

# Digitally mediated doctoral practices, identities and agencies

A study into how PhD students are using social and  
participatory media

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# Abstract

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This research explores how PhD students are using social and participatory media in their studies, and seeks to examine how they contribute to doctoral identity development and forms of agency.

In a qualitative study, the social media practices of six UK-based PhD students from social sciences, humanities and interdisciplinary departments are examined using an activity theory framework.

Data collected over a 15-month time frame comprises digital artefacts collected from multiple social media, field notes and three in-depth interviews per participant.

The construction of multiple and interrelated activity systems enabled fine-grained analyses situated at the operational level of the participants' social media practices oriented towards key doctoral activities. The concept of figured worlds was employed to examine how participants' conceptualised their positionality and negotiation of multiple social and cultural environments.

Findings indicate the complex role social media can play in contributing to, and revealing, the contradictions inherent in the negotiation of multiple and interrelated doctoral practice contexts. The study reveals how participation in emergent online research networks and communities is enabling new forms of academic and professional identity development. Doctoral agency is enabled by the appropriation of digitally mediated cultural tools, yet can be compromised by established and dominant forms of academic genres and practices.

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# Chapter 1. Introduction

This thesis represents a qualitative enquiry into how PhD students are using social media as part of their studies. In this opening chapter, I establish the focus of the research by introducing a student-centred perspective of doctoral study, and describe how the emergence of social media provides opportunities for facilitating increasingly networked and participatory forms of academic practice.

I present the argument for adopting a critical perspective on dominant discourses and approaches to the research of, and within, educational technology practice. I describe how this, along with my engagement in developing workshops in the doctoral training field, was instrumental in shaping some of the key motivations for doing this study. These motivations are subsequently presented as a set of key interrelated epistemological positions, in which I argue for an approach to researching the topic that broadly encompasses holistic and sociocultural perspectives of both social media practice and doctoral education, and identifies the need to examine the authentic contexts in which these intersect.

I describe the key terms used in the thesis in relation to doctoral education and social media. This also serves to help establish the scope and parameters of the study in relation to these contexts, which are explored at length in Chapter Two and refined in further chapters. An overview of the thesis structure is provided to help guide the reader through the remaining chapters. I conclude the chapter by presenting the research questions for the study.

## 1.1 The Research Focus

The PhD represents a formal qualification to the role of an independent researcher and entrant in the academic community. The PhD student is seen as an increasingly active and knowledgeable participant in a local community of scholars, commonly defined by the faculty and learning institution in which she resides, and constituting a range of academic roles and research foci around a disciplinary or interdisciplinary practice. In developing a negotiated research portfolio, the PhD student is supported by a formal programme that typically consists of a range of support services, supervision and training, and is expected to engage in the necessary academic activities that provide her with the knowledge and skills required to contribute to her academic and professional development (McAlpine et al., 2009; Cumming, 2010). A complementary view sees the doctoral student negotiating a learning trajectory in which she locates herself within her field of study by familiarising the cultural norms, discourses and artefacts that define her research practice (Baker & Pifer, 2011).

These activities require that the PhD student becomes increasingly participative and recognised within the research community at large. Postgraduate study typically combines both formal and informal community-based learning (Brooks & Fyffe, 2004), and identifying and actively participating in a number of research communities is recognised as an important academic practice and a demonstration of professional development as an independent researcher (Golde, 2005; Sweitzer, 2009; Gopaul, 2011). There is the potential for the PhD student to be actively engaged – in a largely self-directed way – in developing and maintaining connections and dialogue with both collocated and distributed peers and professionals in her research field. In particular, engagement in external academic communities and networks beyond local areas of expertise provides access to a wider and more distributed resource, which may be particularly necessary in contributing to the specialised and knowledge intensive nature of enquiry associated with doctoral study. A number of recognised opportunities – such as publishing, conferences and seminars, doctoral summer schools and university visits – are firmly established through well-rehearsed institutional, national and international structures and conventions. Of particular interest to this study, is that academics increasingly have the option to adopt and use web-based Information and Communication Technologies (ICTs) in supporting these and other activities.

Increasingly, our universities and departments are providing online platforms for PhD students to create an academic profile and generate a basic online presence, whilst a number of dedicated academic and professional sites provide similar services with enhanced opportunities for asynchronous social interaction and sharing of academic content. A number of academic-specific online tools and services have also emerged to challenge market-leading proprietary software, particularly bibliographic and social citation software, typically featuring additional content sharing and social networking facilities. In addition, there is considerable evidence, at both faculty and institutional levels, that universities are increasingly utilising more open and social forms of online media and exploring the development of openly accessible content and resources. Whilst motives may, as Bradwell (2009) suggests, be partly driven by marketing agendas in an increasingly competitive and globalised higher education sector, these activities have coincided with emergent open publishing, open access, open science and open education agendas, and the development of open educational resources (OERs) providing a wide range of formal and informal learning and teaching materials (Weller, 2011).

The World Wide Web has been transformed in recent years by the rapid emergence and widespread adoption of multiple forms of social and participatory media. These include social networking sites, blogs, microblogs, social bookmarking, wikis, and file-sharing sites, and a wide range of related tools, platforms and services. The emergence of these so-called web 2.0 technologies and related social and cultural practices have had significant impact on informational exchange, and creative and cultural production across a range of sectors (Benkler, 2006; Shirky, 2010), and there is a growing sense that these digital tools and services are becoming culturally normalised in society (White & Le Cornu, 2011).

In recent years, the education sector has sought to capitalise on the popularity of web 2.0 technologies and trends, through technological implementation and development within institutional systems, or by appropriating existing proprietary and open source platforms. Furthermore, the communicative, participatory, collaborative and communal practices commonly associated with social media are seen as complementary to a number of social constructivist, sociocultural and situated learning models and pedagogies (Selwyn, 2009; Conole, 2010). These emergent practices have the potential to 'deterritorialise' learning practice (Usher

& Edwards, 2007), by loosening up traditionally conceived and bounded educational spaces for learning and teaching activities into ones that are more socially constituted, timely and participative. For Gee (2004), these new learning environments represent digital 'affinity spaces,' enabling informal social engagement through common interests or activities and engagement with experts outside formal educational structures. Highlighting the limitations of traditional and institutional models of scholarship, Mazzoni and Gaffuri (2009: n.p.) argue the social web enables "a greater flexibility in the use, in the transfer, and in the integration of personal knowledge and social competences." Such claims resonate with Ivan Illich's (1970, 1973) key texts on education and technology. Whilst he was, at the time of writing, unable to foresee the global connectivity and communicability provided by the World Wide Web, his texts have, in recent years, been noted for their remarkable prescience of the emergence of the social web and social software (Kop, 2008; Leadbeater, 2008). Illich presents an alternative post-industrial model of education within a broad social, political, economic and ecological framework, in which he envisaged 'community webs' in localised settings bringing learners together with experts. He saw these as 'convivial' tools, freeing individuals from dependency on institutional and proprietary systems to cultivate autonomy and sociality, enabling a more democratic participation and debate in social and political life.

Scholarship in general is becoming increasingly engaged in online environments and digital technologies, whilst research practices are becoming more social and conversational in nature (Oblinger, 2010). Further, this shift towards a more 'digital' scholarship is seen as having potentially profound implications on academic practices generally; liberating scholarship from traditional boundaries and inertia to one that is engaged in the pursuit of a more open, accessible and flexible knowledge-sharing culture (Ingraham, 2005). Loosely-connected research networks are becoming increasingly established through the web, expanding activities previously restricted to local and formal academic practices, and reconceptualising the research community beyond the limitations of departmental and institutional silos (Francis, 2007; Procter et al., 2010). The inherent social and collaborative affordances of social media are seen as having significant potential in facilitating many aspects of scholarly practice, empowering individual social capital and providing novel opportunities for networking, research dissemination and peer review.

However, despite the increasing advocacy to support greater use of social media

in educational and academic practice, there is a clear and significant disparity between the potential of web 2.0 tools and that of actual adoption and use (Conole, 2010). Whilst it is quite common for doctoral students to be familiar with various online research environments, the majority does not use social media and web 2.0 tools and services in ways that contribute significantly to their studies. Consistent, frequent and intensive use is rare and tends to be experimental and localised around specific disciplines and specialisms (British Library/JISC, 2009; Procter et al., 2010). In their survey of UK-based early career researchers, James et al. (2009) report 72% do not use web 2.0 or social media to share their research.

Adopting social media for educational purposes presents conceptual difficulties to learners, challenging their notions of social space and ownership (CLEX, 2009), and students in higher education are generally cautious and discerning in their attitudes to adopting social media in their studies (Bayne, 2006). Perhaps their greatest challenge is, as Beetham et al. (2009) suggest, in recognising and negotiating the differences between emerging professional and scholarly communities and the less formal techno-social practices of their peer groups. For new researchers, cautious experimentation and risk averse attitudes prevail (Weller, 2011). Given their propensity to challenge and revitalise the cultural norms of academia, there is, for Weller, an 'inverse logic' in the way early career researchers adopt these conservative attitudes to social media use, while it is largely left to a small number of established and tenured practitioners to explore and establish new practices.

Scholarly discourse is culturally entrenched within the traditions associated within well-established channels of academic networking, whilst formal research dissemination is dominated by the duopoly of peer-reviewed journal articles and conferences (British Library/JISC, 2010). Furthermore, the pre-eminence of these forms of academic and social output ensures they remain the core currency with which academic status and achievement are recognised and career progression is moderated. As Procter et al. (2010: 8) maintain, "for most researchers, the established channels of information exchange work well; and, critically, they are entrenched within the systems for evaluating and rewarding researchers for their work." Furthermore, there is a tendency for faculty to encourage graduate and early career students to focus on these formal and established 'high-impact' forms of publishing and dissemination, and largely disregard the potential impact and public engagement activities associated with the social web, blogging, and



other non-traditional forms of digital dissemination (Harley et al., 2010; Kroll & Forsman, 2010, cited in Weller, 2011). It remains rare that engagement with social media is formally recognised or rewarded by faculty.

Yet there are signs that knowledge exchange and impact agendas are causing academics to reconsider the value of networked technologies, and explore their potential contribution to aspects of dissemination, interdisciplinary and public engagement. Indeed, we may have reached the stage where not participating in the online environment is becoming seen as detrimental to emergent aspects of scholarship and personal and professional development, with expectations of participation even extending to institutional requirements and conditions of tenure. However, as Weller (2011) reminds us, informal collaboration and dissemination through social media is difficult, if not impossible, to formally measure and reward. The relatively low reputation of social media generally continues to be a key disincentive for the majority of academics (Procter et al., 2010). Engaging in social media is frequently considered trivial and insignificant, a distraction from 'proper scholarship,' and potentially disruptive to established academic practices and traditional conventions of formal recognition and reputation. Often, those who do engage significantly in using these media are variously cast as frivolous, egotistical, and even unprofessional (James et al., 2009; Weller, 2011).

The apparent disparity between the potential and actual use of social media in education generally, and doctoral education specifically, provides an interesting problem with which to guide further enquiry. Some would suggest this disparity is emblematic of the persistent gap between the 'rhetoric and the reality' of technology use in education generally (Selwyn, 2010a), and the reasons for this would appear to be manifold and complex, attributable to a range of interrelated cultural, institutional and technological factors (see, for example, Conole, 2010). The current literature suggests there is little coherent strategy for the provision or implementation of web 2.0 within higher education (CLEX, 2009), yet that is not the primary concern of this study. In exploring the self-directed adoption and use of informal, non-institutional social media by doctoral students, it is the cultural and technological factors that come to the fore. The effects on the cultural norms of academic and doctoral practices, and on the assumptions around the purpose and practices of educational technologies present interesting and problematic areas for further enquiry. Studies of PhD students' use of social media are scarce, though comparative studies related to higher education

students and research practitioners can provide insight into the wider context. To begin to explore these issues, and to develop a rationale for generating research questions, it is useful to closer examine the field of enquiry.

## 1.2 Exploring the Field of Enquiry

### 1.2.1 A Critical Perspective

Conole and Oliver (2007) identify the key concerns within learning technology research as being pedagogic, technical, organisational and sociocultural. But broadly speaking, educational technology is historically rooted within a dominant scientific, behavioural-based model of rationality based on a predominantly empirical view of knowledge (Koetting, 1983, cited in Nicholls & Allen-Brown, 1996). Within this, a deterministic view of technology holds sway; one that is predominantly optimistic and positivistic, viewing educational technology as an exclusively functional provision (Friesen, 2008). This propagates the belief that technological progress is independent of other determinants, in particular devaluing the potential influence of social and cultural factors in transforming educational practice (Selwyn, 2011a). For Czerniewicz & Brown (2010), this represents:

a dangerous slippage between these well-intentioned aspirations and a kind of single-minded evangelism which quietly ignores the contradictions emerging from both empirically based research investigations and reported reflective practice (pp. 142-3).

As a result, research into educational technology has gained a reputation for an overtly instrumental and developmental rhetoric that routinely privileges technological innovation over pedagogies and sociologies in the wider educational discourse (Selwyn, 2009; Bennett & Oliver, 2011; Facer, 2011). In addition, Feenberg (2002) argues increasingly economic and corporate rather than pedagogic models prevail, in which educational technology is primarily seen as a managerial tool oriented towards the increased efficiency of existing transmission models of learning. "How, then," asks Neil Selwyn (2011a: 714), "can educational technology discussion and debate be reinvigorated and reorientated towards becoming a more realistic, rigorous and ultimately relevant academic form?" As Selwyn (2010a: 71) himself indicates:

(A) critical approach to the study of educational technology attempts to produce analyses that highlight the practices, processes and liminal spaces in educational settings where technology use can be challenged and reconfigured along more equitable and empowering lines.

These key ideological values are evident within the critical philosophical lineage from Kant, through to Hegel and Marx, and the early neo-Marxists of the Frankfurt School. Out of this has emerged critical approaches characterised by challenging one-sided, idealist and reductionist positions to develop more holistic and complex dialectical perspectives of a given field, highlighting multiple, contradictory or opposed knowledge claims (Kellner, 2003). Critical theories generally share a social and cultural analysis with a critique of oppressive and dominant views to represent marginalised or overlooked perspectives (Tripathi, 2008). In short, they seek not only to 'critique', but also to generate critical or 'emancipatory' forms of knowledge to provide alternative and progressive ways of looking at the world. Friesen (2008) proposes a number of key stages to adopting a critical approach to educational technology:

- Identifying and scrutinising ideas or claims that are presented as obvious, inevitable, or matter-of-fact in dominant sources of knowledge
- Scrutinizing these ideas or claims in the context provided in other more marginal knowledge forms or sources
- Revealing that behind dominant claims and ideas lay one or more politically charged and often contradictory ways of understanding the phenomena
- Using this underlying conflict as the basis for developing alternative forms of understanding

Such approaches are useful in addressing how the prevalent instrumental and economic determinants in educational technology have been reinforced by its hegemonic role in supporting the dominant political economy (Hall, 2011). The roots of its current manifestation can be seen in the paradigmatic shift from an industrial to a post-industrial economy – which has subsequently been referred to as knowledge, information and networked economies (Bell, 1973). The idea of a radically new social, historical and economic order centred on information or knowledge has had important social and political consequences, which Friesen (2008) argues conceals a polarised and contested social reality. The post-industrial model has been enthusiastically welcomed in the educational field (Feenberg, 2002), in which traditional educational artefacts (such as text books, curricula and universities) are characterised as representing an outdated industrial paradigm (Gandel, Katz, et al., 2004), whilst new 'disruptive' technological innovations are framed as "typically cheaper, simpler, smaller, and, frequently, more convenient to use" (Christensen, 1997: xv). In particular, the rapid technological and social advances in the web invoke post-industrial virtues

of student-centred empowerment primarily manifest in personalised learning (Francis, 2007; Friesen, 2008). For Selwyn (2009) these new claims have brought about an 'imperative to connect,' as the transformatory rhetoric of internet connectivity and the affordances of social media becomes the dominant technological orthodoxy within the education community. These issues are explored further in the following chapter (see 2.2).

### **1.2.2 Contributory Activities**

My increased familiarisation with this literature broadly coincided with my participation in a number of student-led training initiatives with the support of the Graduate School at the University of Nottingham. Initially working with a colleague and fellow doctoral student, we designed and delivered a series of workshop sessions in the academic uses of social media to multi-disciplinary groups of PhD students and early career researchers at several of the University's graduate centres. Feedback from attendees generally indicated that opportunities for discussion and the sharing of good practices were highly valued. This led to me subsequently co-managing a project focused on creating sustainable models for shared practice, primarily through the filming of participant videos for an online resource. It would be wrong to suggest that during these training initiatives we deliberately set out to transform those who participated into intensive social media practitioners. Indeed, we were keen that the discussion elements of the workshops encouraged attendees to engage in reflective and critical thinking on their use (or potential use) of social media in their studies and work. However, it struck me that their cautious enthusiasm, concerns, misunderstandings, and at times hostility, toward social media practices contrasted markedly with the largely optimistic and consensual attitudes of my pilot study participants from the educational technology field (as summarised in Section 4.3). Whilst not directly linked to this study, the experience of participating in these training activities greatly informed my understanding of the complexities underlying the attitudes of doctoral students of other disciplines to adopting and using social media. It is therefore worth highlighting some of the general observations that were made whilst undertaking these workshops (with reference to, Coverdale et al., 2010).

The workshops soon dispelled any assumption we may have had that PhD students were either familiar or competent with using many social media.

Attendees generally associated their existing use of social media with Facebook (predominantly for recreational, non-academic use) and Wikipedia (as a reference site rather than an example of a collaborative editing site). Discussions confirmed that traditional and established forms of research practice, discourse and dissemination are highly valued by many PhD students, and there is a tendency to trivialise the role and contribution of social media within faculty. Yet there was significant interest in the potential of social media, particularly for networking and the development of online academic profiles. There were indications that academic disciplines and departmental practices influenced attitudes to the usefulness of specific types of social media. Whilst some attendees were drawn to the potential reflective and network-seeking activities of blogging and social networking, others were interested in collaborative and project-based tools such as wikis. Crucially, it became evident that the general lack of access to critical numbers of peers and experts in some of the disciplines was a key disincentive to engaging with social media generally. These observations in particular, point to the importance of recognising the habitual influence of existing research practices, and prevalent attitudes to social media within localised and disciplinary research cultures.

In their report on research practitioners' uses of web 2.0, Procter et al. (2010) suggest academics do not necessarily see social media as comparable to, or substitutes for, other tools and services, but as having their own distinctive roles for specific purposes. They suggest the most successful adoption of social media will occur where researchers are actively involved in discovering, exploring and exploiting new capabilities, and adapting them to their own purposes, in accordance with the broader contexts of their academic and research practices. Our observations indicated that broadly instrumental attitudes to adopting and using technology were prevalent for a number of activities. Those social media where the relationship between tools and purposes were clearly defined often created the most interest, such as document sharing and collaborative platforms such as wikis for their potential in developing joint papers and coordinating group tasks. In addition, attendees were drawn to social media that were seen as directly facilitating tasks closely related to academic processes and tools they already employed. This was particularly evident with social bookmarking and bibliography/citation sites. Yet we found that some attendees had difficulty conceptualising the value of social media where the benefits were not immediately evident - such as establishing a sustainable network on Twitter or developing a blog. Therefore, we found by focusing on existing doctoral activities

- such as getting published and presenting at conferences - we were able to encourage discussion in how the potentially transformative and disruptive effects of adopting and using social media can both challenge and augment established academic practices. However, ecological and developmental concepts such as Personal Learning Environments (PLEs), and the employment of multiple, interrelated practices using underlying technologies such as tagging and RSS were, we felt, beyond the rudimentary requirements of most attendees.

## 1.3 Terms of Reference

### 1.3.1 Doctoral Education

In their wide ranging review of postgraduate education in England (Harris, 1996), the Higher Education Funding Council for England (HEFCE) highlighted the 'private' and 'public' roles of research training; that is between the individual needs of students (to learn new skills, acquire new knowledge, and enhance personal development), and their contribution to wider societal and economic needs. Subsequently, the wide-ranging Roberts Report (Roberts, 2002) emphasised the need for doctoral students to graduate with a wide range of skills, not limited to academic and research skills, but also generic 'employability' skills such as communication, career management, and networking and team-working (Pilbeam & Denyer, 2009; Hopwood, 2010a). Subsequent reforms in research training - as identified in the Joint Skills Statement (UK Research Councils, 2001) and embedded in the Quality Assurance Agency for Higher Education Code of Practice (QAA, 2004) - have signified a reformation of sorts: a shift from the European tradition of doctoral education, with its emphasis on contribution to knowledge, towards the North American tradition, with its emphasis on personal development and non-specialist research training (Chiang, 2003; Park, 2005). In addition, increased government regulation in the UK has led to a diversification of doctoral pathways and alliances with external public and private organisations, the introduction of a number of new structured doctoral programmes such as professional doctorates, practice-based PhDs and 'new route' PhDs, and the introduction of Doctoral Training Centres (DTCs) (Enders, 2004; Boud & Tennant, 2006). However, universities in the UK (as in Australia and some European countries) continue to place less emphasis on modular training and coursework compared to the US, where the doctoral student is more likely to be used as a teaching assistant (Kendall, 2002). Students are encouraged to specialise in a subject area much earlier in the doctoral programme and study in an 'apprenticeship' type model with their supervisor(s). Unlike most doctoral students in the US, who may be trained in multiple schools or colleges, PhD students in Europe tend to undertake their doctoral education within one specific disciplinary or specialist department (Baker & Lattuca, 2010). Doctoral education continues to rely almost entirely on the production of a thesis after a period of supported extended study.



It is clear that conventions in doctoral education in the UK, as elsewhere, are not fixed, but are subject to significant historical and ongoing shifts in policy and practice (these are discussed further in 2.1.1). Additional variations in doctoral education exist between disciplines, institutions, funding bodies and geographical regions, resulting in considerable disparity in funding models, modes of study and types of doctorate award (Acker, 2001). Therefore, as Baker and Lattuca (2010) advise, great care has to be taken in both reading and contributing to the literature in this field.

As all the participants in this study are undertaking PhD programmes within the UK, the terms most appropriate to the UK higher education system are used throughout this thesis. Therefore, the terms 'doctorate,' 'doctoral' and 'PhD' are used in relation to the formal educational context of the degree, including when referring to programmes, training and students. The use of the term 'graduate' - commonly used in the US and elsewhere to designate doctoral study - is avoided except when quoting original texts. Therefore, it is also necessary to stress that any use of the term 'postgraduate' in the UK commonly refers to higher education beyond the first degree, which is inclusive of both master's degrees and doctoral degrees. As this study draws on the historical accounts of participants' social media adoption and use prior to their PhD programmes, the terms 'first' and 'masters' degrees are used for clarity. In addition, whilst the term 'candidate' can represent a formal progression (from student) in a doctoral programme in a number of countries (including the UK), it is not used here to avoid any confusion. 'PhD' and 'doctoral' student are preferred and used interchangeably. The term supervisor is preferred over advisor. Historically, the term 'thesis' has been used to refer to the wider context of practices included in undertaking a doctoral education (Green & Powell, 2005). However, for the purposes of this study, I am using the term in a narrower sense to exclusively refer to the written-up account that is submitted for formal examination (this is commonly referred to as the dissertation in the US and some other regions). This distinction is particularly important to the following text when discussing the relationship between the research work oriented towards the completion of the thesis, and peripheral work that the student may engage in during his or her doctoral programme. It is also relevant to discussions on the relationship between the thesis as a text and other student-produced texts (such as conference papers) and those undertaken through forms of social media (particularly blogging).

### **1.3.2 Web 2.0 and Social Media**

Tim O'Reilly's original conception of web 2.0 is problematic. What originated as a hastily conceived title for a conference presentation has since become a catch-all term for a 'second generation' of the web. Originally used to identify common features and business characteristics of innovative Internet companies (O'Reilly, 2005), web 2.0 is commonly associated with the rapid development of a number of web-based interoperable commercial services and platforms typically offering free access and easy usability. Reilly's upgrade metaphor evokes a new realisation of the web, yet these technologies, and the cultural practices associated with them, may not be as new or original as is generally perceived. Feenberg (2002) argues that, although it was technically possible, human communication over computer networks was not originally part of the design until hackers opened up the networks to allow human communication as a central functionality. In this respect, the World Wide Web was originally conceived around, and has always supported, social communication and production (Hinchcliffe, 2006). Similarly, a number of subsequent technologies and practices associated with web 2.0 such as social networking sites, RSS and blogging were around in one form or another before the term was conceived (Scholz, 2008).

In their comprehensive review of the literature, Conole and Alevizou (2010) categorise social and participatory tools into ten types: media sharing, media manipulation, chat, online games and virtual worlds, social networking, blogs, social bookmarks, recommender systems, wikis and syndication/RSS feeds. However, attempts at categorising social media are problematic due to the rapid development and release of new tools and services, and the multiple and interrelated nature of specific features within social media types. For Francis (2010), networked environments provide new opportunities and challenges to developing a learning ecology. Within this digital domain, the contemporary student is 'compelled to design':

Advanced knowledge work invariably involves the use of dozens of digital tools in multiple combinations and demands that students take on more of the responsibility for customizing their environments for the task at hand. (Francis, 2010: 48)

I believe the 'dozens' Francis is referring to here do not necessarily equate to specific social media services or platforms, but rather multiple features or components within one or more services or platforms. And whilst such an

approach may seem overtly instrumental, it is one that recognises the complex nature of the networked technological landscape and the interrelatedness of social media. Some authors have preferred to focus on common characteristics or affordances in relation to their educational or pedagogic value (which may relate to several types or combinations of social media, or some of the underlying technologies and practices which support the interoperability of different social media). Others have oriented towards developing a range of digital literacies, with a focus on the cultural and critical skills required to use them successfully in a given environment.

These approaches, which are further examined in 2.2.2, seem more relevant to the current study, as they foreground social media practices over types of technology. They require framing social media by their contexts of use, which is preferred over abstract and decontextualised technological parameters or instrumental determinants. For example, it is clear to see how the motivations and outcomes related to a doctoral student's use of an institutional blogging platform privately as a type of research journal (such as described in Ferguson et al., 2007), may be significantly different to those of a student who independently creates and hosts a similar blog, and who then chooses to make it accessible to the public, and actively promotes it through other social media. Such an approach privileges meditational and sociocultural perspectives related to the authentic patterns of social media adoption and use within the educational context.

