Research

As is the way of scholarship, I suppose, I spent months agonizing over each detail of this research before I embarked upon it, and then promptly diverged from my own plan in innumerable tiny ways. Confronting the end of this dissertation process forces me to take stock of all that is not here, as well as all that I failed to include but wish, now, that I had. Happily, there is always tomorrow, and the messy and fascinating issues raised by networks and institutions in this age of knowledge abundance are unlikely to be resolved before then.

I do see networked scholarship itself as approaching a crucial intersection. The specific techno-cultural system of connection, curation, and collaboration across boundaries that has been so powerful and identity-opening for my study participants and myself has *always* been an ever-shifting sociomaterial construct, but it is a sociomaterial construct currently gaining critical mass and attention. As I note in the conclusion to this thesis, I suspect one of the next discursive battles of our time will be over what "publics" mean, particularly in relation to how knowledge is authorized in a world of knowledge abundance. I see this question of publics as one of the key challenges emerging from networked scholarship, and further exploration of the authorization processes that circulate in networks – building on but not limited to the work begun here in outlining networked scholarly influence – as a site of significant future research.

I also wonder whether networks are approaching that point in their maturity cycle wherein institutionalization and co-optation become a dominant issue, and what it will mean for scholarship if they do. One of the contextual threads that I was not able to explore in this dissertation was that, in addition to the convergence of new tactical uses of Twitter within scholarly networks in December 2013, the Kansas Board of Regents also instituted a far-reaching social media policy that month, which made it clear that networked speech could have institutional consequences for academics (Jaschik, 2013). This is a different kind of consequence for networked speech than the risks of scale explored in the conclusion. While I don't want to see the ethos of networks institutionalized, neither do I believe that networks and institutions are likely to continue as two relative solitudes or techno-cultural systems. From my perspective, then, an important site of further research that this dissertation raises is clear identification of the intersections, gaps, and tensions between open networked practices and those conventionally recognized as scholarship.

Another site of further research comes not from extending what I began here but from revisiting what I did not manage to do, entirely. I had initially hoped to explore positionality, marked identities, and power relations in networks. I acknowledged these in the dissertation, and selected participants based on maximum variation among identity markers, but if I were designing the project again, I would make two key changes. First, I would employ social network analysis (SNA) and network visualization tools as part of the broader participatory framework to initiate and explore networked positions with participants. Second, I would focus less on breadth of voices across identity markers than on depth within. While these three papers and the supporting chapters offer a relatively global and diverse perspective on the themes of networked scholarship that they explore, the minimal representation within cultural groups in particular means that I have left too much of the heavy lifting related to race to a few participants marked – as one says in her own words – by race. I am still working through how to do this better as an institutional scholar and as a networked scholar, and these reflections will inform my approaches to future work.

Finally, there are absences here that reflect broader issues in scholarship generally, in all its techno-cultural manifestations. I had initially wanted to explore class as one facet in the assemblage of networked scholarly identities. However, it did not factor overtly in participant accounts, and beyond a few nods towards precarity in adjunct issues, its visibility here is minimal. Yet the issue of class status among scholars is an important one; the dwindling of tenure combined with the growth in adjunct ranks and graduate programs turning out Ph.Ds points to a serious looming crisis in scholarship as a viable profession, with complex issues of class and access at its core. This is a part of my own lived experience of scholarship. I am no longer a marked identity – I am a white woman in her 40s, privileged in my excess of education and relatively protected financially despite my graduate student and adjunct status due to a longstanding heterosexual relationship. Yet as I noted in the conclusion, these were not my origins, and I have left programs because I could not afford to continue. Thus, in examining how networked scholarship and institutional scholarship are constituted, I note that an area of unfortunate commonality – differentially manifested, but with the outcome something of a lottery in either case – is that neither offer any form of secure, professional return on investment at this juncture. Given this increasing precarity, further research into scholarship in this age of knowledge abundance needs to take up questions of whether and for whom scholarly practices continue to be a viable pursuit, and what implications these questions hold for institutions and for society as a whole.

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