Many specific types and applications of social media are described in reviewing the literature, whilst those that served as sources of data collection (whose inclusion were negotiated with the participants in the study) are outlined in the Methodology and Findings. As such, the criteria for defining what constituted social media in this study were determined by defining their specific meditational roles within the context of their applicability to the research questions.

## 1.4 Key Motivations

### 1.4.1 Doing a PhD - Holistic and Authentic Contexts

I seek to contextualise this study into PhD students' adoption and use of social media by developing authentic representations of what 'doing a PhD' means. This requires adopting a holistic approach that sees doctoral education as a transformative process, framed within lifelong and life-wide learning perspectives.

When asked, students report multiple and changeable motives for doing a PhD (Leonard et al., 2005). A doctoral education serves both intrinsic (personal interest and passion) and extrinsic (professional) needs (Wellington, 2000), requiring that the student negotiates a 'balancing act' between process - i.e. personal development and career progression - and product - i.e. contributing to the existing body of knowledge with original work presented as a thesis. Whilst the award of a doctoral degree has a functional role as a foundation for an academic (and increasingly non-academic) career, it can also represent a hugely transformative and intensive intellectual pursuit (Stanley, 2004). The PhD has been variously described as an academic 'rite of passage' (Renouf, 1989), a liminal experience (Delamont et al., 2000) and a threshold concept (Jones et al. 2009; Wisker et al. 2010). Undertaking a PhD may necessitate fundamental ontological and epistemological shifts, resulting in transformed ways of how the student sees her research field and her emerging contribution and role within it.

The increased capacity of PhD students to participate in the scholarly activities of the research field constitutes a negotiation of shifting and multiple academic identities and roles (Stanley, 2004). Gulson and Parkes (2010) reminds us that whilst completion of a doctorate constitutes a formal recognition of sorts as an academic, the process of 'being' and 'becoming' a scholar is not concluded, nor never is. Therefore, the trajectory of a doctoral education needs to be understood in context with prior experiences and future aspirations, which may reference different and potentially conflicting intellectual traditions and epistemologies, included those rooted in non-academic sectors. Further to this, PhD students engage in a diverse set of academic and professional practices, which are typically negotiated across more than one context (Holdaway, 1996; McAlpine et al. 2009; Cumming, 2010). These are related to core research activities

contributing to the development of the thesis (the written account of the PhD), and peripheral activities, which may include participating in the academic community (such as conferencing), teaching, and engaging in other professional activities and environments (such as internships).

This study aims to understand how and why PhD students are actively appropriating social media to support engagement in these various activities, practices and contexts. Developing these holistic and ecological perspectives of doctoral education provides the basis for this, and recognises that the adoption and use of social media may not necessarily contribute significantly to core research activities, such as fieldwork, data collection and analysis, but rather to peripheral or supportive activities oriented towards the socialisation of the students and dissemination of their work.

### **1.4.2 Using Social Media - An Ecological Perspective**

Reviewing the literature indicates a tendency to limit empirical studies to specific social media or platforms. This is understandable, given that the majority of empirical studies are conducted by educational technologists and researchers directly involved in e-learning and distance learning provision (Conole & Alevizou, 2010). These are commonly drawn to interventionist approaches oriented towards adopting, developing or evaluating a specific technology or application in a particular educational context. Others may also choose to limit the scope of their investigation to a single platform for one or a number of methodological or ethical concerns. Yet authors of some studies who have focused on one specific tool or platform have reflected on the limitations of adopting such an approach. For example, in their longitudinal study of postgraduate bloggers, Ferguson et al. (2007, 2010) observed a significant and largely unforeseen transference of key tasks from blogs to other platforms (primarily Twitter and Cloudworks). In conclusion, the authors highlight the limitations of blogs as 'stand-alone' tools in facilitating increasingly distributed and complex dissemination practices.

Therefore, in challenging the platform-specificity of previous studies, the adopting of a more holistic perspective is primarily based on the assumption that an individual's engagement with the social web is often characterised by patterns of adoption and use of multiple media and interrelated technologies. This introduces a number of methodological concerns that are addressed accordingly in the

Methodology (Chapter 4). At this stage however, it is useful to highlight the key factors that underline the assumption for adopting this approach:

- Key affordances associated with academic uses of the social web may be best facilitated by using multiple forms of social media (Weller, 2011)
- Underlying technologies (for example, hypertext, API, and RSS) and related processes (such as aggregation, subscription and tagging) provide efficient and continual means of interconnectivity between different social media (Siemens & Tittenberger, 2009)
- The adoption and use of social media is transient in nature, and subject to changes in technologies and design, and to social and cultural trends (Shirky, 2010)
- The communities and networks in which individuals engage through social media often overlap (Wenger et al., 2009)

In recent years, the educational technology field has assimilated the affordances of informal networked tools with personalised learning agendas to promote Personal Learning Environments (PLEs) as a conceptualisation of multiple, non-institutional social software and 'loosely-coupled' networked services and tools. These are seen as facilitating self-directed and social learning processes, representing a learner-centred alternative to the centralised provision of institutionally owned and controlled platforms such as VLEs (Virtual Learning Environments) and LMSs (Learning Management Systems) (Fiedler & Våljetaga, 2011). For Selwyn (2010a: 71), the anti-institutional agenda implicit in PLEs represents "academic valorisation of the informalisation of educational activity." JISC CETIS (2007) describe PLEs as supporting individual learners and groups of learners to access and share a range of different resources, tools and services in an integrated way in support of personalised learning activities and objectives. In their most complex forms, PLEs constitute multiple hardware and software platforms and services, including integrated tools, user modelled services and social software (van Harmelen, 2007). But the term is problematic in that it has become conceptualised and interpreted in a number of ways. Fiedler and Våljetaga (2011) identify the emergence of two distinct approaches:

- A predominantly *instrumental* approach that engages aspects of open access and interoperability to develop specific platforms of integrated web-based tools.

- A predominantly *conceptual* approach that describes self-directed and developmental approaches to appropriating networked tools and services to facilitate learning or research workflows

Wilson et al. (2006) argue the instrumental approach evokes a process that occurred during the evolution of e-portfolios, which shared many of the concepts of the PLE before they became condensed into a single platform by software vendors and educational institutions to record student achievement. To an extent, a number of commercial personal web portals (such as iGoogle, Pageflakes and Netvibes) provide similar integrated platforms in the form of customisable interfaces with which individual users or groups can access a range of aggregated social media, websites, applications and plug-in tools. However, it is the conceptual approach that is most relevant to the focus of the present study. Here, the PLE has come to serve as a reification of self-directed and self-regulated engagement of multiple and interrelated social media and networked tools and services. This has been most enthusiastically demonstrated and disseminated by members of the educational technology field themselves, where a penchant for displaying increasingly complex visual representations of tool and workflow integration has served in promoting the concept. Subsequently, the term has been adopted as a 'catch-all' term for a number of studies into the use of multiple forms of social media (Mazzoni & Gaffuri, 2009).

However, many of the conceptual perspectives of PLEs tend to present consensual or idealised notions of efficiency and workflow - such notions for example, had little resonance with attendees to my workshops. As Selwyn (2009) reminds us, patterns of use of the social web are not necessarily consistent, but subject to fluctuations in requirements and circumstances. And yet issues of discontinuity and dis-connectivity are rarely addressed in the PLE literature. Weller (2011), for one, is dismissive of a 'deliberate policy' of constructing a PLE, in favour of a more informal, flexible and pragmatic approach to adopting social media through personal trial and error. I believe this reflects the authentic patterns of adoption and use within educational settings, which may be messy, inconsistent and contradictory, and represents the approach that most academics (including doctoral students) take in engaging with social media.

### **1.4.3 Users and User Contexts - An Inclusive Approach**

In a literature largely dominated by conceptual and philosophical perspectives (Leonard et al, 2009), empirical studies of doctoral education are limited, with fewer still exploring the student perspective (Baker & Lattuca, 2010). Similarly, despite the assertion that identity development is a crucial dimension of the doctoral student experience, few studies have empirically examined this process. In particular, Sweitzer (2009) calls for greater qualitative and longitudinal approaches to conducting research in the doctoral educational field. Few doctoral education studies, for example, have accounted for the influence of relationships beyond faculty and supervisory relations (Sweitzer, 2009), yet a number of studies provide evidence that students' networks within and outside of the academic community are crucial to learning and identity development during doctoral study (Baker & Pifer, 2011). However, as Gurstein (2001) notes, web-based networking and community-based activities that primarily take place externally to formal institutions are frequently 'invisible' to those who are not participating.

With the recognition of the 'lived experiences' of university students increasingly a policy agenda, Selwyn (2011b: 212) calls for a more sophisticated and systematic understanding of student experiences with educational technologies:

"Why, then, does our research and writing not provide accounts and interpretations of what actually is taking place – for worse as well as for better? Why is there a reluctance to produce in-depth, forensic accounts of the 'everyday life' of educational media and technology – accounts of the ordinary rather than extra-ordinary aspects of how digital media and technology are being used (and not being used)? Our field tends to shy away from these areas of inquiry because most academics and technologists consider them to be largely irrelevant to the development of new technology. It is likely that many people working in the field – as high-tech early adopters themselves – also find these issues to be of little or no personal interest."

Research in the field has tended to focus on learners who are most active using technology (Sharp & Beetham, 2010). In particular, there is prevalence for educational technologists, with a vested interest in developing technologies under investigation, to conduct research using 'model' education settings and 'well-resourced' students (Buckingham, 2007), at the risk of marginalising other learners who may be non- or peripheral users in compromised settings. I adopted a participant sampling model (see 4.4.2) that was sympathetic to the type of user whose social media practices might be seen as resembling the 'cautious



experimentation' Weller (2011) refers to as being typical of many new researchers, in particular, drawing from outside the 'ed-tech bubble' (Selwyn, 2011b) from where the participants in my pilot study had been sourced (see 4.2.1).

I came to recognise the 'privileged position' of the pilot study participants regarding their professional relationship with the social media being examined. Their professional investment in the technological field was seen as accounting significantly for the high level of use and experimentation across multiple social media, and - in comparison with those from other disciplines and specialisms - contributing to an enhanced motivation and interest, greater familiarity and competence with the technologies, and most crucially perhaps, access to a greater number of peers and fellow academics in their field. As responses in my workshops suggested, for many doctoral students, the lack of a 'critical mass' of social media users in their fields is seen as a significant barrier to adoption (Conole, 2010). As McAlpine et al. (2009: 97) suggest:

We need to understand better the experiences of and related challenges faced by doctoral students in the process of coming to understand academic practice and establishing themselves as academics.

Technological studies often remain abstract and largely 'context-free.' To account for the more 'messy' social relations and structures which underpin the "often compromised and constrained social realities of technology use in authentic educational settings" (Selwyn 2009), a study of student experiences of social media needs to be situated within the local contexts of doctoral practices and doctoral research cultures. In taking up this challenge, this study proposes to present what could be termed a 'bottom-up' view of doctoral experience, by developing doctoral students' accounts of learning through a range of academic activities mediated by their engagement with various social media.

## 1.5 Guide to Chapters

Whilst the linear structure of this thesis constitutes a broadly authentic representation of the evolution of the study, it belies the characteristically cyclical nature of a major research project and the explorative and transformational experience of undertaking a doctoral programme. I therefore make no apologies for indicating where it is necessary, simultaneous, causal or iterative relationships between different activities that may not be apparent from their ordering in the document, through appropriate cross-referencing within and across chapters.

Following the conclusion of this introductory chapter, in which I present the research questions, I proceed in Chapter 2 with my review of the literature in the two primary fields of enquiry that concern this study, namely those relating to doctoral education and social media. The distinct focus of these two sections emphasises the significant lack of research and empirical enquiry into the intersection of the two fields, though a review of emergent educational and research practices around using social media is presented in 2.2.2. The two sections however are common in presenting an exploration of key multiple and interrelated cultures, which in both cases define transformative and contested practices and knowledge claims. I therefore examine a number of interrelated research cultures within the doctoral context and their relationship with student practices, identities and agencies, before drawing on critical perspectives of the participatory culture and technological affordances of the social web.

Within the varied definitions of the conceptual framework in doctoral theses (Leshem & Trafford, 2007), Blaxter et al. (1996: 36-37) suggest its role is to "define the territory for your research, indicate the literature that you need to consult and suggest the methods and theories you might apply." Whilst this could arguably constitute the first few chapters of a thesis, I adopt the term specifically to define the role of Chapter 3 in establishing a link between the literature review and methodology. Here, I introduce and compare several theoretical models that are dominant in the current educational technology literature, examining how they address key conceptual themes related to the methodological requirements of the study before describing the reasons for choosing to use Activity Theory for my analytical framework.

In the following chapter, I present my methodology, with an account of the pilot study and the subsequent research design, describing the sampling process, data collection and analysis, and the ethical considerations of the study. I introduce the key historical concepts of Activity Theory and the development of the analytical framework. I examine the key components of the activity system as the unit of analysis in relation to the specific contexts and methodological concerns of the study, and draw particular attention to the conceptual roles played by genres and figured worlds.

I begin Chapter 5 by introducing my participants, with an outline of their doctoral topics, programmes and activities and a review of their key social media use. In the subsequent two sections, I present the main findings of the research related to key aspects of doctoral practices, identities and agencies, drawing on selected participant narratives supported by activity systems-based analysis.

In proceed in Chapter 6 to review these findings through a series of cross-case discussions with reference to the existing literature. I attempt to categorise the key Activity Theory-based analytical tools of contradictions and cultural tools to develop a deeper understanding of the patterns and trends that emerged in the participants' adoption and use of social media.

In my concluding chapter, I summarise the key findings in relation to the research questions. I then offer my thoughts on the implications of the study to research and practice, and its contribution to the fields of doctoral education and learning technology. I present an evaluation of my research methods and the analytical framework, and conclude by identifying how the findings might inform further research.

## 1.6 Research Questions

I have outlined in this chapter a number of key epistemological positions and motivations from which several distinct research aims have been established. These can be summarised as follows:

To address how social and participatory media may contribute to new forms of doctoral practice requires a qualitative understanding of their sustained use by PhD students in authentic educational settings. I believe social media can potentially augment, disrupt and innovate existing academic practices. Therefore, the activities associated with their adoption and use by PhD students should be contextualised with existing doctoral practice and training, and situated within the research cultures of local and distributed academic environments and peer groups.

In adopting a holistic approach to the academic use of social media, one should recognise the authentic use of multiple and interrelated tools and frame the categorisation of them within dynamic and contextualised sociocultural practice.

Doctoral student progression is framed as both an academic achievement and a transformative process of personal and professional development. This study can posit the role of social media in doctoral identity work; recognising the potential contribution of digitally mediated activities and discourses in which PhD students may develop academic and professional identities and position themselves in their fields of study through actively networking and participating in multiple and interrelated academic communities.

From the outset of this thesis, I have presented the PhD student as an increasingly active and knowledgeable participant in the academic community. As a negotiated and supervised programme of study, a doctoral education constitutes a series of challenges, goals and opportunities. Doctoral agencies are contested in a range of academic and professional activities, but are also manifest in the tools and methods utilised to undertake them, and in the social and professional communities in which they are enacted. Therefore, as both a set of interconnected technologies and environments, social media can be presented as new agentic dimensions in which the PhD student is potentially engaged.

I will explore these aims with the following research questions:

- ***How do PhD students use social media in their studies?***
- ***How are doctoral identities constructed through using social media?***
- ***How can social media contribute to forms of doctoral agency?***

To address these questions, I aim to conduct an empirical study that solicits the voluntary participation of PhD students using multiple social media as part of their studies. I will adopt a broadly interpretivist approach to examining the phenomena, developing student accounts of their doctoral experience with which to gain a qualitative understanding of how and why they are actively using social media to support engagement in the activities, practices and contexts described above.

In the next chapter, I expand on my initial research focus by reviewing the literatures relating to doctoral education and social media. The intersection of these two fields of study represents a rich and increasingly important area for original empirical research, and I believe this study can provide a useful and timely contribution to knowledge in this area.

## Chapter 2. Contexts

In reviewing the literatures of the two primary fields of enquiry that intersect this study, namely those relating to doctoral education and social and participatory media, I am mindful of the holistic and sociocultural approaches I advocated in the previous chapter.

Therefore, I present doctoral contexts as a set of competing rationalities manifest in a number of interrelated research cultures, within which the PhD student is located as an increasingly active and knowledgeable participant. In directly addressing the research questions, I proceed to explore the doctoral contexts related to practices, identities and agencies.

I introduce the 'community' and the 'network' as two dominant metaphors with which to conceptualise the sociability of the web, and draw on the critical literature on technology to posit social media as 'ambivalent' technologies. This provides a useful theoretical position with which to discuss the paradoxical relationship between the 'commercial imperative' of these tools and their inherent potential to facilitate social and peer production.

Adopting Paavola et al.'s trialogic model of learning metaphors, I explore the role of social media in an academic context in relation to enquiry, networking and dissemination, and its implications for doctoral practice. I return to the needs of developing an ecological perspective of social media use raised in the previous chapter, and the difficulties inherent in defining the functionality of social media. These are rooted in the philosophical argument of technological determination, and whilst Gibson's notion of affordances provides a useful, if flawed perspective, I discuss how studies on digital literacies and frameworks such as Visitors and Residents have emerged to present a more sociocultural and practice-based approach conversant with the aims of this study.

## 2.1 Doctoral Contexts

### 2.1.1 Doctoral Education: Competing Rationalities

As the highest, most specialised and most knowledge intensive and knowledge producing form of education offered by universities, doctoral education is now right in the middle of a fierce contestation that pits the traditional values of the academy against the new values of the knowledge economy. (Usher, 2002; 145)

Understanding the sociocultural, economic and political factors that contribute to this 'contestation' is useful in providing context for conducting research within the doctoral educational domain and, more specifically, in examining how these factors potentially influence and shape social media practices of doctoral students. However, Usher's observation not only highlights ongoing debate on the role of universities in society and reforms in higher education in the UK and elsewhere, but also locates the PhD student at the epicentre; negotiating the academic community as a learner, an emerging independent researcher and potential new member of the academic profession. This frames the student, not as a passive recipient, but as an increasingly knowing, active and agentic participant in her educational programme and its role in society.

Reports on doctoral training (Harris, 1996; Roberts, 2002) have highlighted the tension "between the intellectual, theoretical and critical purposes of higher education on the one hand and the economic, practical and service purposes on the other exemplified in the skills agenda" (Rowland 2006: 45, cited in Thomson & Walker, 2010: 18). For Kendall (2002), this represents a battle of 'competing rationalities' between administrators and academics, which he contends is "inexorably going the way of the policy makers" (p.131). Progressive neo-liberal and, more recently, knowledge economy agendas, have been instrumental in shifting the emphasis from scholarship to that of training, in which the acquisition of a set of research skills and methods is given precedence over traditional values defining the PhD as intellectual, theoretical and critical enquiry. According to Thomson and Walker (2010), this remains manifest in two distinct and fundamentally opposing models:

- A purposive rationality and instrumental and strategic approach akin to a 'professionalising' of research, emphasising (increasingly generic) skills, performativity and outcomes.
- A navigational reflexivity which posits doctoral education within the process of lifelong learning that focuses on personal development, growth and satisfaction.

These transformations in doctoral education have emerged as the result of several key societal and economic drivers, most notably:

### **The expansion and diversification of the doctoral student body**

Over the last decade or so, the massification of the UK higher educational sector generally has been consistent with a greater demand for advanced degrees, resulting in an enlarged and more heterogeneous doctoral student body, and with it, a diversification of student experiences and ethnographies, and learning trajectories and expectations (Enders, 2004; Batchelor & Di Napoli, 2005).

### **The changing function and role of research in the knowledge economy**

The changing notion of knowledge in contemporary society – commonly depicted as the 'knowledge economy' – is recognised as a dominant policy agenda (McWilliam & James, 2002, cited in Tennant, 2004). As a result, learning institutions have become increasingly less engaged with 'Mode 1' knowledge production – that which is academic-driven, disciplinary and culturally concentrated on original contribution – in favour of 'Mode 2' knowledge production – that which is socially distributed knowledge with a greater focus on problem-solving and societal and market value (Gibbons, 2000; Becher & Trowler, 2001; Tennant, 2004).

These have influenced a number of key policy agendas in doctoral education:

### **Increased government intervention in doctoral education**

In direct response to the perceived shortcomings of the 'apprenticeship model' of academic training – in which training is more or less seen as an internal affair and the responsibility of faculty – there has been a significant increase in government intervention. This has established a greater link between research and innovation and economic performance and knowledge exchange (ESRC, 2009, cited in Gu, 2010), with an increased emphasis on identifiable research outcomes and improvement in completion rates (Boud & Tennant, 2006).



### **Training policy agendas**

In an endeavour to develop doctoral programmes that are relevant to new innovation and economic development and competitiveness (Yates, 2010), there is an increased focus on producing doctoral programmes that are training-focused and market-driven. These shift the emphasis towards students' employability and the need to equip successful doctoral candidates who can provide research-based solutions to wider societal and economic problems defined by the needs of industry and government (Szkudlarek, 2010).

### **The diversification of doctoral subjects and programmes**

Rotblatt (1998, cited in Gasper, 2010) argues that, by asserting deep and organised knowledge, academic disciplines serve the role of protecting scholarship from external political intervention. Yet Yates (2010) believes that under the current climate, distinct disciplinary traditions and cultures are being compromised, particularly within the humanities and the social sciences. In particular, he suggests there are fewer opportunities for student-led research topics - in which the conceptualisation of the study, and choice of theories and methods are part of the academic process and recognised outcomes - in favour of 'heterochosen' topics common in the sciences, which are predetermined by institutional or external research agendas.

## **2.1.2 Doctoral Research Cultures**

According to Raymond Williams (1983: 87), culture is "one of the two or three most complicated words in the English language." The notion of culture has evolved beyond earlier conceptions that emphasised the universal sharing of ideas. Modern anthropologists typically view cultures as typified by internal diversity (Hannerz, 1992). Throughout their studies, doctoral students are exposed to a number of interrelated and potentially conflicting research cultures. These are not static, but are subject to the type of ongoing transformative forces (both internal and external to doctoral education provision) discussed above.

Research into doctoral education has tended to focus on either the interpersonal context (particularly between the doctoral student and supervisor), or the cultural or socialisation context (environments that support research productivity), and therefore draw on social relations defined by institutional, departmental and

disciplinary boundaries. The interrelatedness of disciplinary and departmental research cultures has strong historical foundations (Gasper, 2010). In addition, the importance of representation in doctoral education, particularly in the part it plays in roles identification (as explored in 2.1.4) cannot be overlooked. Several authors have examined the representational nature of supervision. Green (2005: 162) suggests that to an extent, the supervisor represents not only the department, but the discipline itself, though students may have supervisors from different disciplines and departments.

Sociocultural theories of learning understand learning as a process that is situated within social aggregates and specific contexts that share a common practice and focus on the role of membership or community participation. However, they should also recognise how social interactions occur within and between these localised academic communities, and inside and outside the university (Baker & Lattuca, 2010). Through this lens, universities can be viewed as 'loosely-coupled' (Weick, 1976) communities of discourse rather than rigid departmental structures. Knowledge is often situated in 'epistemic cultures' (around common ideas or perspectives) rather than disciplines (Borgman, 2007). Kerr (1963) famously introduced the term 'multiversity' to describe the internal differentiation and heterogeneity of his university. Similarly, Becher and Trowler (2001) use the metaphor of academic 'tribes and territories' to explore the relationship between the normative mode of disciplinary and departmental contexts, and the operational mode of academic participation and social interaction. Whilst disciplines are partly socially (re)constructed through tribal activities, they are primarily territorial possessions, defined by their production of knowledge. Disciplinary boundaries can be tightly knit and heavily defended, or more distributed and open, but generally, disciplines do not map neatly with the tribal tendencies of academic communities, which operate in a state of constant flux due to the convergent and divergent patterns of mutuality and fragmentation inherent in academic migration, interdisciplinarity and multiple membership.

Deem and Brehony (2000) focus on two research cultures based around the student experience: research peer cultures and research training cultures, particularly highlighting the inequalities in access to these cultures for part-time, international and, to a lesser extent, women students. They document a range of personal, professional and social factors for inequality to occur, and suggest doctoral students are more likely to be influenced by disciplinary cultures than any so called 'research cultures' that may be cultivated by themselves or

institutional training programmes. For part-time doctoral students in particular, research in the social sciences is typically an isolated experience with interaction limited to that with their supervisor through occasional meetings, whilst institutional support has a tendency to homogenise international students; grouping them collectively at the expense of cultural diversity (Deem & Brehony, 2000, Goode, 2007).

## **Departmental**

Learning institutions typically inherit the role as arbiters of a PhD student's learning process by formally inducting and integrating students within a supportive research environment. Chiang (2003) categorises doctoral education as consisting primarily of supervision, research training and institutional facilities and support services. The PhD student is predominantly engaged within, and reliant on, a single, dominant and localised peer community. Broadly speaking, whilst a university or funding body establishes general requirements for the timely completion of the doctoral degree, the department is responsible for establishing specific goals, trajectories and milestones within the programme, through negotiation with the student and her supervisors.

Though doctoral programmes can vary considerably, and incorporate formal elements of training and supervision, the transition from graduate to doctoral education represents a fundamental shift from a primarily course-based environment to that of a community of scholars. This situates the student learning trajectory as a process of personal and professional development through social and collaborative activity, gaining recognition as an independent learner and reflective practitioner through increased participation and enculturation within a peer-supported research community (Schön, 1987; Brooks & Fyffe, 2004). For new doctoral students, institutional programmes constitute an anticipatory stage of socialisation (Weidman et al., 2001), providing a gradual induction into the community (Gasper, 2010). However, studies indicate that individual student experiences of the departmental support vary considerably through individual agency and sociocultural factors (Baker & Pifer, 2011). There is considerable recognition in doctoral education that the shift from a modular to independent study can, for some students, be an isolating experience. The sense of 'community' which may be established during initiation into research training programmes often dissipates in middle to late stages of PhD, when students typically 'go out into the field' to collect data and begin analysing and writing-up.

As a result, everyday interactions between doctoral students can be greatly reduced. Despite this, the social cohesion of a doctoral programme or department often continues to serve as conduits to the local research community by helping to keep students informed of events and professional development opportunities (Deem & Brehony, 2000; Baker & Pifer, 2011).

## **Disciplinary**

There are a number of well-known accounts describing the cultural differences between academic disciplines, particularly between the pure sciences, and the arts and social sciences (for example, Snow, 1959, Becher & Trowler, 2001). In addition, sub-disciplines and specialisms may have cultures very different from their 'parent' fields (Knorr Cetina, 1999), whilst cultural patterns may only just be emerging in new interdisciplinary areas (Procter et al., 2010). Differences in disciplines and specialisms, are fundamental in terms of how research is performed, and what constitutes valuable knowledge and dissemination (Weller, 2011).

Chiang (2003) proposes that disciplinary diversity in doctoral education is engendered by the fundamental research training structure, which she defines as the interaction among doctoral students, supervisors and their research projects within a specific discipline. These are, she argues, highly influential in establishing the doctoral students' research environment, but also in determining their research process and learning experiences. Taking the research structures of Chemistry and Education respectively as examples, Chiang makes the clear distinction between a 'teamwork' structure and an 'individualist' structure. In a predominantly teamwork research training structure, doctoral students are more likely to work on the same research projects as their supervisors, developing a relationship similar to a traditional apprenticeship. Interactions between the two are frequent and informal. In the sciences, a sense of community is generally built around the cohesive culture of the lab as a collective space for data gathering and analysis. In the predominantly individualist research training structures of the humanities and social sciences, where there is no agreed methodological paradigm or consensus over research questions, the domain is more fragmented. Doctoral students adopt a more solitary engagement with the research, working on individual research projects under supervisor support. Interaction is more formal and less frequent, and access to resources and facilities may be more difficult. Students are prone to feelings of isolation,

indifference and loneliness, yet are arguably more likely to develop a greater sense of independence (Chiang, 2003; Batchelor & Di Napoli, 2005; Pilbeam & Denyer, 2009).

These fundamental cultural differences appear entrenched. However, recently in the UK, targeted research funding and the increased development of research centres in the social sciences and humanities have influenced a shift from the individual to the collective, with the aim of encouraging the type of community cultures that are traditionally associated with the fields of the sciences and medicine (Ludvigsen & Digernes, 2009).

### **Supervisory**

The relationship between student and supervisor remains the primary and pivotal pedagogy on which a doctoral education is formally founded, and is well documented in the literature (see for example, Hartnett & Katz, 1977; Gopaul, 2011). For Hopwood (2010b), it represents the biggest intellectual investment the doctoral student makes. Supervisors are required to address a range of conceptual and interrelational issues in contribution to the project management of the doctoral degree and the professional development of the student, encouraging critical and reflexive thinking, and ensuring the student is enthused and inspired and encultured into the disciplinary community (Lee, 2008). Yet there are significant inconsistencies in students' supervisory experiences, which continue to cause concern (Heath, 2002). Whilst departmental and disciplinary cultures invariably influence supervisory approaches and traditions, Batchelor and Di Napoli (2005) argue the dialogue between supervisors and students should be continuous, deep and intense, of mutual interest, and "devoid of too many unwanted interferences from the other people and structures" (n.p.). Yet for some, supervision constitutes a diminishing role. As doctoral student numbers rise and workloads of supervisors increase, the attention that they are able to give to individual doctoral students is increasingly compromised (Baker & Lattuca, 2010), placing greater emphasis on the role of departmental management procedures, graduate school training and peer support (Leonard et al., 2005).

### **Training**

With an emphasis on supporting increasingly diverse and multi-vocational career trajectories, recent policies in the field of research training have focussed on

delivering more coherent and systematic institution-wide training programmes and services, principally centred on the establishing of graduate schools and centres. This represents a shifting focus towards generic training cultures inclusive of soft skills, project management and teamworking, oriented towards transferability and employability and a softening of the boundaries between academia and external sectors (Enders, 2004; Ludvigsen & Digernes, 2009). For the doctoral student, these new training structures may reduce access to department-based and discipline-specific expertise, but can present opportunities for establishing and participating in multidisciplinary and interdepartmental networks of practice, and with it a potential to embed boundary-crossing cultures within and across the university's formal organisational structures.

## **Student**

Doctoral education constitutes a fundamental pedagogic shift from mentorship to peer support, in which an academic apprenticeship is valued by participating in a community of scholars, and where knowledge acquisition is:

no longer seen as a top-down practice (from supervisor to student) but as a more horizontal process of sharing thoughts, ideas and experiences among a group of peers. (Batchelor & Di Napoli, 2005; 20)

Research into student cultures in doctoral education is limited (Deem & Brehony, 2000), but a number of studies have examined peer-based academic relationships beyond supervisory and departmental support (Lovitts, 2005; Baker & Pifer, 2011), and their influence on socialisation (Gardner 2010; Gopaul, 2011) and identity development (Sweitzer, 2009; Baker & Lattuca, 2010). These are seen as critical sources of support, contributing to self-efficacy and motivation (Baker & Pifer, 2011). In addition, study-based relationships between doctoral students have the potential to develop into sustainable sources of friendship and personal academic and moral support, fostering relationships that might contribute to postdoctoral professional collaboration (Baker & Pifer, 2011). PhD students have been shown to be highly strategic in their negotiation of different peer groups, utilising them for different purposes, and relying on many different relationships for guidance, opportunities, and support:

Efficacy and initiative are critical to making the transition from student to scholar, and engaging in collaborations with individuals in the community are key for making this transition effectively (Baker & Pifer, 2011: 12)

Most interpersonal peer networks and collaborations occur within doctoral cohorts defined by programmes or departments, rather than the broader disciplinary community (Baker & Pifer, 2011). According to Hasrati (2005, cited in Pilbeam & Denyer, 2009), informal doctoral student communities are primarily identifiable by homophilic, structural and proximal attributes. In other words, they tend to form between individuals who share; similar personal attributes (such as gender or nationality), the same doctoral programme or year of entree, and the same physical location within a department or institution, though this may be dependent on the level and nature of 'collegiality' in any individual faculty (Gardner, 2010). Training and social activities provide the potential to establish links with PhD students from other faculties within institutions, whilst events and conferences create important opportunities for external networking and socialisation into the wider academic community. Baker & Lattuca (2010) describe how many PhD students also retain important connections with pre-doctoral student networks.

Participation in peer groups has a significant effect on doctoral identity development and role enactment (Baker & Pifer, 2011). In particular, participation in multiple peer communities requires them to negotiate particular identities to earn legitimacy within different practice contexts. The applicability of roles, values and expectations will have varying degrees of (in)consistency and influence in relation to students' engagement in different collocated and distributed groups and networks, as multiple and fractured identities reinforce and impede further forms of participation (Stryker & Burke 2000, Baker & Lattuca, 2010).

### **2.1.3 Doctoral Practices and Activities**

Developing a practice-based approach to examining what constitutes doing a PhD requires identifying multiple and interrelated academic and research activities oriented towards a range of purposes and outcomes. Several authors' attempts at categorising these activities provide useful holistic perspectives of doctoral education relevant to this study. Such models are, by nature, highly conceptualised, and as such cannot be expected to represent any individual's doctoral experience. However, they encompass a range of practices and stages common to doctoral disciplines and programmes.

In his integrative model of doctoral enterprise, Cumming (2010) provides a holistic framework of mutually inclusive, interrelated doctoral practices. These are presented in a constant state of flux, embedded within a diverse range of relationships, networks, resources and artefacts that relate to several interlinked and hierarchical social arrangements within faculty and the wider research community.

#### DOCTORAL PRACTICES

- curricular
- pedagogical
- research
- work

#### DOCTORAL ARRANGEMENTS

- the participants
- the academy
- the community

Holdaway's (1996) conceptual framework provides a more granular analysis of specific doctoral activities related to specific foci.

#### PRIMARY ACTIVITIES

- Research
- Required Coursework
- Reading
- Reflecting
- Discussing
- Writing

#### SECONDARY ACTIVITIES

- Optional Coursework
- Teaching
- Publishing
- Preparing Conference Papers
- Preparing Research Proposals

#### PRIMARY FOCUS

- Acceptance of Completed Thesis

#### SECONDARY FOCI

- Acquiring of Skills, Knowledge, and Reputation
- Establishing Contacts
- Publications

Holdaway's distinction between 'primary' and 'secondary' activities relates closely



with the model proposed by McAlpine et al. (2009), in which activities are designated 'doctoral-specific' or 'academic-general' (see Figure 1). Whilst the former correspond to the specific "more structured and often benchmarked features of doctoral experience" (p.107), the latter represents less formal activities important to the process of socialisation (discussed further in 2.1.4). Hence, it is typically these 'day-to-day', 'taken-for-granted' and 'informal' activities and conversations that contribute most to a PhD students' feeling of being an academic or belonging to an academic community. In addition to research, Hopwood (2010a) emphasises the importance of supplementary learning opportunities that arise from engaging in other practices, particularly those related to teaching. Yet whilst 'extra-curricular' activities such as teaching, internships, summer schools and university visits tend to be broadly encouraged, and in some cases initiated by faculty members, the timely completion of the thesis remains the principle concern of the department and the overwhelming responsibility of supervisors (Baker Sweitzer, 2007). Such approaches also need to be recognised in relation to key stages of doctoral programmes (such as those presented by Grover, 2007), and the strategic aims of students. Baker and Pifer (2011) for example, report a shift from short-term to long-term thinking in late-stage PhD students, as publication and career opportunities come into focus.

	<b>Formal</b>	<b>Semi-formal</b>	<b>Informal</b>
<b>Doctoral Specific</b>	Submitting thesis etc.	Supervisions Training etc	Writing thesis
<b>General Academic</b>	Publishing, Conference presentation etc.	Attending conference etc.	Applying for jobs etc.

**Figure 1: Matrix of Activity Clusters – based on McAlpine et al. (2009)**

McAlpine et al. (2009) also introduce the notion of formality in defining activities, whilst offering little explanation of how they came to categorise its different levels. But how is formality defined in the context of doctoral education? Is it an indicator of importance, and if so, how is this determined? Does formality distinguish whether an activity is optional or mandatory, or whether it is assessed? Importantly, the legitimisation of these criteria needs to be seen as being a process that is highly contested (by, for example, the PhD student, supervisors, faculty and funding body) and as such, constitute potential sources of tension in regards to their importance or effectiveness in contributing to the students' education at any particular stage of the doctoral programme. These points of contestation are particularly relevant to the issue of doctoral agency, which is reviewed later in this chapter (2.1.4) and further discussed in the

conceptual framework (3.2.3).

## **2.1.4 Doctoral Identities**

### **Identity Development**

There is a consensus that doing a PhD is not just a matter of acquiring specialised knowledge and skills, and making an original contribution to a field of academic enquiry, but also comprises a transformation of identity (Austin & McDaniels, 2006; Barnacle & Mewburn, 2010; Thomson & Walker: 2010; Baker & Pifer, 2011). For many scholars, the process of undertaking a doctorate plays a central role in the early development of an academic identity (Stanley, 2004). It is also generally acknowledged that research is a reflexive process in which the values and perspectives of the researcher can shape and define the aims, methods and outcomes of the enquiry (Herman, 2010). As doctoral students are expected to adopt a highly reflexive stance in which they address and articulate their own personal development, their own awareness of who they are and who they want to be become integral to their learning process. By reflecting on what is being learnt, students encounter significant changes in personal identity (Baker & Lattuca, 2010), and the intensity of identity development in doctoral education cannot be overlooked. For many students, the PhD represents the first opportunity to develop an academic, and in some cases professional, persona. Undertaking a PhD not only represents their entry into the scholarly community and the gateway to a potential academic career, but also constitutes the most personally transformative period of their professional lives (Becher, 1993, cited in Stanley, 2004). After all, during their doctorate, students are expected to make fundamental ontological and epistemological decisions that will influence the remainder of their academic careers.

A number of pedagogical approaches emphasise how identity development is constitutive to the learning process, and is mediated through interaction with a unique set of social relationships constructed around each individual (Martin, 2009; Baker & Pifer, 2011). From a sociocultural perspective, identity construction is seen as transformative, and a student's ability to reflect on and articulate her own identity development can be understood as an evolving form of competence (Murphy & Hall, 2008; Baker & Pifer, 2011). Through the socio-constructivist lens, construction of meaning is recognised as a social as well as

psychological activity. Meaning is assimilated and re-constructed by the individual through the interaction with others, which forms the basis for individual identity (Martin, 2009; Baker & Lattuca, 2010). Sociological theories of identity development such as symbolic interactionism (Blumer, 1969) see identity simultaneously constructed by the interaction between one's perception of self and the reflected appraisal of that which is socially validated by others (Skitka, 2003). Where learning is seen as being situated, identity development is constitutive to the increased capacity to participate in the social environment in which it takes place. Learning is both socially constructed and socially constructing, and the identity of the individual as a learner is both derived from, and embedded in, her membership of, and active participation in, Communities of Practice (Wenger, 1998).

### **Identity and Roles**

As the doctorate represents a significant shift from student to independent researcher, then it is reasonable to assume the learning process also constitutes the adoption of an increasingly professional academic identity (Thomson & Walker (2010). As they engage in specific academic practices, PhD students come to accept the norms and behaviours associated with academic roles. They assign priorities to different roles, valuing (or devaluing) them in response to their importance demonstrated by the research community, and, crucially, developing the learning processes necessary to undertake those roles (Baker & Lattuca, 2010). Students assess their capacity to enact the behaviours associated with a role - envisioning imagined possible or 'provisional selves' (Kanno & Norton, 2003) - before taking on the identity associated with that role. This type of role prioritisation has implications for a learning trajectory based on socialisation (see 2.1.4), because it may either be reinforced or questioned by the community and its associated members (Baker Sweitzer, 2007). When a student's role prioritisation matches that of the community, the student is likely to be willing to internalize those roles and corresponding activities. However, critics of socialisation suggest that the internalisation of norms and values in reference to an 'ideal' represents an assimilation of those values. Sociocultural perspectives tend to present an opposing view, in explaining "how people become able to play a role successfully and appropriately" (Packer & Gioechea, 2000: 235) by assessing 'provisional selves' through both external feedback and their internal beliefs (Ibarra, 1999). In short, provisional selves do not necessarily become 'actual selves' (Baker & Lattuca, 2010).

Within the doctoral context, role negotiation and prioritisation needs to be framed in the transformative nature of identity development (Stryker and Burke 2000; Baker & Lattuca, 2010). Colbeck (2008) observes that whilst there is a human tendency to resist identity change, transformations are most likely to occur when one is transferring to a new role. This requires doctoral students undertaking parallel processes of identity development, in some cases re-establishing a student identity and role, whilst simultaneously developing a professional academic identity and the role of an early career researcher (Baker & Pifer, 2011). In addition, the doctoral student 'profile' (a source of provisional self) is not static, but shifts in response to the new rationalities underpinning doctoral education (as outlined in 2.2.1). In particular, the range of skills and attributes that characterise the new 'knowledge worker' - innovative, multiskilled, creative, entrepreneurial, collaborative, reflexive, self-motivated and self-managed - are becoming increasingly established as the cultural norm (Tennant, 2004; Boud & Tennant, 2006). The doctoral process may necessitate shedding prior identities, particularly if they appear to conflict with new identities that have to be adopted (Baker & Lattuca, 2010). For example, Hockey and Allen-Collinson's (2005) study of students enrolled in an innovative practice-based art and design doctoral programme reveals many initially felt that their established creative identities as artists or designers were threatened by the need to adopt less creative and analytical 'scholarly' identities.

Stryker and Burke (2000) view identity as a reference to "parts of a self, composed of the meanings that persons attach to the multiple roles they typically play in highly differentiated contemporary societies" (p.284). Multiple roles give meaning to the individual's place in different social groups and environments. They perform as 'strands' or 'slices' of identity that co-exist within the individual (Wenger et al., 2009). We occupy different roles, presenting different strands of ourselves, different identities, to each of the communities in which we are involved. The meaning we attach to each of the identities we present forms our view of our self and is informed by the views of our identity expressed by other members of the groups we participate in (Martin, 2009). Goffman's (1959) dramaturgical metaphor has become well known in its conceptualisation of identity as continual performativity, where multiple selves are acted out in accordance with different audiences. As described in 2.1.2, doctoral students engage in multiple practice contexts, and the social identity of an individual is often negotiated in the messy, multiple and interrelated reified forms of social

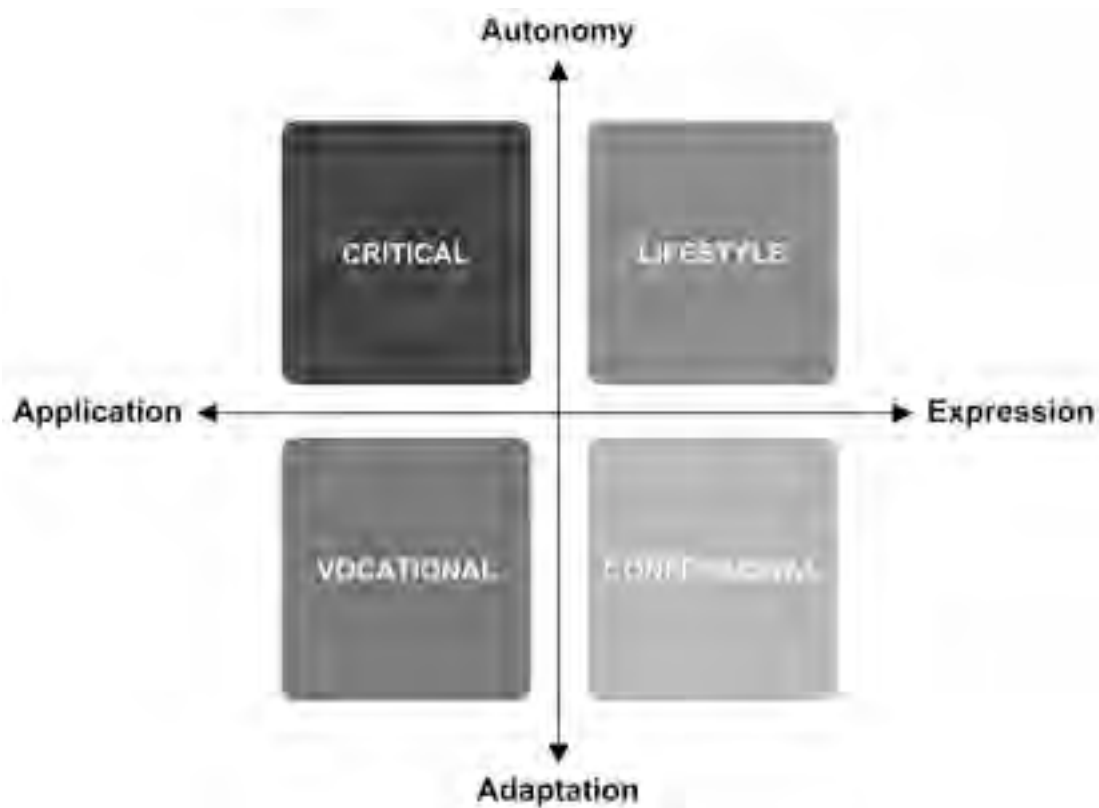
production, interaction and participation. Through the adoption of social media and networked technologies, these are becoming increasingly distributed and polycontextual (Engeström, 2005). New digital literacies help address how the negotiation of multiple practice contexts is mediated through engaging with interrelated social media:

recognising technology practice as diverse and constitutive of personal identity, including identity in different peer, subject and workplace communities, and individual styles of participation. (Beetham et al., 2009: 8)

Potential conflicts and tensions often lead to strategic realisations of technological practice along traditional binaries, particularly between 'peer' and 'institutional' knowledge cultures (Beetham & Oliver, 2010). Yet individuals may have as many identities as the number of groups in which they actively engage (Stryker and Burke, 2000). This would suggest that identities - and the activities associated with them - can be distinct, and mutually exclusive, but in reality they are often interrelated and potentially conflicting (Colbeck, 2008). Similarly, the social media environments in which students engage may or may not correspond neatly with their multiple practice and audience contexts. Therefore, they are required to negotiate identity production across these multiple contexts through complex processes of either integration or fragmentation, or combinations of the two (Colbeck, 2008). Barnacle and Newburn (2010) argue that doctoral students who consciously adopt a 'fractured subjectivity' are more able to shape their identity by maintaining "coherence through multiple performances of different identities with different material semiotic dimensions" (p.441). Developing strategies across multiple contexts and sites of identity production provides them with opportunities for effectively positioning themselves in sites of knowledge, resources and opportunities within their networks.

### **A Postmodernist Critical Perspective**

Lifelong learning theories characterise the individual biography as a journey in which the personal construction of identity becomes an integral part of the learning process (Alheit, 2009). Usher et al. (1996) present a postmodernist approach to identity formation within an experiential learning context. In the schema (Figure 2, below), they demonstrate how lifelong learning can be understood through four distinct contemporary social practices: lifestyle, confessional, vocational, and critical.



**Figure 2: Based on Usher et al. (1996)**

The role of identity formation is particularly evident in the two opposing practices of the confessional and the critical. Edwards and Usher (2001) draw largely on Foucault's notion of the 'confession,' which describes the rituals that unfold within power relationships. In a confessional practice, the learner is disempowered in accepting the dominant (or solitary) model of learning, aligning her subjectivities with formal educational discourses to articulate her own learning needs. In a process where the "externally imposed discipline has given way to the self-discipline of an autonomous subjectivity" (pp.12-13), the pedagogical emphasis is on self-improvement, self-development and self-evaluation. This promotes a modernist notion of identity; one that is stable, unified, coherent and developmental. Unlike confessional practice, where empowerment is illusory, critical practice authenticates empowerment through self and social transformation. Autonomy is achieved through questioning, challenging and potentially changing - rather than adapting to - particular learning contexts. Postmodernist approaches challenge the tendency to see individual and society as a dualism; rather they see 'subject' and 'social' as produced through discursive practices (Tenant, 2009). The critical pedagogies literature (for example, Friere, 1970) emphasises the politics of representation in the cultural processes of

learning and education, and sees representation of self as a socially and politically constituted agent that shapes meaning making and identity formation. Edwards and Usher (2001) see this critical practice as promoting a postmodernist perspective, which understands culture as an ongoing process, in a state of constant flux. This corresponds with a broadly sociocultural perspective of identity as being fragmentary, multiple, contradictory and relational, open to (re)construction across different contexts (Hall, 2008).

## **Digital Identities**

The concept of digital identity is primarily a socio-technical construct that has evolved through a number of theoretical perspectives. Whilst early definitions primarily explored ideas of 'virtuality,' contributions from the sociological and sociocultural literature have emerged to present digital identity as 'multiphrenic' (Gergan, 2000); that is, created not only across multiple media, but also performed and presented through different subjectivities. These ideas have been filtered down and operationalised into common usage, where digital or online identity is broadly understood as the representation of a persona that an individual presents across the digital communities in which he or she is represented. That persona can describe a composite model of an individual's digital identities representing the activities and roles they perform in different digital environments. As social media provides new channels of academic discourse and dissemination, cultivating and maintaining a web presence is increasingly seen as part of the development of an academic public persona.

The 'confessional' approach described by Edwards and Usher (2001) above promotes a modernist perspective to instrumentalist constructions of identity formation, which assumes identity is 'manageable' and sees digital identity development as a purposeful and managerial practice. This is evident in forms of formal and informal profiling - both within specific social media and aggregated forms - which are routinely formalised around professional or institutional roles, or representations of professional development. Tenant (2009) argues the modernist notion of identity is especially manifest in the formal profiling and representational activities associated with learning plans and portfolio development. Initiatives such as e-portfolios are held up as focal points for student engagement with social media and for the development of digital and information literacies (Beetham et al., 2009). Yet as Selwyn (2007) observes, students can quickly become 'portfolio people,' in situations where learning

becomes overtly oriented towards the production of CVs, resumes and personal development plans. Increasingly, PhD students see online environments as entrepreneurial tools for raising their professional profile and developing their marketability in the academic and professional arena. For Tennant (2004), this emphasis on the 'management of self' represents a commercialisation of individual intellectual property and the marketisation of the doctoral student as a research product.

### **Conceptualising the Research Field**

Students' identity work engaged in locating themselves in the research field is seen as a crucial component of their doctoral education (Herman, 2010). Thomson and Kamler (2010) suggest that the identity formation of doctoral students is necessarily fragile, in order to allow them to evaluate key positions and debates within their research fields and make decisions that will contribute to their own understanding and location. Defining 'the research field' is problematic, complicated by varied and inconsistent use of the term in academic discourse. In addition, there is a tendency to use similar terms such as the research 'community' in ways beyond the boundaries defined by academic department or institution to include external disciplinary and multidisciplinary elements. Importantly, Brown (2010: 180) stresses how defining the research field is an integral part of the doctoral student's learning process:

[Research] fields are not always quite so simple to identify, and exploration of the field, in order to position one's own work, constitutes a major part of the project of completion of a doctorate. Fields are not discrete, nor are they defined by or limited to academic disciplines, but incorporate, relate to, overlap with, influence and are influenced by each other and domains of professional practice.

Theory isn't simply adopted and applied. As Gulson and Parkes (2010: 82) note, a theoretical perspective "constructs the scholar as much as it illuminates the data." As this theoretical development is externalised, individual academics are "adopted by the theory, as another of its conduits into discourse." Lather (2006: 47) sums up the relationship between identity and the research field:

(S)tudents develop an ability to locate themselves in the tensions that characterize fields of knowledge... such efforts need to be situated in a context of historical time marked by multiplicity and competing discourses that do not map tidily onto one another, a time of unevenly legitimized and resourced incommensurabilities regarding the politics of knowing and being known.



Therefore, positional activity consists of developing conceptual and theoretical perspectives and adopting particular identities, subjectivities and sets of relationships. This introduces the question of how these processes are mediated and externalised.

### **Identity Work - Forms of Mediation**

Doctoral students are required to engage with and conceptualise previous research that encompasses a complex range of theoretical and empirical work, to establish key perspectives and defending knowledge claims. As the primary academic practice, Kamler and Thomson (2006, 2007) maintain it is through writing that doctoral students primarily learn how to position themselves as scholars. They advance doctoral writing beyond the mastery of written communication skills and relevant disciplinary knowledge, to its role as the principal act of performativity in establishing scholarly identity. In particular, the literature review is reconceptualised as a key site of identity work. For Brown (2010: 176), the literature review represents:

a form of active engagement with writing and other academic and professional artefacts in order to gain a sense of the landscape in which we are working, and figure out where we stand in this landscape, and, importantly, a clear sense of the other individuals and groups standing alongside us.

What Brown is stressing here is the need for the doctoral student to establish a deep understanding of the relationship between the individual members and stakeholders of the academic community and the theoretical field in which they are actively engaged in (re)interpreting. He goes on to emphasise how active participation in the former can support the process of engaging in the latter:

(N)ot knowing it sufficiently well to be able to position your work and establish its originality and rigour, clearly constitutes a major threat to the perceived value of the project. There are clearly ways of mitigating this risk. A field is sustained by a community of researchers, and so interaction with members of the community and participation in its activities, for instance, help to ensure the relevance and value of the research, and help, in turn, to shape the field. (Brown, 2010: 176)

Kamler and Thomson limit their observations on identity work to formal texts, with particular focus on the central role of the literature review. They do not explicitly address other, less formal forms of writing with which the doctoral

student may engage, or other sites of dissemination. In their highly reflexive account of doctoral study, Barnacle and Mewburn (2010) argue that scholarly identity is distributed and as such, identity production can be performed in other, 'non-traditional' sites of learning. Taking an Actor-Network theoretical perspective, which affords the same consideration to artefacts and systems as it does to people (see 3.2.3), they attempt to conduct an authentic portrayal of doctoral students' activities, which "actively utilise, initiate and interface with myriad associations of people and things that populate what might be called the 'research landscape'." (p.434) By actively participating in this landscape, doctoral students learn to adopt and perform scholarly identities through a range of activities, some of it text-based, but also other recognised scholarly activities and artefacts, such as presentations, meetings, events, conferences and workshops. This type of perspective has significant implications for considering the role of social media. It also positions the role of social media in this context as an under explored area. The necessity to actively participate in the research field and the potential of identity work in multiple research environments and artefacts provides an interesting framing with which to view the potential value and role of social media.

### **2.1.5 Doctoral Agency**

Doctoral education policies and programmes seek to support self-directed study in a shared training environment, and create independent researchers socialised into a discipline and an academic community and equipped with a range of academic and life skills. Typically, doctoral students move away from the structure provided by course schedules to enter into a self-directed period to develop their own academic identities and independence as scholars (Pilbeam & Denyer, 2009; Baker & Pifer, 2011). Through participation in the academic community, doctoral students build the knowledge and skills required for scholarship in their field of study, and make choices about the associated roles and values (Baker and Lattuca, 2010). In this sense, the doctoral student can be seen as an increasingly participatory agent in an educational programme that constitutes a negotiation of both the transition from student to independent researcher, and a process of socialisation and enculturation into a specific field of academic enquiry.

In basic terms, agency is the power to affect change. Human agency is implied in

purposeful human activity; in the way a person is seen as being in, and responds to the world. From a broadly sociocultural perspective, agency supports the notion that what people do is (at least partly) shaped by their own intentions and feelings; but that individual self-determination is less a form of inherent free-will, and more enacting in response to social relations through the reinterpreting of cultural norms and expectations (Engeström, 1999a; Hopwood, 2010b).

The social nature of learning is manifest in the sociocultural conceptualisation of learning as increasingly skilled participation in the practices of a specific social group, community or field. Through participation in an academic community, doctoral students learn the concepts and principles associated with a field, its methods of inquiry and its criteria for assessing and validating knowledge (Baker & Lattuca, 2010). 'Ways of being' and 'ways of doing' are implicit in the practice or culture of the community. This institutional context - sometimes referred to as the 'hidden curriculum' (Gilbert, 2009) - establishes the knowledge seen as providing membership into a community; including structures, beliefs, values and practices, the rules and cultural norms that guide them, and the language and symbols that mediate social interactions within them (Gopaul, 2011).

Socialisation has become a common framework through which to view the doctoral student experience, particularly in studies from the United States (Hopwood, 2010b). Socialisation describes the process through which an individual learns to acquire and adopt the characteristic values, skills, attitudes, norms, and knowledge needed for effective membership of a given society, group or organization (Sweitzer, 2009; Gardner, 2010; Gopaul, 2011; Weidman et al. 2011). Doctoral student socialisation has been variously categorised by the acquisition of knowledge and skills, 'learning the ropes,' and interaction with experts (Weidman et al., 2001), and has been operationalised into specific stages: of anticipatory, formal, informal, and personal development (Thornton & Nardi, 1975, cited in Gopaul, 2011). Faculty requirements, events, rituals and artifacts communicate important information about the values, norms and expectations of its members (Baker & Lattuca, 2010). But it is the faculty members themselves who are seen as the primary socialising agents, transmitting their attitudes, values and behavioural norms both formally - through support structures and supervision - and informally through social activities, interaction and feedback (Bragg, 1976, cited in Gardner, 2010). However, Gardner's (2010) study indicates the majority of faculty members do not recognise the importance of the roles they play in their doctoral students'

socialisation, attributing the key influences to external experiences, such as conferences and publishing.

Critics of socialisation theory argue it presents doctoral education as an essentially linear, monolithic and conservative trajectory, assuming a 'culturally neutral' orientation of assimilation and homogeneity (Tierney & Rhoades, 1993; Tierney, 1997) that emphasises generic doctoral cultures, norms and practices (Hopwood, 2010b). In doing so, it does not account for differences in disciplinary cultures (Golde, 2005; GoPaul, 2011) and the dynamics in which these overlap with departmental and institutional groups (Gardner, 2008) (as discussed in 2.1.2). Empirical studies tend to be limited to formal faculty-led initiatives (such as internships), formal external conventions (such as conferences), or the accomplishment of specific goals (such as publishing) (Weidman et al., 2001). Crucially, it fails to recognise the importance of informal, unstructured experiences, particularly those related to the influence of peer culture (Gardner, 2010). Socialisation also assumes a power differential between the faculty members and the doctoral student that is unidirectional, dismissing any effects the socialised may have on the socialising agent or the socialising organisation (Tierney, 1997; Antony, 2002; Gardner, 2010).

For some, socialisation by nature does not account for the experiences of underrepresented and marginalised groups (Antony, 2002; Antony & Taylor, 2004). Bourdieu's theory of practice has been widely adopted to explore and expose the reproduction of social stratification within educational structures. GoPaul (2011) uses Bourdieu's tools of capital, field and habitus to show how the structural and procedural dynamics of doctoral education are constitutive of the practices and processes of socialisation, serving as either enabling or limiting factors for students to reaffirm existing inequalities. He shows how normative socialisation patterns in the habitus of particular students may mediate a range of abilities and competences, such as cultivating faculty and peer relationships, and accessing funding. The field defines the 'rules of the game' that assist in setting standards or regularities that are not explicit. The dispositions associated with habitus construct action to the extent that actors will engage in activities and practices that create success as defined by their resources and previous experiences. Habitus acts as a constellation of perceptions and attitudes that frame possible actions in different situations. Thus, habitus acts as both a generative and restrictive mechanism in that some actions are deemed more appropriate in certain contexts based on an individual's status and experiences

assisting in determining what is valued and acceptable. According to GoPaul (2011), early socialisation is seen as extremely important to the development of habitus, in that it produces perceptions, beliefs, and practices that reinforce the reproduction of existing external structures and social stratification.

A number of studies (for example, Baker Sweitzer, 2007; Hall & Burns, 2009) describe identity conflicts when there is a disconnect between the values and goals of faculty or doctoral programmes and those of the student. In such circumstances, it seems many students accept the need to 'play the game', at least for the duration of the doctorate (Baker & Lattuca, 2010). But does this imply that doctoral students can be successful within a community if they yield to forces of assimilation and homogeneity (Tierney & Rhoades, 1993). Is it possible to develop a personal understanding of a field's content, values and norms, and learn how to work within those frameworks, without having to internalize – 'or accept as one's own' – such cultural conventions? (Antony (2002; Baker & Lattuca, 2010). Taylor's (2007) study of students in professional doctoral programmes in the UK indicates an intimate relationship develops between a student's intellectual and personal development within her learning experiences. Changes in personal identity are influenced by deep reflection on what is being. Baker and Lattuca (2010) combine sociocultural perspectives and social network theories to examine the variations in individual agency within discourse communities such as academic fields and departments. Students exhibit agency in their acceptance or otherwise of a conferred identity. They conclude that successful participation does not inevitably lead to identity change and reinforces the agency of the individual to accept or reject particular academic identities.

However, the present study has identified a need to recognise the distributed nature of the sources of knowledge and support with which doctoral students engage. A sociocultural view would seem to lend itself to examining the type of agency that may be involved in the way doctoral students navigate, construct and exploit their experiences outside formal institutional and disciplinary boundaries, though empirical and theoretical work in this area remains under-explored (Hopwood, 2010a; 2010b). Francis (2007) examines doctoral students' agency with a specific focus on their use of digital tools, "cultivating, nurturing and activating globally distributed funds of living knowledge" (p.211) through engagement with peers and experts outside institutional boundaries. Whilst his empirical evidence is predominantly based on postgraduate students' use of pre-web 2.0 technologies (namely, a Learning Activity Management System (LAMS)

and a multiplayer role-playing game), the emergent social web is theorised as representing important sites of self-authoring. He draws on to reconceptualised as distributed forms of 'figured worlds,' the term Holland et al. (1998) use to describe culturally constructed environments (see 2.1.4). Students gain agency in breaking away from their institutional Communities of Practice, to develop and manage dynamic and globally distributed 'funds of knowledge' (Moll et al., 1992, cited in Francis, 2007) through their engagement with peers and experts outside institutional boundaries.

## 2.2 Social Media Contexts

### 2.2.1 Web 2.0 Cultures

Media theorist Henry Jenkins (2006) reminds us that whilst interactivity is a property of the technology of the new web, participation is predominantly cultural. His ideas of a participatory culture arose primarily through studying how sub-cultural practitioners appropriated web tools for their own purposes. This and other readings of the early development of the social web describe how the emergence of broadly open access and participatory cultures supported the principles for creating and sharing content, ideas and artistic expression with others, and with it a strong sense of social connection and community (Jenkins et al., 2007). For Rheingold (1993), the practices of early web users created an ecosystem of subcultures in the public sphere, a 'virtual community' analogous to the behaviours commonly associated with physical and geographical communities. Other social theorists (for example, Castells, 1996; Bauman, 2001; Wellman et al., 2003) offer an alternative perspective, suggesting the networked landscape of the web increasingly represents new forms of sociability based on individualism. They describe a transformation in social structure from predominantly communal forms (with shared values and interests) to predominantly individualistic forms; networks in which actors create social networks for personal gain rather than their intrinsic value (Gane & Beer, 2009). They largely attribute the personalisation of the web to the rise of an 'internet society' determined by a fundamentally capitalist, performance-driven logic, transforming the role of the individual from citizen to consumer (Castells, 1996; Bauman, 2001). Whilst many believe the increasingly open, dynamic and decentralised landscape of web 2.0 reinforces networked individualism, both of these theoretical orientations are worth noting, as 'community' and 'network' remain the dominant metaphors with which the sociability of the web is conceptualised. They also correspond with key sociocultural theoretical constructs and models of analysis for researching the social web, and these are discussed further in the following chapter.

Jenkins' (2006) concept of convergence culture was originally conceived to describe potential tensions arising from the relationship between an increasingly mainstream web-based participatory culture and established cultural industries

(Adorno, 2001) epitomised by mainstream media. How usefully might this approach be applied to educational and academic domains? Allen (2008) contends web 2.0 represents more than merely the coming together of old and new media forms, but is rather a “process by which various instantiations of human behaviour involving information transfers and exchanges, previously separate, come together to occur in a comprehensive, interlinked manner” (n.p.). He suggests web 2.0 constitutes a range of ‘ontologically non-compatible’ elements:

- Technological - Implementations that prioritise the manipulation and presentation of data through the interaction of both human and computer agents
- Economic - Utilising new web technologies to connect people and data together in meaningful exchanges for financial reward
- Socio-cultural - Users are perceived as active participants, engaged in creating, maintaining and expanding web content
- Political - The democratisation of the web, emphasising freedom of choice and the empowerment of individual users

To help explore this non-compatibility further, it is useful to draw on some of the critical literature on technology and the social web.

### **Critical Perspectives**

One of the values of critical theory is that it challenges what is frequently taken for granted; asking questions of things that are otherwise considered to be common sense or self-evident. This is partly achieved through the ‘historicizing’ of ideological claims: asserting the difference between that which is claimed and that which is evident from historical and social references (Nicholls & Allen-Brown, 1996; Kellner, 2003). Feenberg (2002) for example, describes how critical theory can help recover ‘forgotten contexts’ to develop a historical understanding of technology. Described as a ‘third generation’ critical theorist in the Frankfurt School tradition, Andrew Feenberg (1991) revises previous critiques by Marcuse and Habermas to explain how interconnected codes of power and capital are embedded in technological development. He rejects essentialist and deterministic views - in which technology has an immutable essence beyond human intervention (Tripathi, 2008) - in favour of technology as ‘ambivalent’ (Marcuse, 1991). This is distinguished from neutrality by the role it attributes to social



values in the development of technological systems. For Feenberg (2002), the development and use of ambivalent technology has the potential to be transformative, emancipatory and democratic. He uses the twin analogy of the factory and the city to describe how educational technology is polarized by two conceptual models of post-industrial education. Essentially, one views learning technology as a medium of automation - a 'logic of production' oriented towards efficiency, standardisation and reproduction - whilst the other emphasises diversity, societal interaction and communication. We therefore have the choice to employ technologies to support education as either a technocratic commodity or a liberatory project.

Benkler (2006) believes the potential resonant in these ambivalent technological philosophies are manifest in the social and peer production values of the social web. Yet whilst these may be apparent in practices such as the Open Source movement, Scholz (2008: n.p.) insists this new realisation of the web remains largely the domain of "professional elites that define what enters the public discourse." Indeed, contemporary critical literature provides a collective deflating of the rhetoric within the social and computer sciences that surrounds web 2.0 technologies and practices. Most principally, so called democratic forms of media consumption and cultural production, and creative expression and production of web 2.0 are challenged by the underlying "dictates of a neo-liberal socio-political hegemony" (Jarrett, 2008: n.p.), as evidenced in the exploitation of user-generated content by major corporations (Petersen, 2008). As Silver (2008: n.p.) reminds us, "when corporations say community they mean commerce, and when they say aggregation they mean advertising." Similarly, a number of critical authors argue that the development and implementation of educational technology are not guided so much by empirical and theoretical knowledge about learning as much as they are by neo-liberal and commercial interests (Nicholls & Allen-Brown, 1996). Whilst the open access and participatory culture of web 2.0 suggest these services and tools are 'democratic' in nature, Friesen and Lowe (2012) highlight the 'commercial imperative' of many social media, and explain how this specifically underpins connective learning practices. Drawing on the analytical frameworks of media theorist Raymond Williams, they argue business models inherent in the design of proprietary social media are inseparable from their user experience "in ways that significantly detract from learner control and educational use" (p.2).

## **2.2.2 Educational and Research Practices**

Drawing on Anna Sfard's (1998) metaphors of learning – acquisition and participation – Lakoff and Johnson (2003) suggest most learning in networks is concerned with learning as acquisition, and most learning in communities is concerned with learning as participation. Paavola et al. (2002, 2005, 2010) extend these metaphors to present a trialogic model of three areas of practice, adding production to Sfard's acquisition and participation. These metaphors can be seen as broadly corresponding with three interrelated areas of doctoral practices: enquiring, networking and disseminating. This approach provides a useful heuristic with which to guide a further review of the literature.

### **Knowledge Acquisition Metaphor (Enquiring)**

The social web has broadened and fragmented information contexts, with a new ecology of increasingly open-access distributed and socially negotiated knowledge domains. Whilst critics (for example, Keen, 2007) suggest informal channels of dispersed and unaccountable 'amateurs' are undermining the professional and critical filters of an 'informed citizenship' of experts and gatekeepers, traditional notions of knowledge acquisition and validation are being challenged (Cormier, 2008). Deleuze and Guattari (1987) adopted the term rhizomes - underground stem systems of plants consisting of semi-independent nodes whose growth are bounded only by the limits of their habitat - to explain non-hierarchical, horizontal structures which form multi-directional connections. The concept has been explored in the educational field primarily to explain distributed, socially negotiated knowledge production in online learning environments (Cousin, 2005). Cormier (2008) argues, "the rhizomatic model dispenses with the need for external validation of knowledge, either by an expert or by a constructed curriculum." Instead, knowledge is constructed and negotiated in real time through the contributions of those engaged in the learning process; spontaneous and continuous acts of construction and reconstruction. So called 'knowledge-pull' models of online learning are characterised by social environments which enable learners to gain access to information outside their primary knowledge domains by sourcing less-structured resources from a wide array of content, communities and experts. Web 2.0 based learning constitutes a shift from 'one-size-fits-all' content-centric models to user-centric models; a distributed control of knowledge resources which is increasingly decentralised; and a bottom-up approach where communities emerge naturally and evade the control mechanisms of formal

organisations and institutions (Faraj, & Wasko, 1999; Chatti et al., 2007).

Traditional methods of academic reward such as citation uphold quality standards, whilst ensuring academic elitism in a cyclical process of 'self-reinforcement' (Becher & Trowler, 2001). However, academic social capital and status instead may be determined by technocratic modes of influence that tend to privilege 'net savvy' academics (Siemens, 2006a). Within higher education, students have been amongst the most vociferous in questioning the academic integrity of web 2.0 activities (Bayne, 2006), revealing generally cautious approaches to negotiating online identities and sourcing digital texts; emphasising the value they afford traditional, authoritative and trustworthy sources. Chang et al. (2008) describe the tensions that arise between the motivation to engage in 'student-based pedagogies' and their dependability on traditional authoritative sources. Studies like these emphasise the genuine concerns over the integrity, quality and reliability of the discourse and content that takes place within these informal academic environments, compared to the assumed reliability and trustworthiness inherent in traditional outputs.

Information literacy is defined by the "skills and understanding to search, authenticate and critically evaluate material from the range of appropriate sources, and attribute it as necessary" (CLEX, 2009: 7). Academics are increasingly required to determine and maintain the currency, sustainability and value of online knowledge resources. Initially gaining recognition across the educational technology blogosphere, George Siemens' (2004) and Stephen Downes' (2005, 2006) introduced Connectivism and Connected Knowledge theories in reaction to the increased growth and complexity of networked information resources and the communication affordances of the web. Connectivism frames learning as an individual's ability to access specialised nodes or distributed information sources as and when required, and the ability to develop and maintain and these connections. The 'capacity to know' is more critical than what is 'currently known' from the accumulation of prior knowledge. Learners evaluate the currency, sustainability and value of the knowledge resources with which they are interacting (Siemens 2004, 2006a). The growth and complexity of knowledge requires that a learner's individual capacity for learning increasingly resides outside the learner (within a community or technological network), and needs to be made explicit in the connections she forms with other people and information. In effect, the 'know what' and 'know how' of knowledge (Brown & Duguid, 1998) have been supplemented by the

'know where' (Siemens, 2006a). Learners need to develop meta-cognitive skills to connect subsets of specialised knowledge fields and communities, and nurture and maintain the connections to facilitate ongoing learning. Kerr (2007) however, questions the way Connectivism privileges knowledge currency, suggesting it obscures the durability of knowledge, and the fact that, at any given time, some knowledge is always more important than another.

### **Participation Metaphor (Networking)**

In the participatory metaphor, "learners are conceptualised less as containers into which knowledge is delivered and more as actors who are coordinated into "taking part" in knowledge" (Crook, 2002: 162). The potential role of networked technologies and different social media platforms and services exploit network and community metaphors of social interaction. The widespread adoption of prominent Social Network Sites (SNS) such as Facebook and MySpace, and microblogs such as Twitter, introduces both synergies and tensions between recreational social networking and its potential appropriation for academic purposes (Veletsianos & Kimmons, 2012). In their comprehensive review of the literature on SNS, boyd and Ellison (2007) describe how digital networks enable individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system. These services can significantly enhance the sociocultural contexts of research practices (Briggle & Mitcham, 2009), foster collaboration and collective intelligence within the academic community (Eijkman, 2008), whilst enhancing community outreach opportunities, social capital and career advancement (Veletsianos, & Kimmons, 2012). Similarly, Veletsianos (2012) found that academics used Twitter for networking, 'crowdsourcing' information and sharing resources.

Further, the adoption of these new technologies characterise a shift from the 'instrumental' to the 'expressive' internet (Tufekci, 2008) in which the user is oriented to performing:

social interactions, self-presentation, public performance, social capital management, social monitoring, and the production, maintenance and furthering of social ties (pp. 547-548).

Brake (2009) suggests social networking and microblogging primarily promotes

'phatic' communication, which "serves to establish bonds of personal union between people brought together by the mere need of companionship" (Malinowski 1923: 315, cited in Brake, 2009: 50) Unlike blogging, they tend to be non-dialogic and "content-less in any substantive sense" (Miller, 2009: 395, cited in Brake, 2009: 30). However, academics are required to evaluate the 'appropriateness' of social and phatic dialogue in predominantly professional online communities and networks (Conole, 2010). Working exclusively within the institutional constraints of faculty significantly limits access to specialist knowledge the doctoral student typically requires. Even though they are likely to share disciplines and fields of enquiry, faculty cannot match the vastly increased academic pool potentially available through online networks. However, as Weller (2011) observes, the tendency to coalesce around shared research interests, specialisms and professions can contribute to a lack of a diverse or dissenting discourse. The potential 'echo chamber' effect of specific and narrowly defined online social networks has been widely discussed (notably by Van Alstyne & Brynjolfsson's (1996) work on 'Cyberbalkanization').

### **Production Metaphor (Dissemination)**

Scholarly discourse consists of the exchange of ideas and arguments, through which the knowledge base of a discipline is advanced. Social media can change both the form and the means of dissemination of scholarly discourse (Ingraham, 2005). Research funding requirements, institutional policy shifts in expectations of the role of research in society have intensified impact and outreach agendas. In this environment, academics are finding themselves under pressure to engage with wider academic, and increasingly non-academic audiences, and make clear the relevance of their research in relation to wider societal issues and prescribed 'real-world' problems.

Usefully, Weller (2011) locates the role of social media in disseminating research in the context of the research or publication (life)cycle; essentially an economic model typically delineated by funding or programme requirements. Researchers perform a range of tasks: seeking new information, gathering data, analysis, reflection and discussion, and publishing (James et al., 2009). It is not unusual for academics to take a guarded approach to discussing projects in progress at conferences, and large-scale research projects in particular are sometimes required to produce formal interim reports. However, there is a general expectation that academics conduct their research and disseminate at the end.

For Weller (2011), the adoption of digital, networked, and open approaches potentially refocuses activity, engagement and reputation to that of an 'ongoing' context, representing a fundamental shift from specific and formal outputs to "sharing smaller granularity outputs earlier in the research cycle" (p.62).

Blogging in particular offers flexible solutions to this level of granularity. Blog posts can be widely varying in terms of writing styles, lengths, and even media, compared with the relatively rigid formats and formal requirements of established outputs such as journal articles. Blogs represent a more open, flexible and accessible medium through which to release ideas, prototypes, and draft results throughout the lifetime of a project and provides opportunities for generating interest, publicity and feedback. Researchers have used blogs as an alternative to research journals for developing ideas and concepts (Ferguson, et al., 2007, 2010), for aggregating resources (Kirkup, 2010), and for qualitative data collection (Hookway, 2008; Chenail, 2011). Bloggers typically employ a subjective rather than objective voice common in formal research writing (Kirkup, 2010). This type of performative writing is seen as an example of 'conversational scholarship' (Gregg, 2006), enabling academic work to be accessible to a wider audience outside the academy. Concerns over the academic legitimacy of blogging persist, though Siemens (2008a) argues the type of informal peer review processes he has encountered within the academic blogging community are at least as demanding as those of any scholarly journal in the field.

### **2.2.3 Functionality and Purpose**

Technology is becoming increasingly recognised as an important and distinct field of philosophical study. The question as to whether technology itself is determined by, or is a determinate of, society's structure has become a major point of contention among social and critical theorists (Ruse, 2005). Technology itself has no 'essence,' but is rather a specific configuration of some concrete entity, such as a design, a project or a product. During this process of materialization, a piece of technology becomes associated with one or more practical purposes (Arisaka, 2001). Whereas instrumental theory posits technology as socially and politically neutral (i.e. without intrinsic value) - as 'tools' to serve the purposes of their users - critical theorists view technology as value-laden with the social, historical and political cultures in which it is formed (Feenburg, 2002).

Gibson's (1979) work on affordances may have some relevance here. His interactionist view of perception and action as an aspect of the environment has had significant influence on the educational technology field. Whilst Gibson's frame of reference primarily focuses on utility - the fundamental characteristics of the object in relation to the user - Norman (1998) applies a design perspective to emphasise usability, which accounts for how an object is perceived. He argues real affordances are not nearly as important as 'perceived' affordances, for it is these that determine the actions that can be performed and signal to the user how they may be accomplished. Affordances have been used to describe how specific features of technologies can support learning (for example, Conole & Dyke, 2004; Conole 2007; Bower, 2008). However, Oliver (2005) feels these interpretations have expanded original concepts of affordances into a "conglomeration of claims about perceptions, actions and characteristics." (p.409). In using social media, specific affordances – or, to broadly adopt Norman's definition: user perceptions of usefulness – may not be easily apparent. The most evident problem – particularly given the holistic approach of this study – might be in determining what the technology under investigation is: how it is defined and what it represents. Shirky's (2010: 53) view of media as a bundle, "referring at once to process, product and output" highlights the difficulty in categorising the mixed ontological nature of digital technology.

A similar observation is made by White and Le Cornu (2011) in proposing 'tool' and 'space' (or 'place') as the most appropriate metaphors to represent contemporary use of digital environments. The 'Visitor and Resident' framework (White et al., 2009; White & Le Cornu, 2011) describes how learners engaging in social media orient towards one of two distinct types. Visitors are goal-orientated, and see the web primarily as a 'toolbox.' They may actively use a range of social media but do so in a purposeful, task-orientated way, without endeavouring to develop a long-term digital presence. Conversely, residents see the web more as a set of interrelated spaces, primarily in which to engage in sustained social interaction and develop and cultivate a long-term digital presence. Whereas Prensky's (2000) 'pre-web 2.0' concept of digital natives and immigrants became largely reduced to generational factors, this perspective argues social media use is less determined by age or experience related competences, but is rather influenced by learning ecologies. Visitors it seems, tend to value and rely on traditional modes of learning content delivery and the reassuring role of an expert, whilst residents tend to see learning as an explorative and social activity, in which self-identity development plays a key role.

Corresponding holistic approaches are evident in a proliferation of new literacy metaphors - including digital, web, media, information and network literacies - which have been proposed to promote the study of literacy in emerging digital media and networked technologies and practices. These have become increasingly influential with educational policy agendas and strategies across the educational spectrum. In Higher Education, digital literacies represent "a significant and growing deficit area" (CLEX, 2009: 6) and have incorporated studies examining student experiences, competences and access to technology. Fundamentally, these new literacies represent a shift in focus from procedural and instrumental conventions of digital technologies and related skills and competencies, towards a more holistic understanding of creative, critical and ethical uses of digital technologies, and their social and cultural settings (Belshaw, 2011). Contemporary models in higher education are founded on literacies that have been largely organised around the transmission of text-based printed materials and specialist knowledge defined by academic disciplines. It is argued these fail to adequately prepare students for the increasingly interdisciplinary and innovative skillsets they need to navigate and negotiate emergent economic and cultural artefacts (Luke, 1997). New literacies are seen as a necessary response to the sociocultural conditions of emergent technologies, empowering students to participate in an increasingly complex, interdisciplinary and networked society (Kellner, 2000; 2003). However, there is still considerable debate over what actually constitutes literacy; Karlsson (2002) suggests new literacies are merely print literacies that appear on the web, particularly as text still dominates the medium. It is seen as a competence or cognitive capacity beyond an exclusively functional aspect of literacy (i.e. skills of reading and writing), including an evaluative aspect that embraces sociocultural ideas of learning mediated by technologies, traditions and cultural norms (Belshaw, 2011). The work on new literacies builds on postmodernist reformations of the definition of 'text' to include media such as image and film, whilst concepts such as multimodal literacy (Kress & Van Leeuwen, 2001), which describes a complex set of critical and social practices, are increasingly replacing discourse around student learning styles (Beetham et al., 2009). In supporting students to use their own technologies for learning, Beetham et al. (2009) advocate the need to develop effective strategies, enabling students to navigate increasingly complex learning landscapes, and using technologies to develop critical skills, personal reflection and planning. In this respect, literacies describe ways of being in the digital environment, and incorporate issues of identity and reputation.



## 2.3 Summary

In this chapter I have considered the two dominant sets of cultures that underpin the focus of this study: the multiple, interrelated and increasingly contested cultures of doctoral education and the emergent cultures (both generic and platform-specific) of the social web. I believe the intersection of these two fields represents a rich and increasingly important area of study for the doctoral education field, with additional implications for the study of academic use of social media generally. Reviewing the literature has identified a significant gap in this area, and highlights the need for original empirical research.

The current literature indicates how emergent social media practices are providing PhD students with enhanced opportunities for sourcing information, networking and dissemination.

I have highlighted how digitally mediated doctoral practices and associated identity work are likely to be enacted in an increasingly transformational and politically contested academic environment, in which the PhD student should be seen as a progressively active and knowledgeable participant.

The chapter has confirmed that to effectively examine the social media ecologies employed in doctoral enterprise requires an approach that engages holistic and sociocultural perspectives, and highlights the necessity to determine the most appropriate theoretical and analytical tools with which to address the research questions.

Therefore, in the next chapter I develop a conceptual framework with which to examine a number of dominant sociocultural learning approaches and determine how they may be utilised to address the key theoretical, conceptual and methodological concerns of the study.

# Chapter 3. Conceptual Framework

In this chapter, I examine more closely the key theoretical approaches that are prevalent in the current educational technology literature reviewed in the previous chapter. These approaches are common in challenging generally behaviourist accounts of learning - the transmission and acquisition of discrete abstract knowledge - to those that are broadly sociocultural and situated. That is, they each address the co-construction of contextualised knowledge within a social and culturally mediated process.

- Situated Learning
- Activity Theory
- Actor-Network Theory

I briefly present each theoretical approach, addressing key knowledge claims and methodological issues related to how they have been adopted and used in the learning technologies field, before considering their applicability to the doctoral educational context of the current study. In the subsequent section (3.2), further attention is given to how these theoretical approaches might contribute to the current study by addressing how they lend themselves to an understanding of key conceptual and methodological concerns that arise in addressing the research questions, in particular:

## Context

- What is the unit of analysis?
- How are doctoral practices conceptualised?
- How are social media related activities across multiple communities and networks conceptualised and how are they analysed?

## Mediation

- How are specific or multiple social media conceptualised?
- How is the nature of mediation understood?
- How are specific digital artefacts conceptualised and how are they analysed?

## **Agency and Identity**

- How is the construction of identities understood in the context of digitally mediated communities and networks?
- How are agency and identity conceptualised and how is the relationship between them understood?

## 3.1 Key Theoretical Approaches

### 3.1.1 Situated Learning

Situated learning theories emerged through a number of key educational and anthropological studies into participation as a learning metaphor. They shift the focus from cognitive learning to learning as an integral characteristic of social practice outside formal learning environments and instructional models, placing particular emphasis on learning that is situated in a specific context defined by a social or physical environment. Lave and Wenger (1991) present a historical-cultural study of apprenticeships using the central concept of 'Legitimate Peripheral Participation' to describe the relationship between newcomers and experts. Learning is seen as a process of deepening participation in a Community of Practice that is at first legitimately peripheral but increases in engagement and complexity. In Brown and Duguid's (1991) focus on learning and innovation in the workplace, Communities of Practice exist outside the organisational framework as dynamic systems of tacit knowledge, highlighting the difference between formal duties and the way work is actually carried out in practice.

Wenger's subsequent work (notably, 1998) represents a significant shift in focus from theory to practice, presenting a systematic approach that locates Communities of Practice within a broader conceptual framework of social learning applicable to any type of environment. The subsequent widespread interpretation and application of Communities of Practice - particularly within the organisational and Knowledge Management literature - has repurposed what was originally an analytical tool to understand learning as a feature of social practice into a strategy or technique that can be managed in some way. For Kimble (2006), this represents a 'dislocation' of the early theory; the 'commodification' of a concept that disregards original complexities and tensions between practice, participation and membership, to present overtly positive and consensual views of organisational groups.

Wenger's later texts also introduced the notion that the networked environment can provide the necessary interactions for online Communities of Practice. Higher education practitioners have adopted the metaphor to describe emergent networked learning practices (White & Pagano, 2007), transferring many of the

original concepts of legitimate peripheral participation to the online environment (Wasko & Faraj 2000). For Kirkwood (2006), the low participation rates in 'first generation' e-learning sites, such as VLEs are partly explained by student perceptions of a lack of community (Song et al., 2004). The learning affordances of social media can enhance online Communities of Practice as self-regulating knowledge networks in which individuals are motivated to participate, enabling increased communication, participant interactivity and collaborative pedagogical models (Gannon-Leary & Fontaine, 2007).

The development of further analytical frameworks, primarily through operationalising the three core properties of Wenger's (1998) dimensions of practice - mutual engagement, joint enterprise and shared repertoire - have been shown to be useful in a number of higher education studies, for reviewing research practices (St. Claire's, 2008), and for a number of online communities. Describing students' use of an institutional VLE, Moule (2006) concludes that additional facets are required for consideration to support Communities of Practice in an online environment, particularly around issues of access and the development of trust. A derivative model, based on the principle that knowledge is generated and shared when there is "purposeful conversation around content in context" (p.33) is provided by Hoadley and Kilner's (2005) C4P framework, which describes five mutually dependent factors; content, conversation, connections, (information) context and purpose. In particular, this has been adopted for studies into the cultivation of online environments, both within and without institutional boundaries (for example, Hodgkinson-Williams et al., 2008).

Communities of Practice have been widely adopted as a useful term for describing collocated groups, such as Leshem's (2007) cohort of doctoral students collaboratively engaged in conceptual framework development. Several empirical studies adopt Communities of Practice as a metaphor for student socialisation and institutional peer-support, largely conceptualised through the recognition of distinct stages or phases of development (for example, Palloff & Pratt, 1999; Seufert, 2000; Haythornthwaite et al., 2000). Janson and Howard (2004) describe how a group of Management Communication PhD students found emotional and academic support through a collaborative peer community. Though initially encouraged by a number of supervisors, the community was self-forming and self-directing; occurring organically around informal meetings, free from "external regulation and governing mechanisms" (p.174) into face-to-face and online discussions on theoretical, technical, methodological and emotional issues.

They conclude that participants closely experienced the stages prescribed by Wenger et al. (2002) – potential, coalescing, maturing, stewardship, and transforming – but only after an additional preliminary stage was introduced to facilitate recognition of common interests.

### **3.1.2 Activity Theory**

Cultural-Historical Activity Theory (CHAT), henceforth referred to as Activity Theory, is a conceptual framework of theoretical concepts originating in the work of L. S. Vygotsky and his followers in post-revolutionary Soviet psychology, in the 1920s and 1930s (Guy, 2005). Activity Theory presents a holistic and ecological perspective on the relationship between the human mind and human activity, from which various methods and approaches for studying and analysing human actions and interactions with cultural tools, or artefacts, can be developed (Bannon & Bødker, 1991; Nardi, 1996). In Activity Theory, the human mind emerges, exists and can only be understood within the context of human interaction with the world and this interaction, i.e., activity, is socially and culturally determined. As such, it seeks to explain these social and cultural practices in a real world context, by relating them to the specific cultural and historical context in which the activity is taking place (Kaptelinin, 1996; Issroff & Scanlon, 2002; Uden et al., 2008). Kuutti (1996: n.p.) suggests Activity Theory provides a theoretical basis “for studying different forms of human practices as developmental processes, with both individual and social levels interlinked at the same time.”

Activity Theory has become increasingly cross-disciplinary. Its gradual adoption in Human-Computer Interaction (HCI) represented a ‘critical turn’ in the field (Bødker, 1991, Nardi, 1996 and Engeström, 1993 were particularly instrumental). With the rapid expansion in ICTs, dominant cognitive science-based theories such as Information Processing, were increasingly seen as inadequate in examining the needs of the individual end user (Kaptelinin, 1996). Activity Theory provides a wider theoretical basis in its social, cultural, developmental and organizational contexts. Its framework is seen as containing the conceptual tools – lacking in cognitive approaches – to provide an effective means of analyzing the actions and interactions with artefacts within a historical and cultural context. In particular, whilst most research into the use of ICTs within Higher Education has focused on learning outcomes and systems design (Issroff & Scanlon, 2002), Activity Theory

- with its emphasis on mediation and social activity – enables a better understanding of the learner experience in computer-based practices (Kaptelinin, 1996), and has been used for studying a range of distributed and technology-supported learning and learning design (Jonassen & Ronrer-Murphy, 1999; Russell 2002; Joyes, 2006).

Activity Theory lends itself to qualitative approaches to investigating issues complex real-world learning environments. It presents a manageable, bounded framework with which to organize, examine and describe complex data sets, by formulating and describing how activity and its settings evolve over time (Yamagata-Lynch, 2010). Contemporary 'third generation' Activity Theory models extends mediated action by identifying and including sociocultural aspects of activity as critical elements within object-oriented units of analysis known as an activity system. Activity systems are multi-voiced - in that they constitute multiple points of view, traditions and interest - and historical – in that they are shaped and transformed over a significant period of time (Engeström, 1999b). Whilst Activity Theory provides conceptual models for explaining levels of activity and the relationships between them, there is no single unified approach to applying them to practice. Engeström (1993) notes that Activity Theory does not offer ready-made techniques and procedures for research; rather, it is a conceptual tool, and must therefore be adapted to the specific nature of the phenomena being studied.

### **3.1.3 Actor-Network Theory**

Rooted in the sociology of science and technology associated with Bruno Latour, Michael Callon and John Law, Actor-Network Theory developed primarily as a response to prevailing technological determinist perspectives. Less of a theoretical construct, Actor-Network Theory has been described as a 'descriptive' (Law, 2008) and a 'sensitivity, interruption or intervention' (Fenwick & Edwards, 2011). Garfinkel's ethnomethodological approach is frequently adopted by Actor-Network Theorists, utilising analysis of first-hand empirical evidence, and descriptive, reflective and anecdotal storytelling to describe and explore the topic of inquiry. Data collection is emergent and situated, with a focus on the micro content, negotiations and links that often includes seemingly insignificant and mundane objects and activities. This requires meticulously tracking specific everyday details of a situation, site, sets of activities and practices. The

phenomena being studied are seen as specific, material effects of multiple specific, material connections. (Barnacle & Mewburn, 2010; Fenwick & Edwards, 2010).

Latour uses the term 'translation' to describe what happens when entities - both human and nonhuman - come together and connect (or in some cases fail to connect) to form networks of activity, and how these entities change through these connections. Connections take different forms, some more flexible, tenuous, or long-lasting than others. Some of these connections link together to form an identifiable entity or assemblage - or network of things that have become connected in a particular way - that has the ability to be an 'actor' exerting force and influence in the world. Networks can keep expanding to extend across broad spaces, long distances or time periods, but can also break down, or dissolve, or become abandoned. Nothing is pre-configured. All things are assumed to be capable of exerting force and joining together, changing and being changed by each other. The Actor-Network theorist tries to faithfully trace all of these negotiations and their effects by constructing multiple interrelated networks, determining how they became assembled and how they continue to be enacted. This can occur through highly diffuse, diverse and contested sets of framings and practices, force, knowledge, identities, routines, behaviours, policies, innovations, oppressions, and reforms.

The use of Actor-Network Theory in educational research remains limited, but Fenwick and Edwards (2011) describe how it can provide rich interpretations of the ambivalences, multiplicities and contradictions that are embedded in many educational issues. Actor-Network Theory supports multiple ontologies, and any educational policy or artefact - such as classrooms, teaching, curriculum, policy, testing, inequities, reform - can be treated as assemblies of myriad things that order and determine educational practices, often formed on precarious networks that require substantial work to sustain. Tracing these networks "reveals the knowledges that become distinct when organized pedagogies are distributed across multiple regions of learners and teachers" (Fenwick & Edwards, 2010: 84). Actor-Network Theory provides useful concepts for understanding the nature of the knowledge and relationships between different academic communities and the interface between people and technology (Garrety et al., 2001; Fox, 2005). In Actor-Network Theory, actors are mostly hybrids (Fenwick & Edwards, 2010). The hybridity of humans and information technologies is manifest in the concept of the 'cyborg' as "material-semiotic assemblages of sociotechnical relations



embedded in and performed by shifting connections and interactions among a variety of organic, technical, 'natural' and textual materials" (Gough 2004: 255).

In their highly reflexive study, Barnacle and Mewburn (2010) present doctoral candidature as an actor-network (of both human and non-human actors), in which the doctoral candidate can be understood as a 'knowing location.' Populating the rest of the network are relations with other knowers, such as supervisors, peers and colleagues, and knowledge artefacts, such as journal articles, books and databases. Yet each doctoral student does not occupy one singular actor-network but are part of multiple and overlapping actor-networks. "(C)andidature actor-networks can 'fold in', or adopt, other actor-networks and at the same time they may also be 'folded in', or adopted by, these other actor-networks" (p.435). Therefore, the thesis is presented as not merely the product of the doctorate, but as an encapsulation of the heterogeneous networks of socio-technological relations with which the student has interacted. In time, a thesis may transfer from an effect into an actor in other actor-networks. Conferences and journal articles for example are presented as enabling technologies in this process.

## 3.2 Key Concepts

### 3.2.1 Contexts

Edwards (2009: 3) defines learning contexts as “relationships between people, artefacts and variously defined others, mediated through a range of social, organizational and technological factors.” Thorpe (2009: 130) describes how online learning contexts are based on emerging, and not pre-existing practices:

A context has to be reconstructed and participation invited through the use of activities, structured formats and textual genres operating at various levels. These are practices with technology that work synergistically with the actions of learners as they navigate through and contribute to online environments. Context is the product of these interactions and relational developments over time.

Miller (2009) categorises three key metaphors commonly used to conceptualise contexts for learning:

- Container
- Russian Doll
- Woven Cloth

The first of these describes ‘contained’ learning contexts that are fundamentally static and bound to specific structures or ‘spaces of enclosure’ - such as the classroom, the book and the curriculum (Edwards, 2009). However, the theoretical frameworks summarised in the previous section share the ability to contextualise learning activities beyond conventional educational situations and transmission models of learning. Therefore, the further two metaphors present the opportunity to frame a discussion on how each of these theoretical frameworks address some of the contextual concerns of the present study.

#### **Russian Doll (Ecological)**

A critical analysis of what shapes and defines educational technology requires an appreciation of the various levels of context that are associated within formal and/or informal provision, and how understanding the relationship between these levels might contribute to a richer understanding of authentic educational settings

and technological use (Selwyn, 2010a). Social psychologist Bronfenbrenner's (1979) metaphor of Russian dolls describes an ecological approach oriented to defining multiscale systems, usually manifest in three or four hierarchical descriptive levels. Fisher (2009) adapts Bronfenbrenner's model in an attempt to describe positioning and influences between levels concerned with educational technologies. Adopting his approach for the present study, these systems can be seen as representing the following:

- Microsystem describes the immediate local setting of a student at a given time, including activities, roles and interpersonal relations (in this case, the use of social media, but understood in relation with other dimensions of scholarly and social life).
- Mesosystem describes the relationship between multiple settings of microsystems around common factors (in this case, primarily 'doing a PhD').
- Exosystem describes policies, processes and procedures of educational institutions manifest as 'control systems' (such as doctoral programmes, research projects and funding).
- Macrosystem describes common overarching political, cultural and economic values, belief systems and ideologies that shape the social structure of society (such as the knowledge economy).

Similarly, the nested framework model for doctoral education proposed by McAlpine and Norton (2006) views the academic department, institution and society as nested contexts. However, according to Engeström (2009c), ecological models such as these tend to be constrained by their hierarchical systems and can therefore remain inherently static and closed. In particular, he suggests, "it is very difficult to depict and analyze movement, interaction, contradiction, and construction of the context itself" (p.19).

### **Woven Cloth (Relational)**

Social media environments present new interpretations of sociability on the web. People generally demonstrate a disposition to participate in, and a strong affiliation to, communities and networks of shared interests, values, rules and vocabularies (CLEX, 2009). Learning environments are inherently social and cultural. There is general consensus that students in Higher Education are best

supported in learning communities with shared activities and objectives (Beetham et al. 2009; CLEX, 2009). However, as Thorpe (2009) suggests, the influence of changing contexts on learning environments has been to shift the emphasis from communities to focus more on 'learner-centred' networks and loosely-linked relationships at boundaries across practices.

Informal practices have not translated well into formal contexts of learning (Beetham & Oliver, 2010). Activity Theory, Actor-Network Theory and situated learning theories have helped reconceptualise traditional 'bounded' learning contexts by enabling a metaphorical and analytical framing of learning that is more fluid and relational (Edwards, 2009), typified by dynamic activity across networks and Communities of Practice in response to lifelong and life-wide learning trajectories. The outcome is a set of practices that are not bound within a single context, but can be seen as 'polycontextual' (Engeström et al., 2005), representing a range of interrelated learning contexts based upon participation across multiple settings (Edwards, 2009). This relational and networked paradigm represents a fuzzier model of learning, and as such, defining units of analysis to examine it becomes more problematic. Developing units of analysis has tended to require containing the context to be explored. Communities of Practice and Activity Theory require containment to some degree. In Activity Theory, Engeström (2006) stresses, contexts *are* activity systems, but increasingly, contexts are not bounded, but multiple and fragmented. As Spinuzzi (2011) argues, Engeström's attempts at mixing closely bounded cases (i.e. activity systems) with "examples of extraordinarily broad, relatively unbounded activities" (p.455) such as learning are problematic. Similarly, Uden et al. (2008) suggest Activity Theory is limited to understanding 'regularly patterned' (i.e. organisational) human activity.

In the type of web-based practices that are the focus of this study, the communities and practices that define contexts are becoming increasingly open in character with weaker boundaries. Activity Theory-based studies have increasingly adopted the concept of multiple activity systems and shared objects (Engeström, 2007), but to the extent that interrelated activity networks (Miettinen, 1999) are required to contain the study, leading Russell (2010: 354, *my italics*) to declare, "the *network* is the context." Similarly, Wenger (1998) suggests when social configurations are too large or too complex to be a single Community of Practice, they are better understood as 'constellations of practices' defined by relations of multi-membership, which share members, artefacts,

institutions and historical and geographical roots. Related conceptual frameworks - variously described as 'communities-of-communities' (Brown & Duguid, 1991), 'networks of practice' (Brown & Duguid, (2000) and 'layers of communities' (Triggs & John, 2004) - extend the role of community participation and shared practices to describe the interconnectivity of varyingly constituted micro, meso and macro levels of engagement. These frameworks are more heterogeneous in nature, bringing together stakeholders from different Communities of Practice, and often spanning organisational boundaries and hierarchies. Members share a common practice but do not necessarily coordinate their work interdependently (Fischer, 2001; Fischer et al., 2007).

Both community and network-based learning theories recognise the importance of boundaries, peripheries, and the interfaces and links between them (Cummings & van Zee, 2005). Though paradoxically, situated learning theories are founded on establishing specific contexts (for example, as defined by a Community of Practice), they share with Activity Theory and Actor-Network Theory, the adoption of boundary objects as a border crossing metaphor (Edwards, 2009). Boundary objects (Star, 1989) enable different individual knowledge systems to interact by providing a shared reference in the forms of externalised knowledge that is meaningful to all. They are "key in developing and maintaining coherence across intersecting social worlds" (Star & Griesemer, 1989; 393). Efimova (2009) describes how blogs can act as 'enabling artefacts' (Wenger, 2001) to represent boundary objects, not at intersecting social worlds (Star & Griesemer, 1989) or multiple Communities of Practice (Wenger, 1998), but at the boundaries of different perspectives of individual knowledge workers. The publishing, interaction and reflexive modes of blogging support various practices of different constituencies, whilst the accessibility of content and the standardised structure and protocols of the blogging platform are appropriate for the shared understanding across diverse audiences.

### **3.2.2 Mediation**

Through a sociocultural perspective, human development is founded upon social interaction in cultural practices that are mediated (Billett 2006, cited in Hopwood, 2010a). Mediating processes include language, concepts, material artefacts and social relationships (Wertsch, 1991). They occur as individuals incorporate signs, meanings or tools from the external environment and change their thoughts or

actions as a result. However, as Daniels (2011) indicates, mediators are not neutral and inert but dynamic, reflecting complex social, cultural and historical processes. As Rogoff (2003) explains:

Artifacts such as books, orthographies, computers, languages, and hammers are essentially social, historical objects, transforming with the ideas of both their designers and their later users. They form and are formed by the practices of their use and by related practices, in historical and anticipated communities.... Artifacts serve to amplify as well as constrain the possibilities of human activity as the artifacts participate in the practices in which they are employed.... They are representatives of earlier solutions to similar problems by other people, which later generations modify and apply to new problems, extending and transforming their use. (p.276)

Vygotsky (1978) makes the distinction between two types of mediating artefact – tools and signs. The tool is externally oriented, whilst the sign is internally oriented. In effect, the mediating artefact relates individual activity to society, and to its cultural and historical development (Engeström, 1999a). In Activity Theory, the functional, historically evolving artefacts are interpreted in relation to the sociocultural structure of activity, though it took Leont'ev's (1978) 'second generation' development of Activity Theory to fully incorporate these collective and historical conditions within the unit of analysis.

The term reification has been used to describe both a process and its resulting form; epitomised by Polin's (2008: n.p.) depiction as "the freezing of knowledge in a concrete artefact." As a process, it is dynamic and gives shape to experience. In a Community of Practice, this process forms a duality with participation, which establishes the level of discourse at which the concept of practice can be understood. Whilst Wenger (1998) acknowledges it is impossible to totally translate meaning into a concrete form, it can be an effective and useful process in producing representational devices that can clarify and explain meanings (to both members of a Community of Practice and its outsiders). Reified forms such as tools, symbols, stories and concepts can become important 'points of focus' around which meanings can be negotiated collectively and organised. However, as Wenger (1998: 61) warns us, "the power of reification – its succinctness, its portability, its potential physical persistence, its focusing effect – is also its danger." Forms of reification can 'ossify' activity, becoming almost autonomous, and taking on identities of their own which are distinct from the original contexts and processes that created them.

Latour's sociology of technical artefacts and mediation rejects the key ontological separation of materiality and meaning that is inferred through externalisation and representation. All objects - as well as all persons, knowledge and sites - are seen as relational effects. Artefacts represent an assemblage of materials brought together and linked through to perform a particular function.

A textbook or an educational article, for example, each bring together, frame, select and freeze in one form a whole series of meetings, voices, explorations, conflicts, possibilities explored and discarded. Yet these inscriptions appear seamless and given, concealing the many negotiations of the network that produced it. And a textbook or article can circulate across vast spaces and times, gathering allies, shaping thoughts and actions and thus creating new networks. (Fenwick & Edwards, 2011: 12)

Actor-Network Theorists use Latour's concept of 'translation' to describe how one element may become representative of another or others. "The others are 'black-boxed', that is, in a sense they are 'forgotten' about, they become assumed, or presumed." (Fox, 2005: 102). Latour uses examples of everyday artefacts - such as the seat belt, the road bump, and the weight on a hotel key - to explain how the human and the artefact are determined and transformed by each other (Miettinen, 1999). Action and agency are a combination or relationship between human and nonhuman actors. Technical artefacts have a script, an affordance, a function, or a programme of action and goals that can partly provide a substitution or replacement for human actors.

Actor-Network Theory's assertion of symmetry - that human and non-human material objects are treated equally - is also reflected in the Connectivist principle that learning resides in non-human applications (Bell, 2010). From a connectivist perspective, it is the connections that individuals create that most represent externalised forms of meaning making:

We are social beings. Through language, symbols, video, images, and other means, we seek to express our thoughts. Essentially, our need to derive and express meaning, gain and share knowledge requires externalization. (Siemens, 2006b)

Connectivist theories (Siemens, 2004; Downes, 2005) draw from complexity theory to emphasise the importance of this externalisation as pattern recognition and connection forming within meaning making and metacognitive processes. "To 'know' something is to be organized in a certain way" (Downes, 2005: n.p.), which is exhibited through patterns of connectivity. Students need to develop self-organisation skills to synthesise and recognise patterns between knowledge

sources that have been shaped by complex networks. This highlights the importance of effective representation of these networks and the need to develop methods of analysis and evaluation.

### 3.2.3 Identity and Agency

The use of geographical metaphor is common in educational discourse. Becher and Trowler (2001: 58) suggest:

It seems natural enough to think of knowledge and its properties and relationships in terms of landscapes, and to saturate epistemological discussion with spatial metaphors: fields and frontiers; pioneering, exploration, false trails, charts and landmarks.

Engeström (2009b) describes the learning landscape “as a terrain of activity to be dwelled in and explored” (p.313). This is particularly revealing to the present study if the ‘dwellers’ below are considered as doctoral students:

The dwellers create trails and the intersecting trails gradually lead to an increased capability to move in the zone effectively, independently of the particular location or destination of the subjects. However, the zone is never an empty space to begin with. It has preexisting dominant trails and boundaries made by others, often with heavy histories and power invested in them. More than that, the existing trails, landmarks, and boundaries are inherently contradictory, possessing both exchange value and use value, being both controlled by proprietary interests and opening up possibilities of common good. When new dwellers enter the zone, they both adapt to the dominant trails and struggle to break away from them. (Engeström, 2009b: 313)

This potential to break away from dominant trails relates to Engeström’s (1987, 2001) concept of expansive learning.

	<b>Nature of Object</b>	<b>Locus of Agency</b>	<b>Learning Movement</b>
<b>Craft</b>	Personal Object	Individual	Peripheral Participation
<b>Mass Production</b>	Problematic Object	Team	Linear and vertical improvement
<b>Social Production</b>	Runaway Object	Knots in Mycorrhizae	Expansive swarming, multi-directional pulsation

**Figure 3: Historical organisational contexts – adapted from Engeström (2007)**

In Figure 3, Engeström (2007) uses a number of historical organisational contexts to contextualise different types of exploration. This is defined as the learning



movement, which he describes as dominant patterns and directions of physical, discursive and cognitive motion. Note how Engeström uses 'craft' to describe the community-based context, characterised by Lave and Wenger's (1991) movement from periphery to centre. Wenger (1998) describes practice as a dialectic relationship between the increasing participation in the community and the interpretation of signs and familiarity with discourse that reify that participation. A learner's trajectory can therefore be understood in the interrelated dimensions of increased familiarity with the signs and discourse of an academic community and greater participation and engagement. For the student, individual agency does not disappear, but rather she faces new challenges in attaining the position of an 'agentive subject'. She gains authority and agency by becoming recognized in, and supported by the community. Wenger (1998) describes learning in a Communities of Practice as a 'privileged locus' for the acquisition of knowledge – enabling students to access competence and opportunity, and the creation of knowledge – enabling students to explore new perspectives and insights within a supportive communal environment. Knowledge is situated, socially constructed and negotiated through increased participation. According to Davies and Mangan (2006), models like Communities of Practice provide a social regulation of learning. Whilst the individual student has a unique set of reference points to the learning process, these must attain legitimacy within the context of the community. Since communities derive their coherence from particular ways of practicing, they regulate how the student's progress can be recognised as learning. Within most formal education this is usually manifest in curricula and attainment of qualifications, but within less formalised educational programmes, such as a PhD, these may be less evident and more a process of negotiation and student efficacy.

Engeström (2007) concedes that communities and the contexts in which they reside, are becoming increasingly multiple, complex and open in character. He likens the forms of movement associated with social and peer production (Benkler, 2006) to that of pulsation and swarming. Engeström (2007) uses a botanical metaphor, mycorrhizae (the symbiotic association between a fungus and the roots of a plant), to conceptualise knowledge as socially constructed through a process of negotiation in contextualised, collaborative learning environments. Activity Theory treats activity as primarily object-driven, where objects describe foci of attention, motivation, effort and meaning. Engeström (2007) suggests objects have a 'runaway' character under mycorrhizae-like activity. Runaway objects can be small and dormant yet highly unpredictable

and emancipatory, with the potential to escalate to a global scale of influence and controversy, as exemplified by technological innovations. They become pervasive, comprising of numerous, indefinable activity systems which often seem to be subsumed to the object rather than in control of it. In Actor-Network Theory, human intention and action are effectively de-centred. Critics have highlighted the ambivalence towards human agency and subjectivity that is implied in the assumptions inherent in the symmetrical stance that human and non-human elements are of equal importance. Yet proponents of the theory indicate that by focusing on the interrelatedness of ontological elements, actor-networks can reveal multiple, often hidden, and potentially surprising 'sets of agencies' that other theoretical frameworks fail to recognise, some of which may incorporate non-human systems (Fenwick & Edwards, 2010).

Wenger (1998) describes a profound connection between identity and practice. The formation of a Community of Practice does not only involve the negotiation of meanings, but also, and of equal importance, the negotiation of identities. Indeed, each of the key concepts critical to negotiation of meaning in practice has parallel concepts in negotiations of identity; community as membership, shared histories as trajectories, and boundary and landscape as nexus of multi-membership. Identity in practice is defined socially through participation and reification in Communities of Practice, and constructed through negotiation of meaning. Learning is therefore not just an accumulation of skills and acquisition of information, but a process of becoming defined through an identity of participation. Wenger (1998) argues students must find ways to coordinate multiple perspectives, not only by developing their skills but also their identity. In a Community of Practice, identity formation is a dual purpose of identification and negotiability. Processes of participation ('identifying as') and reification ('identifying with') provide the experiences and materials for building identities, both individually and collectively. This forms how the individual member identifies with a community and how they are recognised as members by others. This can be a positive and negative experience, and subject to both participative and non-participative actions. Negotiability determines the degree of individual control over these meanings of identity: "The ability, facility and legitimacy to contribute to, take responsibility for, and shape the meanings that matter within a social configuration" (Wenger, 1998; p.197).

An alternative but potentially complementary conceptual framework is provided by the seminal work of Dorothy Holland and her colleagues (1998), who

synthesise the work of Vygotsky, Bourdieu and the Russian linguist, M.M. Bakhtin to describe agency and identity in cultural worlds. In particular, they draw on the Bakhtinian concept of the 'space of authoring' to describe the mutual shaping of identities in social practice. Learning is perceived as continual heuristic development in which individuals and groups are constantly (re)forming themselves through the adoption of cultural tools. From this socio-historic perspective, a 'view of self' is developed

through and around the cultural forms by which they are identified, and identify themselves, in the context of their affiliation and disaffiliation with those associated with those forms and practices. (33)

Holland et al. (1998) share with other sociocultural theories (see 2.1.4) a view of identity as a constantly forming composite of multiple, sometimes contradictory, selves distributed across the material and social environment, but reconceptualised to active participation in environments they call 'figured worlds.' Agency is the capacity to envisage and realise an improved form of subjectivity. It is constrained and shaped by their 'history-in-person,' a record of past experiences and subjectivities upon which one can develop in response to current social situations using the cultural tools available. Agency is potentially exercised in the form of 'improvisations,' in which people respond to their particular subject position in relation to a broader sociocultural base of 'self-other' relations. This seems to resonate with Bruner's (1996) cultural view of learning, in which agency is the construction of a conceptual system that 'organises' a record of agentic encounters, partly performed through knowledge and skills acquisition in specific settings and interrelated with identity development.

Whilst the work of Holland et al. (1998) challenges traditional sociological perspectives of cultural identities, they acknowledge that figured worlds are positioned in the hierarchies of power, status and privilege that relate to fields of activity, and are therefore subject to – though not categorised by – the social stratification associated with divisions of class, gender, and ethnicity. Further to this, Holland et al. (1998: 5) maintain that human agency "happens daily and mundanely." Through the authenticity of figured worlds, the everyday narratives and actions that constitute relative positions of influence and prestige can be exposed. This helps us situate figured worlds among the related concepts of fields, practices, activities, and Communities of Practice explored above. Drawing particularly on Bourdieu's *Homo Academicus*, Holland et al. (1998:59) highlight the limitations of applying his concept of field to analysing the day-to-day socio-

cultural relations in academia, in comparison to the heuristic development possible through figured worlds:

Had Bourdieu mediated his understanding through “figured world” instead of “field,” he would have told us more about the discourses of academia and the cultural constructions that constituted the familiar aspects of academic life: the taken-for-granted generic figures (professors, graduate students, undergraduates, provosts, secretaries) and their generic acts – both such formal tasks as giving tutorials, administering tests, firing, hiring, and granting degrees, and the less formal stories of tenure granted, tenure denied, and teaching responsibilities juggled against writing and scholarly research – as situated in a particular institution. He would have more closely detailed the terms of academic discourse – such as “quality,” “originality,” and “brilliance” – as ways in which academics come to evaluate their efforts, understand themselves, and interpret the positions they hold in the academy.

Drawing on his research with postgraduate students, Francis (2010: 94) explains how, in examining personal agency, “one is invariably forced to understand practice in relation to students’ values, commitments and personal ethics which, in turn, appear to be related to their sense of who they are and who they might become.” For the present study, one is required to determine which theoretical framework provides the most appropriate and effective analytical or descriptive research tools for empirically distinguishing the digitally mediated communities and networks in which PhD students participate.

### 3.3 Summary

In this chapter I have identified and discussed the key conceptual concerns in conducting a qualitative enquiry into how PhD students are using social media, and discussed the potential contribution of key broadly sociocultural theoretical frameworks. Adopting Weaver-Hart's (1988: 11) advice that theories are "tools for researchers to use rather than totems for them to worship," I will now proceed to outline how choosing to use Activity Theory as the basis for my analytical framework provides a number of key advantages over the other approaches considered in this chapter in addressing the requirements and challenges of this study.

Third generation Activity Theory presents a manageable, bounded framework with which to organise, examine and describe complex data sets, by formulating and describing how activity and activity settings evolve over time (Yamagata-Lynch, 2010). It is suited to a qualitative research design using mixed methods associated with naturalistic inquiry; that is, observations, interviews and the collecting of artefacts, with which to understand complex, real-world learning, including those within digitally mediated environments (Nardi, 1996). The unit of analysis, the activity system, provides a systematic approach to examining individual practice within social and cultural contexts. Holland et al.'s (1998) concept of figured worlds – as a heuristic for conceptualising individual subjectivities within interrelated social aggregates engaged in multiple practices – provides an effective alternative to similar framings based on actor-networks or the membership of multiple Communities of Practice. Further, its historically situated, socially organised and culturally constructed nature reveals a close conceptual and theoretical affinity with Activity Theory, with the potential to operationalise it as a 'participant heuristic' within the activity system.

In developing an Activity Theory-based enquiry, the PhD student can be seen as adopting, adapting and constructing 'cultural tools' to mediate a range of academic activities primarily oriented towards the successful completion of a doctoral programme. When these are partly (though not necessarily exclusively) facilitated through the use of social media, the shaping of these cultural tools will be partly influenced by the cultural values of the networked environments (both generic web 2.0 cultures and platform-specific cultures). However, in the holistic framing of this study, it is necessary to recognise that the student's own values

can also be influenced through similar processes through her engagement in other local and distributed research environments (and in turn, by their related cultures, such as departmental and disciplinary). This will help explain the potential for conflict between established academic cultures and the emerging cultures of web 2.0. I see this as a dynamic, ongoing and reciprocal process. The more the student engages in each of these interactional environments, the more informed and culturally aware she will become (at least within the social groups and networks in which she participates), which in turn will be seen as shaping the cultural tools she employs. Furthermore, the student can be seen as having agency in the way she might develop, conform to, or reject the cultural values of these environments, including those predominantly facilitated by social media. How these are 'aligned' with her own values or beliefs can determine whether she is empowered or marginalised by her activities.

These propositions raise several key methodological concerns. Firstly, how and why do participants create cultural tools and cultural (or figured) worlds? Secondly, how can these cultural tools be best determined and described? And thirdly, how might an Activity Theory framework help represent these processes through the construction of object-oriented activity systems? These concerns are addressed in the following chapter.

## **Chapter 4. Methodology**

I begin this chapter by further examining the historical development and key concepts of activity theory, and their relevance to the present study. I provide a summary of the pilot study. Whilst this was conducted largely before the adoption of an Activity Theory framework, it played a significant role in informing the research design of the main study.

I proceed to examine each of the key components of the activity system in relation to the challenges presented by the specific contexts and methodological concerns of this study. Particular attention is given to the important conceptual roles that both genre and figured worlds played in both informing the development of the activity systems, and in refining my understanding of the activity system components they relate to.

The processes of data collection and analysis are described in depth alongside key methodological factors related to the research design, including the voluntary recruitment of participants, the presentation of findings, and the ethical considerations of the study.

## 4.1 Activity Theory

Wellington (2000) reminds us of the subjectivity inherent in readings of research studies. Individual readers draw conclusions from personal perspectives and requirements. Therefore, the reader is reliant on the researcher being as open and descriptive as possible in explaining the methods of data collection and analysis and how findings were derived. In choosing to use Activity Theory, I have a responsibility to describe and explain its theoretical history and the analytical components of activity systems. Yamagata-Lynch (2010) bemoans the general lack of discussion on methodological processes in Activity Theory based studies, observing that “in many cases, study reports in the form of journal articles, presentations, white papers, and project reports are severely abbreviated versions of what authors and presenters can share about their study” (p.132). The long format of this thesis however, provides scope for an extended review of the literature, the conceptual and methodological interpretations of the theory I undertook in developing the research design, and descriptive accounts of the procedures of data collection and analysis.

### 4.1.1 Origins and Development of Activity Theory

The origins of Activity Theory can be traced to the classical German philosophy of Kant, Hegel and Fichte. However Activity Theory is today mostly associated with Lev Vygotsky and the cultural-historical school of Soviet-Russian psychologists, who explored the objective, ecological, and sociocultural perspectives of activity-based philosophy of Marx and Engels (Kuutti, 1995; Lewis, 1997). Sergey Rubinstein first formulated the notion of human action as a unit of psychological analysis, and Alexey Leontiev, a student of Vygotsky, developed the conceptual framework that became known as Activity Theory. The theory was not known widely in the West until the 1970s and 1980’s, when some of the canonical texts were first translated, and key ideas became disseminated by several American cultural psychologists (notably, James Wertsch and Michael Cole). The hugely influential Scandinavian tradition of Activity Theory emerged primarily through the work of Yrjö Engeström (1987), who expanded and reformulated some of its key ideas to support his conceptualisation of expansive learning.



Engeström's generational schema has become a well-known interpretation of the historical development of Activity Theory. First generation Activity Theory draws heavily on Vygotsky's (1978) conception of mediated action, in which the stimulus and response formulation (common to behaviourism) is transcended by a complex mediated act. This became formalised in the basic triangular-shaped model of the instrumental act, and established a basic unit of analysis. Recognising its limitation to an individual activity or practice, second generation theorists, influenced by Leont'ev (1978), focused on the relationship of mediation with the other components of an activity system. Engeström's (1987) enhanced model of an activity system has subsequently become the principal 'third generation' model for analysing individuals and groups. It adopts joint activity or practice, building on the idea of multiple interacting activity systems focused on a partially shared object. Third generation Activity Theory expands the unit of analysis, to synthesise two seemingly incompatible conceptual directions. One, moving up and outward, engages multiple interconnected activity systems with their partially shared and often fragmented objects (activity systems, organizations and history), whilst a second, moving down and inward, engages issues of subjectivity, experiencing, personal sense, emotion, embodiment, identity, and moral commitment (subjects, actions and situations) (Engeström, 1987).

#### **4.1.2 Key Concepts of Activity Theory**

Activity Theory can be seen as being founded on a number of key interrelated concepts or principles that constitute a general conceptual system or framework.

##### **Unity of consciousness and activity**

Activity Theory adopts Marx's dialectic materialist view that activity and consciousness (i.e., the human mind) are interrelated in a principle of unity and inseparability. The human mind "comes to exist, develops, and can only be understood within the context of meaningful, goal-oriented, and socially determined interaction between human beings and their material environment" (Omicini et al., 2009: 159). Consciousness is not a set of discrete acts, but the result of everyday practice and processes of meaning making. As a component of human interaction with the environment, it should therefore be analysed within the context of activity (Kaptelinin, 1996; Kaptelinin & Nardi, 1997; Jonassen & Ronrer-Murphy, 1999).

### **Object-orientedness**

Human beings live in a reality that is in a broad sense, objective. The object-orientedness of Activity Theory is constituted by a reality that exists not only according to the natural sciences but which is also socially and culturally defined (Kaptelinin & Nardi, 1997).

### **An activity is the basic unit of analysis**

Kutti (1995: 24) describes the basic unit of analysis as "a minimal meaningful context for individual actions." An activity is a form of 'doing.' It is situated in the context of being directed at an object (broadly, the objective, task or purpose of the activity), and is distinguishable by that object. The subject engaged in the activity (which can be an individual or a group) may be participating in several activities at the same time.

### **Mediation**

Human activity is mediated by tools (also referred to as instruments or artefacts). The mediating tool can be external (e.g. a hammer) or internal (e.g. an idea). Commonly, tools are signs, procedures, machines or methods. Tools are socioculturally specific, in that they are influenced and dependent on social experience and cultural knowledge. They are created, transformed and inherit a particular culture during the historical development of the activity (Kaptelinin & Nardi, 1997).

### **Historical development**

A phenomenon can be best understood by knowing how it developed into its existing form (Kaptelinin, 1996). Activities are not static but dynamic, under constant change and development. Therefore, activities have a history of their own, and an historical analysis of their development is needed to understand their current state (Kutti, 1995).

### **Internalisation and externalisation**

Activity Theory differentiates between internal and external activities, though the two transform each other through reciprocal processes of internalisation (external to internal) and externalisation (from internal to external) (Kaptelinin, 1996; Kaptelinin & Nardi, 1997).

### **Contradictions and tensions**

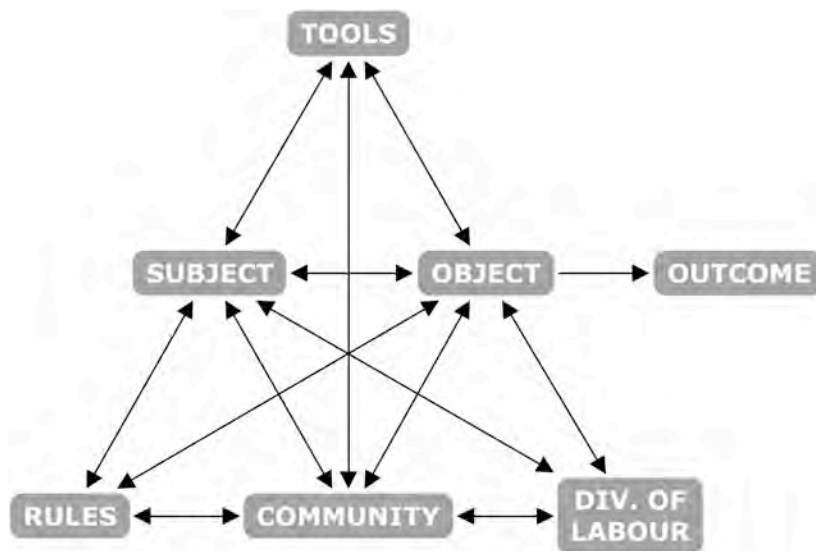
Engeström (1993) suggests contradictions and tensions are inherent in human activity. They constitute the driving force behind disruption and innovation in activity systems, and can be identified and examined by interpreting changes that occur within the activity systems.

### **Hierarchical structure**

Leont'ev (1978) proposes an activity has a hierarchical structure with three distinct levels: the activity level, the action level and the operation level. Activities consist of actions, which in turn consist of operations. Actions are basic components of activities, and different actions may be undertaken to meet the same goal. Operations are ways of executing actions, and represent the concrete conditions required to achieve goals. Typically, an activity will use a number of actions, each of which may use many operations. An action may be used in more than one activity, and similarly an operation may be used in different actions (Lewis, 1997). Kaptelinin (1996) uses the example of building a house (the activity), fixing the roof (an action), and using a hammer (an operation). This hierarchical analysis of human action emphasizes that activity takes place at different levels at the same time and not necessarily in sequence (Bertelsen & Bodkaer, 2003). Activity Theory allows these constituents of activity to change dynamically as conditions or contexts change. The relationship between the three levels is therefore not a rigid one, but allows a flow between them. Through practice and the process of internalisation, activities may 'collapse' (transform) into actions, and actions transform into operations (Jonassen & Ronrer-Murphy, 1999). Kutti (1996) reinterprets the three levels of activity as motive (activity), goals (action) and conditions (operation). Operations that occur as conscious acts may, over time become unconscious actions as they become 'routinized'. Kutti suggests the distinctions between action and activity can be particularly difficult to define as goals and motives can often overlap or be interpreted interchangeably.

### **4.1.3 Analytical Frameworks**

The structure or configuration of an activity is commonly described by the activity system (see Figure 4). This 'triangle model' has become the unit of analysis of most third generation Activity Theory-based research.



**Figure 4: Activity System**

The subject (a person or a group engaged in the activity) is motivated by the need to transform the object (the objective, task or purpose of the activity) into an outcome (an idea, a solution to a problem or a product), which can be positive or negative, intended or unintended. The system retains Vygotsky's mediated reformulation of the simple stimulus-response process (the 'instrumental act') where the object is seen and manipulated within the limitations set by tools. There is rarely a direct relationship between the subject and object - human activities are nearly always mediated by one or more tools, instruments or artefacts. These can be anything used in the transformation process; signs, systems, procedures, machines, methods, laws or processes. These are commonly categorized as psychological tools, or 'tools for thinking' (such as culture, language, and ways of thinking) or material tools (such as a hammer or a computer). Tools are created and transformed as a result of developments and changes in human activity. They are therefore influenced and shaped by their culture and historical use, accumulating and transmitting social knowledge about the cultural context in which they are developed and used.

This structure is however limited to explaining individual activities. As most human activities are collective, commonly occurring in rich communal and social environments, it is necessary to extend the triangle model to include collective activities and cooperative work through the mediational role of the community and social structures. Thus, Engeström's (1987) systemic model retains the mediated relationship between the subject and the object of activity, but in an extended structure that is also shaped and constrained by the sociocultural

factors that exist within the context of the activity. Rules mediate the relationship between subject and the community, and constitute both implicit and explicit norms; conventions and social relations within the community as related to the transformation process of the object into an outcome. Rules may consist of organizational practices, policies and regulations. The relationship between object and community is mediated by the division of labour, which describes how the activity is distributed among the members of the community (i.e. those engaged with the activity). It accounts for the role each individual plays in the activity, and includes factors pertaining to power relationships and responsibility.

## 4.2 Pilot Study

I undertook a pilot study between November 2009 and May 2010. The pilot study is seen as playing an important role in doctoral research design (van Teijlingen & Hundley, 2001) and in the context of the present study, it primarily served the following aims:

- To empirically explore doctoral social media practices through provisional research questions
- To test methods of sampling, data collection and analysis, and assess the effectiveness of these for the main study
- To refine provisional research questions for the main study

Therefore, in the following account, emphasis is placed on describing and reviewing the research design and methods, summarising the key findings, and refining the research questions.

### 4.2.1 Research Design

The research questions guiding this thesis (as presented in 1.6) were not fully formed at the stage of conducting the pilot study, which was focussed on addressing doctoral social media practice in relation to the assumptions presented in 1.4.2. These assumptions can be summarised as follows:

- The use of multiple social media
- The technological interconnectivity of social media
- Sociocultural trends in social media
- Transiency in social media practice
- Overlapping online communities and networks

With these in mind, the following provisional research questions were established to guide the pilot study:

- How are PhD students using social media in their academic activities?

- What are the key motivating factors and barriers to adopting and maintaining social media effectively?
- What strategies, if any, do students develop around using social media?

### **Sampling Survey**

Convenience sampling is seen as an appropriate sampling method for a pilot study (Wellington, 2000). I identified potential participants amongst UK- and internationally-based PhD and Masters degree students studying educational technology and closely related fields, primarily through my personal online networks and communities. These were contacted over a staggered period between November 2009 and January 2010 with a request to complete an online survey. In a 5-point Likert scale, they were asked to determine the frequency of use of different social media and rate their effectiveness in relation to a range of academic activities, which were categorised as follows:

- Sharing information with others
- Getting feedback from others
- Giving feedback to others
- Discussing ideas with others
- Collaborating with others
- Promoting yourself
- Promoting your work
- Accessing experts and peers
- Establishing links with others
- Finding information
- Managing your work
- Conceptualising your work / ideas
- Reflecting on your work

These categories were based on a taxonomy I developed from several web 2.0 oriented socio-technical learning models, namely: Amberg et al.'s (2009) categorisation of PLE tools; Siemens and Tittenberger's (2009) teaching and learning activities matrix; and Wenger et al.'s (2009) orientations of learning. Though the survey provided useful baseline data for the sampling frame, its primary purpose was to solicit volunteers for further participation in the pilot study.

## Participants

Of the 103 people approached, just over half (53%) responded, a good return that I attributed to my familiarity with the sample. Of these, six doctoral students agreed to participate further in the pilot study, though one subsequently chose to withdraw following changes in her doctoral programme. A summary of the five remaining participants is provided below. Aliases are used to ensure their anonymity.

**Bethany** was a full-time 1st year PhD student based in Germany. With a background in computer and learning sciences, she was interested in studying video narratives in education.

**Greg** was a 3rd year part-time PhD student in the UK examining digital literacy. With over 10 years experience of working in e-learning management, he had a growing professional interest in Web 2.0 technologies.

**Mike** was in the final year of a part-time Ed.D also studying digital literacies. A qualified teacher in his late twenties, he was working as an e-learning advisor at a UK comprehensive school.

**Natalie** was a full-time 1st year PhD student at a UK Russell Group University. With a first degree in psychology, she was interested in studying classroom-based technologies.

**Rowan** was a part-time 2nd year PhD student in the US with over 20 years teaching experience. She was studying online communities, whilst continuing to work as a learning skills advisor.

## Data Collection

Data related to participants' activities across a range of social media were collected over a three-month observation period. The sites chosen for undertaking observation of each participant's online activity were determined with the full agreement of each participant. The sites included one or more of the following social media:

- Personal websites / blogs



- Networking sites (e.g. Twitter and Facebook)
- Social network / community sites (e.g. Facebook Groups, Ning sites).
- Content sharing sites (e.g. Flickr, Slideshare, YouTube)
- Social bookmarking sites (e.g. Delicious)
- Wikis

The data collected across these sites were categorised as digital artefacts, profiles and social relations:

### **Digital Artefacts**

These describe the original outputs produced by each participant, which were defined as resulting in a new or modified digital artefact (such as blog posts and tweets). In applying this definition, reading a blog post, for example, did not classify as an action, but commenting on a blog post did. A taxonomy of all possible actions across the range of sites under observation was drawn up. This was used to devise a series of logs that were created for each participant's actions on a particular site.

### **Digital Profiles**

These consisted of all online profile components, features or pages that referenced personal identity, professional status and achievements and other biographical information. Whilst these may have been updated occasionally, they were primarily permanent features, originally created by the participant (such as on a personal blog) or through a standardised template (such as on a Social Network Site). Their values were examined using the following categories:

- Name(s)
- Image
- Contact information
- Biographical information
- Formal / institutional Role(s)
- Interests / Foci
- Non-Research /Academic Information
- Integration with Identity / Password Management Systems
- Permanent Pages
- Permanent Links (participant)
- Permanent Links (other)
- Other Permanent Content

- Archival and Organisational Features

### **Digital Social Relations**

These described the values indicating the participants' relationships to other people with whom they interacted on the sites observed, according to geographical, hierarchical and disciplinary factors. These were determined by directly examining the site profiles of the individuals or through further investigation on the web. They were categorised using the following categories:

#### **Location**

- Department
- Institution
- External
- Non academic
- Not Known

#### **Academic Status**

- Higher
- Same / Equivalent
- Lower
- Non-academic
- Not Known

#### **Academic Field / Discipline**

- Same
- Different
- Non-academic
- Not Known

In cases where the relevant information could not be determined, or where it was ambiguous, participants were asked to confirm or correct relations on a spreadsheet, though only two responded to this request. The results provided useful baseline data for the participant interviews but were rarely referenced.

### **Interviews**

Two rounds of participant interviews were conducted, all remotely, one using MSN Messaging (saving and using the text as transcript) and four using Skype (recording the video calls to MP3 to be transcribed). The first round of interviews,

with Greg, Natalie and Rowan, were conducted immediately after the observation period. The one-hour interviews were semi-structured in nature, drew on specific practices that had been observed on their sites, exploring the following key themes within each of the different forms of social media in which each participant was active, and with reference to key events or incidents in the observation period:

- Specific academic and research practices using social media
- Motivations and barriers to using social media
- Processes, strategies and routines they had developed in using social media
- Communities and networks with which the participant engaged using social media

Though not originally planned, a second round of interviews was conducted in response to the need to better situate the study within doctoral training contexts. Recognising that the data did not engage in some of the critical issues emerging from reviewing the literature on doctoral education, I conducted a further two interviews with two of the three previous interviewees, Greg and Natalie, in which the following themes were explored:

- Historical accounts – the participants’ use of social media up to the period of participation
- Personal study contexts – the participants’ local (departmental / institutional) research environment
- Additional roles and duties related to the participants’ doctoral studies

Each of the first round of interviews was transcribed in full. But given the time constraints incurred by the extended schedule, I opted not to transcribe the second round of interviews but made notes on a second listening of the recordings.

### **Activity Sheets (Participant-reporting)**

Participants were asked to make a personal diary of their social media activities with any comments on key digital outputs that they considered might be useful in the subsequent interviews, and to record any additional activities (for example, commenting on other people’s blogs) on sites not under observation. These were to be submitted to the researcher (by e-mail) on a weekly basis.

## **PLE Diagrams**

Participants were also asked to submit a visual representation of what they considered to be their Personal Learning Environment (PLE) to help them conceptualise and reflect on their use of multiple tools and platforms. Visually representing Personal Learning Environment (PLEs) had become a common cultural practice in the learning technologies field. (I saw the activity being used in an exercise with multi-disciplinary groups of PhD students at the Vitae Digital Researcher event, 15 March 2010, British Library, London.) Participants were free to decide how they presented the diagrams. No standard format was proposed, though a range of existing PLE diagrams (taken from Scott Leslie's blog post, PLE Diagrams, <http://edtechpost.wikispaces.com/PLE+Diagrams>) were provided as examples.

## **Data Analysis**

I adopted a grounded theory approach to open coding the first round of interview transcripts. From these, key themes were cross-referenced with the taxonomy that I had developed for the survey to enable category development of the key academic activities in relation to the different social media.

I analysed the data sets of each of the participant's digital artefacts and digital profiles by specific social media, opting to focus on those related to Twitter and blogs as the two social media common to all participants. Key themes were established related to content and a number of communicative aspects (e.g. blog comments and retweets), and quantitative analysis was undertaken to determine frequencies of each (see sample of Twitter analysis in Appendix 6).

The digital social relations data was collated from all participants and graphically rendered as a single data set to determine common themes. Whilst these data were not shared directly with the participants in interviews they provided reference material in discussions around the participants' online communities and networks. I had also intended to formally analyse the PLE diagrams, but given the limited response and quality, these presented little analytical value. I am not aware of any recognised format for using PLE diagrams as a conceptual instrument for data collection, or any formal method to analysing them (though Onrubia et al. (2010) propose a visual model for self-reflection).

Following the second round of interviews and the completion of the data collection period, I developed an Activity Theory-based analytical framework, to trial the development of activity systems. I focussed exclusively on Greg and Natalie and treated them as individual case studies, revisiting the transcripts of the first interviews and coding the notes from their second interviews. Given the focus on doctoral contexts, the data from the second interviews provided the opportunity to examine new sociocultural elements with which it was possible to develop meaningful activity systems, though attempts to triangulate this analyses with those related to the participants' digital artefacts proved inconclusive as these had not been directly addressed in either of the interviews.

### **4.2.2 Key Findings**

The first aim of the pilot study was:

- To empirically explore doctoral social media practices by reviewing assumptions base on provisional research questions

The pilot study provided substantial evidence for supporting the assumptions presented in 4.2.1, which, through addressing the provisional research questions, were attributed to a range of key factors presented as follows.

The participants' use of social media demonstrated a complex engagement with their peers and other academics represented by different forms of network- and community-type social aggregates, and different promotional and discursive practices. Some social media was strongly associated with specific academic activities, such as the use of social bookmarking sites to reference, collect and manage resources. However, activities did not necessarily correlate with the generally accepted purposes of specific tools and platforms, and the study highlighted the potential shortcomings of establishing parameters defined by affordances and other commonly used categorisation of social media.

The participants demonstrated the temporary adoption of tools, though the field of study may have influenced a propensity to experiment with new technologies. Yet despite participants' general familiarity with many of the social media available to them, there was some concern about the rapidity of the technological development, and a reluctance to move onto new tools. Several participants held

up Google Wave as an example, and only Mike seemed particularly keen to start trying it. Rowan, the most experienced user of social media in the sample, expressed some concern with the excessive number of tools researchers in her field were expected to adopt. She also suggested that the increased distribution of activity was damaging the type of focussed discussion she used to engage with through blogging and forums, where she had also developed a strong sense of online community with other early adopters in her professional field:

Yeah, people I used to talk with through blog posts... I keep getting the feeling that I'm coming into the middle of a conversation. Something that was started somewhere else, like on Twitter or Facebook.

The interviews revealed participants' perceptions of 'usefulness' were realised at different stages of adoption and use. This was perhaps most identifiable with discussions around Twitter. Greg for example, indicated it had taken him several months to realise its potential, and had considered 'giving up on it' several times. However, participants demonstrated they were able to critically evaluate their adoption and use of social media and adapt their practices accordingly, particularly through employing additional time management or technologically mediated methods in response to opportunities or problems as they arose.

The transference of key tasks from one social media to another (or in some cases, the reluctance to do so) was also evident, highlighting the multipurpose and flexible nature of social media. Natalie described how bloggers, by routinely notifying their followers on Twitter of new blog posts (not necessarily their own), were effectively replicating one of key services provided by aggregation and syndication tools such as Google Alerts and RSS Feed Readers:

I'm finding now when I go to check my feeds that I've already read half the posts. That must be through Twitter – or mostly Twitter --- and others that I've picked up through linking or chatting with... I have thought of taking them off my reader, but you never know if they're gonna carry on doing it or not. It's not a big deal.

The study confirmed many instances of overlapping communities and networks across different social media, and indicated that participants transferred their perceived identification of users and audiences from one social media to another. Mike, for example, assumed people regularly read his blog also followed him on

Twitter. Data indicated academic networks that are largely formed through the web (primarily non-localised) are strongly stratified along academic hierarchies (i.e. individuals indicating a tendency to communicate with academics of equal or equivalent academic status). Participants interviewed seem to validate these data, expressing a conscious decision to engage in networking strategies that may effect communication with specific academics. Natalie likened the experience of an expert in her field commenting on her blog to that of “grabbing five minutes with her at a conference.”

Strategies of self-promotion and identity management that were observed across sites included the alignment and aggregation of online profiles through tools such as Google Profile and Open ID etc. (the affordances of greater password management was a contributing factor with several participant), and through directing to key focal sites (e.g. blog, SNS, institutional webpage) on distributed sites. Negotiations with participants over which of their sites were to be observed indicated a tendency to make clear distinctions between online spaces for recreational and social networking, and those for their studies and work activities.

Most blogging content and discussion on social networks centred on general discussion around research methods and methodologies, and general concepts and themes related to their specific and general research topics. Content related to more formal work was less commonly in evidence. Greg suggested he was reluctant to share formal texts primarily due to the ‘untidy’ nature of his work in progress, and expressed concern about confidentiality of content that may not have been formally anonymised. Natalie was uncertain about the appropriateness of publicising anything discussed privately with her supervisor. Mike was the exception here, in openly sharing his formal dissertation development, though he acknowledged the theoretical orientation of his Ed.D reduced risks around sharing confidential material. Greg explained how a blog post of his had attracted more ‘hits’ than any other primarily because, he believed, a professor in his field had once bookmarked it. This demonstrated, that through the persistence of web-based artefacts, actions online could extend beyond both the control and the awareness of participants through the participation of a third party.

Participants cited the opportunities for discussion and feedback as a primary incentive to engage in social media, and types of discussion were observed across a number of sites. However, the questionnaire data highlighted the limitations in

the actual effectiveness of some social media, particularly blogging, in gaining critical feedback through the low occurrences.

### **4.2.3 Reviewing Research Methods**

The second aim of the pilot study was:

- To test methods of sampling, data collection and analysis, and assess the effectiveness of these for the main study

#### **Sampling**

The use of social media was widespread in the sampling frame, and the participants demonstrated high levels of experience, competency and experimentation with multiple tools and platforms. Further, their professional interest in the field was seen as a key incentive for their willingness to take part in the study. In contrast, it would be expected that PhD students from outside the learning technologies field – with less professional incentive and personal motivation – might have less experience and familiarity with the technology and the cultural norms of social media, to engage. Further, it is important to note how disciplines and specialisms outside the learning technologies field may lack a ‘critical mass’ of academics using social media, which as Conole (2010) and Procter et al. (2010) have observed, can be a disincentive to adoption and continued use. As such, I anticipated that my intention to recruit PhD students from outside the learning technologies field in the main study would incur different sampling challenges and strategies. This would require recognising a potentially much larger multi-disciplinary sampling frame from which to recruit participants, and in all probability a greater variance in the use of, and motivations for using, social media. Most notably, given the lack of a professional relationship with the research topic, there would be a significant shift in the criteria necessary for incentivising participation in the research.

#### **Requirements of participation and ethical considerations**

Generally, a good relationship was maintained with the participants throughout the pilot study, and no undue ethical issues occurred. However, I sought additional feedback from all the participants at the end of the study regarding



their participation, with a view to how this might inform the main study. Whilst participants demonstrated a willingness to be flexible to some degree, on occasions they were reluctant to participate in any additional data collection other than that which had been formally agreed. Several of the participants subsequently suggested that an account of the requirements of their participation over a set timeframe should have been made available to them in the initial stages. As any concerns raised by participants were almost exclusively related to the time-intensity of their participation rather than any specific tasks, participant requirements based on the total hours of participation rather than specific stages of data collection were considered to be most appropriate for going forward into the main study. It was necessary to develop an additional consent form documenting the online sites that participants agreed to be included in the data collection. Whilst some participants indicated they were reluctant to include some sites (particularly Facebook) – as these were seen as being predominantly recreational (i.e. non-academic) – they subsequently admitted that elements of academic communication and information sharing took place. This indicated that careful consideration should be given to the tension between recognising the peripheral role of such sites whilst being empathetic to the ethical requirements and wishes of the participants.

## **Data Collection**

### **Interviews**

Whilst the questions in the first round of interviews were effective in establishing a holistic perspective of each participant's social media practice, they lacked the contextual focus needed to relate them with the participants' doctoral activities. This highlighted the value in referencing specific digital artefacts, either as exemplars or specific cases when addressing the questions. However, the second round of interviews helped – albeit retrospectively – to develop a more refined understanding of the sociocultural aspects of the participants' doctoral practices, highlighting in particular the importance of departmental research cultures and pre-doctoral activities. Transcribing all the interviews was a factor in the pilot study running over the allotted time. With an anticipated increase in the number and length of interviews for the main study, the recruitment of a professional transcriber was considered, but eventually not used. Improved equipment and technique helped me develop a more efficient transcribing process.

### **Activity Sheets**

Student diaries, in various forms, have been shown to provide authentic and rich sources of data about learning events as they happen (Conole et al., 2008). Yet when initially discussing their requirements of participation in the pilot study, several participants were quick to show their reluctance at undertaking self-reporting activities, even over a short period of time. Only one of my participants (Natalie) completed the activity sheets over the requested period of six weeks. Two of the other participants began the procedure but did little beyond the first week. This corresponds with Timmis et al.'s (2004) work with written diaries, which students generally found too time consuming. Whilst the use of audio recording was considered, the reliance on participant access to equipment and the management and transference of audio files was considered problematic. Evidence of the successful use of such devices in other studies is limited (Conole et al., 2008), and audio diaries have been shown to be most effective when the mobile and personal devices being used are the focus of the research studies (for example, Pettit & Kukulska-Hulme, 2007). One should also recognise threats to validity such as the 'Hawthorne Effect' and the potential tendency of research participants to alter their behaviour, often unwittingly, in response to researcher observation or expectation. These concerns are most associated with observational research, but in reporting their own unobserved activities, the temptation for participants to exaggerate productivity or technological competence is introduced. And as Buckingham (2007) points out, researchers in educational technology tend to be seen by participants in a relatively uncritical light, providing insight into improved technological solutions. Despite these concerns, this exercise did highlight the need for participants' to record their activities external to their own social media sites (such as commenting on other blogs). At the suggestion of my supervisor, I subsequently used Evernote, a web-based annotation platform, for this purpose in the main study (see 4.4.4).

### **PLE Diagrams**

Three of the five participants submitted PLE diagrams. Whilst accurately representing the multiple social media in which they were each engaged, they were largely ineffective as data, indicating little more than a basic representation of the technical interrelatedness of the tools. There was little consideration given to workflows through specific activities, or the development of strategies and practices across the social media. Given their field of study, all participants were familiar with the concept, and visually representing them had become an increasingly common practice for learning technologists studying social media.

However, they were considered ineffective for participants from outside the learning technologies field - where the concept of PLE is unfamiliar and participants may be engaged with fewer social media. Further to this, not all participants are considered to be visual thinkers. The Digital Researcher event (described above) appeared to produce widely varying results. As such, their use may be best suited to multi-modal approaches to examining social media activities, in which they are utilised alongside textual and conversational methods of data collection. Two of the three submitted diagrams were used briefly as references in subsequent interviews but with little additional value. There were indications that more developed visual representations could be a useful instrument to facilitate discussion (particularly in interviews conducted face-to-face), but I chose not to use them in the main study.

## **Data Analysis**

The pilot study exposed fundamental shortcomings in the analytical process. The lack of a coherent analytical framework made it difficult to triangulate the analyses of the primary data sets provided by the initial student survey, the participants' digital artefacts and the participant interviews.

Further to this, the grounded approach I took in analysing the content of digital artefacts from separate and different types of social media proved problematic. Whilst useful for comparing and contrasting 'like for like' platforms (such as blogs and Twitter) across participants, analysis from each social media related to a specific participant remained a largely separate and unconnected exercise. This highlighted the need to incorporate examples of interconnectedness and transference of tasks across the social media ecologies of individual participants rather than within their discrete technologies. It also gave rise to the potential of genre as an analytical device with which to assimilate different forms of digital artefact types and media oriented towards specific activities and incorporating social constructed and culturally dependent narratives.

In addition, much of my literature review of doctoral research cultures and practices (as presented in Chapter 2) was yet to be undertaken. Whilst the pilot study enabled the study of social media across a range of generic academic and research practices (initially set out in the survey and used to inform analysis of the digital artefacts and the participant interviews), a full appreciation of the doctoral context was yet to be fully formed and incorporated into a coherent

analytical process. In hindsight, this proved to be an unfortunate scheduling decision, but it highlighted fundamental gaps in the data corpus, particularly in addressing the local and distributed doctoral contexts external to social media practice, and the necessity to account for (partly pre-doctoral) personal academic and social media histories.

Therefore, an analytical framework was sought to incorporate the examination of digitally mediated academic practices situated within the unique social and cultural contexts of participants' doctoral education. Following the consideration of several prominent learning theories (described in detail in Chapter 3), an activity system-based analysis was developed retrospectively after most of the data collection had been undertaken, in an attempt to trial an Activity Theory-based research design for the main study.

Having decided a survey would not be employed in the main study, and recognising that data such as PLE diagrams and activity sheets would only potentially provide no more than supplementary information, concern over the relationship between the analysis of the digital artefacts and the role of the interviews became a key focus. Whilst the additional round of interviews went some way to addressing the discrepancies in incorporating the doctoral context discussed above, it also highlighted the need to develop a more systematic and iterative research design, responsive to ongoing data collection and analysis. This would allow for the identification of key artefacts in relation to critical events to form key focus points for interview discussion, but would also encourage the development of key narratives over the longer timeframe envisaged for the main study, where several rounds of interviews and alternate stages of analysis were planned.

On an additional practical note, whilst word processing and spreadsheet software had been sufficient in supporting the analytical process in the pilot study, a more effective platform with which to aggregate multiple forms of data, notes and analysis was considered for the main study, and I subsequently used NVivo (see 4.5.2).

#### **4.2.4 Developing Research Questions**

The third aim of the pilot study was:

- To develop findings to help refine research questions for the main study

The implications of the pilot study on the development of the research questions represented less a refinement as such, and more an expansion, in that it incorporated significant additional elements that were highlighted by the findings and the limitations in the analysis. It should be emphasised that this process occurred simultaneously with the identification of emerging themes in the ongoing literature review, and my increased understanding of the methodological and analytical challenges of the study through developing the conceptual framework described in Chapter 3. In particular, I point to my recognition of the potential importance of cultural tools within the Activity Theory framework, the work of Dorothy Holland et al. around Figure Worlds, and my increased familiarisation with genre studies.

Firstly, the pilot study confirmed the need for a practice-based enquiry into how PhD students are using social media, but provided clearer guidance for examining the intersection between doctoral and social media practices. Whilst identifying patterns of adoption and use within and across multiple social media, activities did not necessarily correlate with the explicit or perceived purposes of specific tools and platforms. The study highlighted the shortcomings of establishing categories of social media use based primarily on affordances; similar to the framework I developed to guide the initial survey. This necessitated a fundamental shift in focus from examining academic practice based on the affordances of social media to one that authentically demonstrates how activities oriented towards specific doctoral educational aims are potentially augmented and disrupted by the emergent adoption and use of social media.

Secondly, the pilot study helped redefine the focus on online identity, from one primarily based on the instrumental role of profiling and identity management within and across multiple social media, towards more holistic sociocultural, constructivist and performative perspectives (as discussed in 2.1.4). This emphasised the importance of recognising the complex interrelation of multiple practice contexts – in particular the influence of participants' research communities and disciplines – and the transitional, transformational nature of identity associated with undertaking a doctoral programme. Even with such a small sample, the potential diversity of PhD students was highlighted. The participants not only represented different stages of their PhD, and full and part-

time modes of study, but they were also heavily engaged in 'peripheral' and 'secondary' activities, such as teaching and additional project work. And notably, several participants referenced how academic activities and roles outside of their formal doctorate studies had influenced their adoption or use of certain social media. In two cases, a wiki and Second Life were used within specific project-based activities external to core thesis-related work.

Thirdly, the pilot study highlighted the possibility of exploring student agency as a key focus of enquiry. I was particularly interested in how the 'key motivating factors' and 'strategies' of the original research questions could be repurposed, towards an understanding of self-efficacy of personal and peer online networks and communities. In foregrounding student agency, one is compelled to address the role of social media engagement within the cultural norms and expectations of doctoral practice, and the ability to challenge and augment established forms of connectivity, socialisation and status within the academic community. This was also seen as an opportunity to explore the inferred relationship between agency and identity described in the literature review.

## 4.3 Developing Activity Systems

In this section, I address the key conceptual and methodological issues related to the key components of the activity systems by further examining the Activity Theory literature, and discuss how these may shape the development of the analysis in relation to the requirements of examining doctoral practices and social media in the present study. This therefore serves as a developmental link between the key concepts that underpin Activity Theory (presented in 4.1) and my account of how I used activity systems in my analytical process (see 4.5).

From an Activity Theory perspective, activity includes both observable experiences and mental or cognitive activities. These are best explored through the combination of observation and participant interviews, to develop comprehensive data sets representing authentic participant experiences in the context of the study (their digitally mediated doctoral practices). A key finding of the pilot study was the identification of interrelated occurrences of incentives, disincentives, opportunities and barriers in the participants' social media practices. Activity Theory can provide a more procedural and systematic method for identifying, revealing and examining the reciprocal and causal relations that underpin these phenomena, through the identification of systemic contradictions rooted in the socio-cultural components within interrelated object-oriented activity systems.

A key value of using activity systems is the ability to identify how actors provide solutions, and examine how these might potentially lead to new activities, and evaluate the effectiveness of these processes. The literature on third generation Activity Theory is primarily framed within Engeströmian developmental contexts, typically characterised by interventionist and participant-collaborative approaches to the development of resolutions. However, the present study is an empirical investigation using activity systems as a primarily descriptive tool (Nardi, 1996) with which to understand how the complex doctoral practices are mediated by social media. Therefore, in adopting a primarily descriptive approach to using activity systems, analyses need to be oriented towards solutions as enacted, realised and described by the participant through stages of negotiated discussion. In such cases, the researcher's role is to facilitate ongoing discussion guided by the analysis without disrupting or overtly influencing the participants' process of meaning making and critical reflection on the topic of the research.

### 4.3.1 Object-Orientation

The object is more than a component of the activity system. It is its defining feature, its 'sense-maker' and the linchpin of its analysis (Spinuzzi, 2011). It is the object, under transformation, that effectively integrates all elements of the activity system (Leont'ev, 1978). Yet the object continues to be one of the most difficult concepts of Activity Theory, and a major source of confusion and concern for new researchers. Its ambiguity partly resides in the mixed interpretations that have arisen out of English translations of canonical Russian texts. Bakhurst (2009) provides a particularly useful historical account of this. The most instinctive, and readily adopted, interpretation is that the object represents an objective or purpose or aim of the activity, i.e. what the subject 'is doing.' However, Bakhurst prefers an alternative interpretation, which he likens to where some material is being fashioned, i.e. what the subject 'is acting on.' This corresponds more closely with more nuanced and expansive readings of the object as a 'problem space' and a 'generator and foci of attention' (Engeström, 2009b) representing a 'horizon of possible actions' (Engeström et al., 2005).

Engeström (1999a) warns us not to confuse objects with goals. Goals are attached to specific actions, which tend to have a short time-spans with clearly defined beginnings and endings. Goals, and the plans to achieve them, are formulated and revised concurrently under these actions and are often realised retrospectively. In contrast, activity systems evolve through long historical cycles – their beginnings and endings are difficult to determine – constantly generating actions in which the object is enacted and reconstructed in specific forms and contexts (Engeström, 1999b). In essence, the object gains motivating force that gives shape and direction to the activity. Single (and potentially short-term) actions should therefore be integrated within activity systems rather than defining them.

It is essential that activity systems are not snapshots in time, but incorporate historical and cultural development. Kaenampornpan and O'Neil (2004) attempt to operationalise this historical aspect in their augmented version of Engeström's activity system by proposing by introducing multiple developmental layers, incorporating current, past and future time through historical and predictive modelling.



### 4.3.2 Contradictions

Contradictions and tensions are inherent in human activity (Engeström, 1999a). However, the Activity Theory literature presents conflicting definitions and interpretations, and to add to the confusion, the terms contradictions and tensions are often used interchangeably without any clear distinction. What is generally agreed is that contradictions are seen as the driving force behind disturbances and change in the activity system (Engeström, 1993). They can be identified and examined by interpreting changes within activity systems. They can occur within components (e.g. within 'Division of Labour'), or between two or more components (e.g. between 'Subject' and Tools'). Most importantly, whilst it is natural to think of contradictions within activity systems as obstacles or interferences, Engeström (1987) reminds us that they can equally act as enabling influences, stimulating the subjects' capabilities to act on and develop the object.

Engeström (1987, cited in Yamagata-Lynch & Haudenschild, 2009) presents us with four levels of inner contradictions in activity systems:

- Level 1: Primary Contradictions - When activity participants encounter more than one value systems attached to an element within an activity that brings about conflict.
- Level 2: Secondary Contradictions - When activity participants encounter a new element of an activity, and the process for assimilating the new element into the activity brings about conflict.
- Level 3: Tertiary Contradictions - When activity participants face conflicting situations by adopting what is believed to be a newly advanced method for achieving the object.
- Level 4: Quaternary Contradictions - When activity participants encounter changes to an activity that result in creating conflicts with adjacent activities.

Even with a cursory reading of these levels, one can see how they might be useful in gaining an understanding of the tensions that occur in adopting and using social media in academic and doctoral contexts. But how might they relate to the potentially erratic and inconsistent patterns of adoption and use of social media by unconnected individual doctoral students? Might the distinct levels of contradictions correspond with equally distinct stages of implementation and evaluation of (new) practices? Whilst primary contradictions might relate to the overarching socio-cultural values at a systemic level, the subsequent contradictions would seem to indicate tensions at an operational level revealed by the participants' understanding of their doctoral practices. More specifically:

- Secondary contradictions might describe the type of conditions related to the participants' adoption and use of social media represents, in that they are being considered and used for existing and well established doctoral activities.
- Tertiary contradictions might describe the type of conditions related to coping strategies required as and when new social media practices are assimilated.
- Quaternary contradictions might describe how the implementation of new social media practices may affect other, interconnected activities, and the activity systems that describe them.

### **4.3.3 Tool, Artefact, Medium**

Mediating artefacts are incorporated into goal-directed action to facilitate achieving specific goals or purposes (Cole, 1999). It is an aspect of the material world that is cultural, in that it is modified by humans as a means of regulating their interactions with the world and with each other, and developmental, in that it embodies a historical record of successful refinements (Cole, 1999). The artefact-mediated construction of objects is a social and dialogical process, drawing on a range of cultures and perspectives (Engeström, 1999c).

Wartofsky's (1979) three-level hierarchy of artefacts has been influential in Activity Theory (Guy, 2005). For Cole (1999), it bridges tool-mediated activity found in Activity Theory with issues of context discussed in cultural psychology.

- Level 1. Primary Artefacts – directly involved in production (e.g. axes, needles, computers etc.)
- Level 2. Secondary Artefacts – representations both of primary artefacts, and modes of using them
- Level 3. Tertiary Artefacts – class of artefacts – modes of behaviour when interacting with artefacts. Tertiary artefacts are "methodologies or visions or world outlooks which serve as guidelines in the production and application of secondary artefacts"

Engeström (1987) modifies this into four categories of artefacts that are less hierarchical but more specifically oriented towards a developmental approach:

- 'What' artifacts are used to identify, describe and classify objects

- 'How' artifacts are used to guide and monitor ways of proceeding and acting with objects
- 'Why' artifacts are used to justify, direct, and explain objects and actions
- 'Where to' artifacts are used to explain, predict, and direct the evolution and change of systems over time

According to Rückriem (2003), the nature and character of human activity are determined by the historically leading or dominant cultural media, and the object of the activity is of secondary importance. He suggests computer and web technology:

changes not only one specific concrete activity but revolutionizes the societal activity structure as a whole and the complete relations of activity and consciousness (that is the economic, social and psychic status of any tool available) (Rückriem, 2003: 2)

In posing the question 'is computer technology tool or medium?' he concludes it is both. "Tools and media are not different things but different functions, different modes of reflecting on them" (p.8). As the dominant media is appropriate to writing and print, Rückriem argues current configurations of Activity Theory may not be effective in addressing ongoing sociocultural transformations of digital media, which he summarises as:

- material techniques (or 'tools') indicate the tool character of media
- technologies (or 'psychological tools') indicate the cognitive character of media
- sense / meaning indicate the communicative character of media

Considering the present study, it is interesting to think how these categories might help address the mixed ontological representations of social media discussed in 2.2.1, whether they be, for example, tools, platforms, brands, components, interrelated technologies, communal spaces or personal learning environments.

However, in addressing how the instrumentality of social media might be incorporated into the Tools component of object oriented activity systems, the platform-specificity of social media might be seen as problematic. Further to this, how might the wide range of participant-produced digital artefacts - seemingly of distinct platform-specific formats, modes and media - be categorised to enable the examination of multiple and interrelated sites without resorting to platform-

specific forms of analysis? For example, it is typical to present the blog post as a specific genre (as for example, Ferguson, et al., 2007 do). However, when one considers blog posts can vary considerably across a number of interrelated determinants - in format, medium, length content and subjectivity - one might question how useful a criterion it is for categorisation. Might the same be asked of tweets, or forums, or online profiles?

It is useful here to consider the distinct sociocultural strand of genre studies that has emerged in recent decades. Berkenkotter and Huckin's (1993) influential paper represented a significant shift from a formalist perspective of genres rooted in literary studies, rhetorical studies and discourse analysis, to that of a dialogical perspective, which is both inclusive of, and focussed on, the social interactions, activities and practices in which genres are embedded. Similarly, Spinuzzi and Zachry (2000) describe genres as artefact types and the interpretative habits that develop around them. This would suggest genres could operate within and across multiple social media, and could therefore provide a more flexible approach to evaluating the contribution of digital artefacts. Taking such an approach, we might develop ways in which genres challenge 'platform-specificity' and enable a more culturally situated and socially negotiated forms of categorising the digital artefacts. In addition, such an approach would seem to present a more convincing conceptual fit with object-oriented activities. Developing genres in this way would seem to reconcile the challenges presented by the mixed ontology of different types, formats and sizes of digital artefacts, whilst recognising the specific cultural and social aspects related to particular platforms and tools.

One aspect of genres that is particularly appealing to the present study is in the way the concept has been applied to education and scholarship. In adopting a perspective that academic knowledge is primarily constructed around genres, the development of 'genre knowledge' is seen as a legitimate form of metacognition, in which genres are potentially portable, reproducible and transferable across different practice contexts. As such, genres associated with the disciplinary cultures of research practices can be seen as embodying the knowledge needed to interact and communicate successfully within and across different academic and peripheral cultures. This representational role of genre draws obvious comparison with the concept of reification - particularly within Communities of Practice (as discussed in 3.2.2).

#### **4.3.4 Subject, Roles and Positionality**

As an interpretive study, the present study seeks to solicit the participants' personal perspectives and experiences. This requires developing a methodological design that supports the development of participants' personal constructs and subjectivities through a negotiated process of meaning making.

In Activity Theory, mediated, object-oriented activity - as described in the model of activity represented by the activity system - is always perceived from a particular subjective point of view (Guy, 2005). The subject can be individual or collective, but as Lektorsky (2009) points out, an individual subject cannot be dissolved into collective activity systems, or vice versa.

For Daniels (2011), the work of Dorothy Holland and her colleagues (1998) (as discussed in 3.2.3) represents a significant contribution to understanding individual subjectivity in Activity Theory, and - with particular relevance to the present study - what it has to say about individual agency and identity. Their concept of figured worlds draws closely upon Leont'ev's notion of activity as a historically, socially and culturally constructed form of social interaction. Figured worlds are materially manifest in people's activities and practices - constantly (re)forming in their everyday actions, events, cultural outputs and performances - and are seen as historical phenomena under continual development by their actors. Therefore, figured worlds can conceptually provide the contexts of meaning in which social relationships and positions are realised, and contribute to a study that is both fine-grained and long-term.

#### **4.3.5 Sociocultural Aspects**

##### **The 'Rules' Component**

The 'Rules' component defines the norms and cultures of the activity system. Rules mediate the relationship between subject and the community, and constitute both implicit and explicit cultural norms, practices, policies and regulations (Kuutti 1996; Uden et al., 2008). In the present study, the process of developing activity systems requires addressing, firstly, the multiple and interrelated doctoral research cultures, and secondly, the cultural norms of web 2.0 (as reviewed in Chapter 2). Effectively, it is the coming together of these two

broad cultural contexts, and the potential conflicts and conflict resolutions that may arise, that constitute the emerging practices that lay at the heart of this study. Analytically, these cultural contexts cannot be treated separately, but as interrelated determinants dependent on how they are defined and delineated through the construction of the activity systems.

There is considerable evidence to support the belief that disciplinary and local cultures - how researchers undertake and communicate their work in different subjects and institutional settings - have a significant influence on how new technologies are adopted (James et al., 2009; Procter et al., 2010). Weller (2011) suggests key cultural norms evident in social media may be sufficient to 'overcome' some of the perceived difficulties inherent in the cultural norms of academic practice, such as those related to disciplinary differences, thereby providing a common framework for interaction and dialogue. Yet whilst web 2.0 cultures based on sharing and collaboration are seen as challenging deeply embedded academic traditions, a culture of 'possessive individualism' (Rosenzweig, 2007, cited in Weller, 2011) pervades academic discourse, particularly in many of the soft disciplines associated with lone scholarship. Further, there are specific practices related to specific social media and types of platforms and services, each of which can be seen as having their own set of cultural norms and metanorms, providing a cultural 'stickiness' to sustain adaptive behaviour (Ehrlich & Levin, 2005, cited in Weller, 2011).

### **The 'Community' Component**

We have seen how the dominant metaphors of web sociability that emerged in the formative years of the social web - namely those of the 'virtual community' and the 'networked individual' - have continued to influence how the web is perceived and studied (see 2.2.1). Further, community- and network-based learning theories provide conceptual frameworks for developing models for analysing how individuals and groups interact and learn (Chapter 3). It is not uncommon elsewhere in the literature for the two terms to be used interchangeably.

Historically, research and practice in e-learning has been primarily focused on groups (Dron & Anderson, 2007) - which Dalsgaard (2008) regards as a collection of individuals who are usually jointly engaged in study activities - and the use of technology in support of groups has often focused on communal and

collaborative elements. More specifically, Barab et al. (2003: 198) define an online community as “a persistent, sustained [socio-technical] network of individuals who share and develop an overlapping knowledge base, set of beliefs, values, history and experiences focused on a common practice and/or mutual enterprise.” Increased opportunities for web-based learning domains, largely brought about by the development of social media, have necessitated a shift in focus to more loosely-bound network and participatory models of learning. In addressing emerging professional practices in web constellations adapted to particular contexts and purposes, Nardi et al. (2002: abstract) privilege the networked individual over pre-defined, enduring communities or groups as the dominant unit of analysis:

Collective subjects are increasingly put together through the assemblage of people found through personal networks rather than being constituted as teams created through organizational planning and structuring.

Jones and Esnault’s (2004) distinction between the strong communal ties of traditional forms of networked learning, and the weak ties (Granovetter, 1973) in an increasingly networked environment, has come to be seen as important to facilitating bridging social capital (Putnam, 2000). Many studies have represented the relationship between the two through historical transformation: from network to community or vice versa. A Community of Practice, for example, can be based on a network foundation, at least in the initial stage of community formation. The historical nature of the activity system accommodates the developmental and transitional aspects of the social structures within it, along with related cultural norms and division of labour. Arguably, both networks and communities can be seen as individual or collective (or social) constructs. Rather than representing concrete examples of community and network development, use of interrelated social media platforms and tools more resembles complex, shifting patterns of orientations, with the actor negotiating domains that are, at any one time, subject to patterns that are collocated and distributed, bounded and unbounded, and formal and informal. In doing so, they are implementing and engaging in what can be loosely thought of as ‘community-orientated’ and ‘network-orientated’ activities. These may not necessarily be consciously distinguishable, but are both crucial to engaging successfully online. This corresponds with Wenger et al. (2011: 13), who present community and network as two ‘aspects’ of social structures in which learning takes place:

Social learning is enhanced by a dynamic interplay of both community and network processes. Such interplay combines focus and fluidity as it braids individual and collective learning.

In this context, networking supports a process of divergence, or diversifying of connections, opinions and domains, whilst community supports a process of convergence, a deepening understanding and contribution to a shared domain. Convergent and divergent activities are also facilitated by some of the technologies – such as RSS feeds and APIs – which underpin the social web, and evident in the technology-enabled processes of subscription, syndication and aggregation.

### **Imagined Audiences**

With the distributed nature of networked technologies, and the inconsistent and sometimes transient nature of user participation and interaction, the identity of online communities and networks is unreliable. The notion of the 'imagined audience' has its roots in studies of traditional broadcast media. Whilst the social and participative nature of the socially mediated web would seem to devalue the broadcast metaphor implicit in the notion of the imagined audience, it has been adopted for the study of social media. This may be entirely different from the actual readers of a blog post or a tweet (Marwick & boyd, 2011). Drawing from communications theory, Thompson's (1995, cited in Brake, 2009) useful typology indicates three primary forms of interaction: monological - in which viewers / readers are unknown and unable to respond; dialogical - which enables viewers / readers to be known and to respond; and teleological or multilogical - which enables an interactive communication with an audience consisting partially or wholly of people previously unknown to the communicator. Social media constitute multiple forms of interaction, which are often teleological. If, as Thompson's typology indicates, "it is the intended not the actual audience and the anticipated level of interactivity that are important in the framing of mediated interaction" (Brake, 2009: 51), then that requires us to understand the actions and intentions that underpin social media activity through the perspectives of individual practitioners.

David Brake (2009) uses a symbolic interactionist approach to examine imagined audiences in relation to personal blogging in the UK. He suggests blogging practices incorporate a range of 'envisaged audience relationships' where a blogger's "construction of the meaning of their practice can be based as much on



an imagined and desired social context as it is on an informed and reflexive understanding of the communicative situation” (p.3). Audience perceptions are partly encoded in the socio-technical characteristics of the social media themselves. In the absence of discreet knowledge about audience, participants take cues from the online environment (boyd, 2006). The ‘identifiability’ of other web 2.0 users will vary across different social media. Viewing indicators (visitor statistics etc.) are limited in what they tell us, whilst acts of participation and reciprocity (comments, retweets etc.) are often fewer in number than we’d like. Even when a network is largely identifiable – such as followers on Twitter – we have little or no idea of their actual viewing behaviours. By choosing to use social media, doctoral students are committed to engaging in more public, distributed and persistent dialogues. The way they blog, tweet and create other digital artefacts across interrelated platforms and audiences incurs potential inconsistencies and tensions. When those audiences are ambiguous, practice and identity agendas are further compromised. This invites questions on how audiences are perceived in different social media, how these perceptions might be formed, and how they might differ across different platforms.

## 4.4 Research Design

### 4.4.1 Ethical Considerations

In accordance with the requirements of the adopted guidelines from the British Educational Research Association's Revised Ethical Guidelines for Educational Research (BERA, 2004), an ethics proposal was developed for the evaluative research and reporting on studies with regard to responsibilities to participants, the research sponsors and the educational research community. A detailed ethics protocol was devised in consultation with my supervisors and a Statement of Research Ethics form was submitted to the Research Ethics Coordinator in the School of Education, University of Nottingham, from which ethical approval for the present study (including pilot work) was obtained. Voluntary informed consent was sought from all participants recruited in undertaking the research for this study. Fundamentally, my key responsibilities were to ensure that the research avoided any circumstances that would be harmful or to the detriment of participants. I recognised participants' right to confidentiality and anonymity, and ensured that the storage, access and dissemination of data did not breach participant confidentiality and anonymity. Ethical procedures were continually reviewed throughout the duration of the research, and none of the participants raised any concerns regarding ethical procedures throughout the course of their participation.

Ethical concerns are bound up with the context in which the research takes place (Simons & Usher, 2000). The content of the World Wide Web is recognised as a legitimate data source (Bassett & O'Riorden, 2002), and the present study involved accessing, collecting and analysing web-based material. Many of the key ethical concerns that arise from conducting research across multiple social media are not specific to online environments, and should be addressed by the same ethical principals as those pertaining to research in 'physical world' sites. However, there are aspects of the ethical research field that require special considerations in an online context, primarily related to the unique nature of online activity, communication and interaction. Academic debate around these issues is in its infancy and ongoing, in response to rapidly emerging technologies and practices, and literature on research ethics engaged specifically with web-based environments is limited. Further, the majority is concerned with what can

be loosely termed 'bounded' online communities, such as those related to an online course or an institutional Virtual Learning Environment (VLE). Engelsem (2003: n.p.) for example, states the researcher has to "maintain and demonstrate a respectful sensitivity toward the psychological boundaries, purposes, vulnerabilities, and privacy of the individual members of a... virtual community." But social media environments present new ethical contexts. The distinction between the private and the public domain, and the ownership of online activities and identities, may be difficult to define. Participants will likely be accessing, participating in, and collating information from environments in which non-participants play active roles.

In addressing ethical procedures for the present study, the following areas of risk were identified:

### **Confidentiality, Anonymity and Identity**

The participants' right to confidentiality and anonymity was to be ensured in all cases. The literature indicates a perception of privacy afforded by the norms of transience, pseudonymity, and confidentiality in online environments (King, 1996; Waskul, 1996; Engelsem, 2003). Whilst recognising that participants may develop online profiles that are fragmentary, multiple and pseudonymic, this does not necessarily assure anonymity (Nissenbaum, 1999).

### **Storage, Access and Dissemination of Data**

It was necessary to ensure ethical use was made of digital artefacts (texts, images, video etc.) that were accessed or reproduced for data collection. In addition, it was recognised that social media platforms and artefacts are inherently identifiable to specific persons, and as such, due care was taken in the reporting, dissemination and reproduction of environments and artefacts so as not to disclose the identity of the participants and other parties.

### **Researcher Online Identity and Participation**

Where it was necessary for me to sign up or register to a specific platform (such as a Facebook Group or Ning site) to be able to gain access for data collection, I adopted a consistent and unambiguous identity (i.e. using my real name and a professional profile as a PhD student). Importantly, participants were made aware that I could be engaged in both general academic (i.e. as a PhD student) and data collection (i.e. as a researcher) activities on any of the sites in which I was engaged. Due care was given to minimise any disruption or influence on

participant behaviour on any social media.

### **Inconvenience Allowance**

A single allowance of inconvenience (£50 Amazon.co.uk gift voucher) was awarded to each of the participants upon agreeing to their participation. There are conflicting views on the ethics regarding payment to participants. Some insist it is an unethical practice. Such an amount might be seen as an undue financial incentive to participate, and subsequently damaging to the confidence and mutual respect in the researcher-participant relationship, with the potential for coercion and undue influence (Macklin, 1981). But this was seen as an appropriate monetary reimbursement to compensate participants' time, contribution and their willingness to grant access to a large amount of online material over a significant time period. Whilst recognising that the risk of undue financial incentive will vary across potential participants, the most appropriate amount was assessed in relation to allowances disclosed in similar research studies and related criteria of participation. The risk of inducement was reduced to an extent by not disclosing the amount in initial correspondence with potential participants (candidates who were not chosen as final participants were awarded an inconvenience allowance (£10 Amazon.co.uk gift voucher) for participating in initial meetings – see 4.4.2). I considered the option of making smaller payments at specific stages of the participation (e.g. for each interview) over the duration of the intended participation. However, it was thought this might risk putting additional undue pressure on participants to continue participation throughout the agreed period, and further risk continued and repeated forms of undue financial incentive. I therefore chose a single payment of the allowance at the participant's agreement to participate. It was made clear to participants that the allowance was not affected by their right to withdraw from the research at any stage.

### **Ethical Procedure**

The following represent a summary of the ethical procedure and related documentation for each participant. All standard forms and letters of correspondence are reproduced in full in Appendix 7.

### **Participant Information Sheet (P1)**

To ensure participants understood the nature of their participation, summarising how the research was to be conducted, used and disseminated, and informing

participants of their right to withdrawal from the research at any time for any or no reason. (In accordance with my Statement of Research Ethics.)

#### **Participant Consent Form (P2)**

Representing a formal agreement between the researcher and participants, enabling participants to confirm their understanding of the research. (In accordance with my Statement of Research Ethics.)

#### **Participant Research Sites Agreement (P3)**

Following an initial meeting, this represented a formal record of the social media each participant permitted as a site for data collection. If, during the data collection period, a participant began to use a new form of social media, which he or she agreed to be included, it was added to the Agreement and countersigned by the participant.

#### **Participant Receipt of Inconvenience Allowance (P4)**

A single payment of inconvenience was awarded to each of the participants upon agreeing to their participation.

### **4.4.2 Sampling**

In this sub-section, I summarise the process of securing the voluntary participation of PhD students for my research. Within a qualitative research design, the sampling process cannot be isolated from other methodological concerns but rather, as Bryman (2004) observes, requires a flexible and iterative approach that recognises the needs of data collection and analysis. Also, as Wellington (2000) reminds us, practical issues such as timescales, resources and issues of access often shape the sampling process. The sampling approach taken for this study required establishing an effective balance between participant numbers, the requirements of their participation, and the nature, depth and duration of the data collection and analysis. Therefore, whilst these issues are addressed separately in the following pages, the process of negotiating these interrelated influential factors constituted a set of risk assessments and continually shifting 'trade-offs' to establish the most appropriate research design.

## **Sampling Sites**

The primary aim of the sampling process was to identify PhD students who were actively using, or in the process of adopting, various social media as part of their doctoral studies, and to seek to gain access to data through their voluntary participation. Unlike the convenience sampling model I adopted for the pilot study, where I drew on my existing access to postgraduate students from within the educational technology field to recruit my participants, I realised a more purposive approach to sampling would have to be employed in order to sample (for the reasons explained in 1.4.3) participants outside my field. Whilst both purposive and opportunistic sampling methods are commonly associated with qualitative research, purposive sampling is typical for small-scale projects, where the main criterion is choosing participants that demonstrate a specialism, interest or expertise in the focus of the study (Silverman, 2005). Also referred to as critical case or criteria sampling, it usually requires the researcher actively seeking out individuals, groups and settings where the phenomena being studied are most likely to occur. As Denzin and Lincoln (2000) explain, it may require the researcher to forge new links and contacts to gain entry to appropriate environments, to select the most productive sample with which to address the research questions. Within educational contexts, this type of sampling is commonly adopted to derive examples of 'good practices' (Wellington, 2000), but it may also be useful in identifying potential barriers to learning or problematising the learning experience.

I initially considered utilising the phenomena being examined (i.e. social media) as a base for sampling: that is, within specific academic-based networks or special interest groups (such as Twitter hashtag communities, Facebook Groups and Ning sites). However, with such an approach, there was a clear risk of the participants' social media activity being primarily or exclusively centred on that specific platform, or on the focus of the group, which would have been contradictory to the sampling profile I was keen to adopt. I opted instead to sample within specific doctoral research departments. Focusing on one or several student cohorts, with similar training programmes, was seen as providing a systematic sampling method, enabling me to examine different individual experiences and personal perspectives of social media practice within the same academic environments. I identified several EPSRC-funded Doctoral Training Centres (DTCs) as potential sites, primarily because of their interdisciplinarity and their focus on the digital economy. As relatively new initiatives, they were each

characterised by specific multi-disciplinary profiles, and had in common doctoral training programmes emphasising modular coursework and industrial partnerships. Following initial communication with programme leaders, I was granted access to several PhD cohorts and arranged site visits to commence provisionally recruiting participants. Snowball sampling is particularly useful in cases where the researcher is largely unfamiliar with the research site (Cohen et al., 2007), and by following recommendations and suggestions from initial contacts I was presented with the opportunity to identify further potential participants within several training centres. However, as a relatively new initiative, the cohorts in the doctoral training centres were limited to first and second year students engaged in four-year programmes. Whilst some variation is evident, the literature indicates strong commonalities in specific doctoral practices (as summarised in 2.1.2) and stages (such as those described by Grover, 2007) across disciplines and doctoral training cultures. By potentially limiting doctoral practices to those associated with early-stage PhD students (such as literature review) at the exclusion of those associated with mid- to later-stage PhD (such as conducting field work and pursuing publishing opportunities), the potential scope of the research would not be adequately addressed.

I became aware that an additional sampling opportunity had arose through my continued participation in social media workshops at several faculties within my, and other universities. To establish parameters, I chose to restrict further potential participants to PhD students from the social sciences and arts and humanities, primarily to correspond with my own personal experiences as both a student and researcher. (Despite the interdisciplinary focus of the doctoral training centres, most of the provisional participants that had been selected were also from these academic fields.) Merging the two sampling processes ensured the opportunity to recruit participants from different stages of their PhDs, as well as providing a mix of formally 'single-disciplinary' students from traditional' schools or departments and 'interdisciplinary' oriented students in the doctoral training centres.

### **Sampling Size**

According to Sandelowski (1995: abstract), "a common misconception about sampling in qualitative research is that numbers are unimportant in ensuring the adequacy of a sampling strategy." But is sample size necessarily an appropriate criterion? Mason's (2010) survey of over five hundred PhD theses that use

qualitative interviews as their main data collection indicates a wide range of sampling criteria and approaches. Whilst results show a mean sample size of 31, there is great variance depending on the nature of study. As Mason indicates, single figures may be appropriate for very detailed studies. Significantly reduced sample sizes are also expected, and often necessary, in studies that use mixed methods approaches, significantly longer timescales, and lengthier and/or multiple participant interviews – all factors that are relevant to the present study. Specifically, Perry (1998) advises researchers who are conducting multiple interviews with participants to consider the number (or total hours) of interviews rather than the number of participants, whilst Baker and Edwards' (2012) report confirms widely varying perspectives on the 'ideal' number of qualitative interviews. As Sandelowski (1995: abstract) indicates, sample sizes:

may be too small to support claims of having achieved either informational redundancy or theoretical saturation, or too large to permit the deep, case-oriented analysis that is the *raison-d'être* of qualitative inquiry. Determining adequate sample size in qualitative research is ultimately a matter of judgment and experience in evaluating the quality of the information collected against the uses to which it will be put, the particular research method and purposeful sampling strategy employed, and the research product intended.

With such a small sample, making any claims for generalising the findings need to be done with caution. Bryman (2004) indicates that findings can only be generalised to the population from which the sample was taken. In the type of purposive approach described above, where samples are not probabilistic, or 'typical case' (i.e. not representative of the population), the researcher may find it difficult defining the parameters of the population (Silverman, 2005). Indeed, Wellington (2000) suggests, identifying and defining the population can be more problematic than that of the sample. It is common for inexperienced researchers to use 'bottom-up' approaches to determine a sample, without regarding what the population is (Cohen et al., 2007), and as Maykut and Moorehouse (1994) observe, the primary goal of qualitative study is to achieve a greater understanding of the phenomena being examined, and claims for generalisability to a greater population are rarely made.

I worked to an initial target of ten participants, projected from the experience of conducting the pilot study. A total of six candidates from the original sampling frame of doctoral training centre students alongside a further four from the workshops sampling frame were provisionally selected from interested parties. These were eventually reduced to six in total following initial meetings and an



explorative stage of analysis. In particular, with the shift towards a more distributed group of participants from different institutions and multiple disciplines, I anticipated a significant increase in the time and effort required in examining the cultural aspects of each of the participants' research environments. Two of the potential participants were rejected specifically because the role of social media was too central to their research topic. Cohen et al. (2007) warn of the potential risks of volunteering participants who indicate a particularly strong interest in the core topic of the study. However, it should be noted that several of the final participants engaged in using social media as part of their own fieldwork or data collection, albeit peripherally, and that this did influence their use of social media in relation to other doctoral practices. This is described further in the following chapter (5.2.8).

#### **4.4.3 Time Frame**

The data collection period of this study ran to nearly 15 months (several months over the intended 12-months time-frame due to the commutative effect of minor delays in conducting each round of interviews). The significant length of this period served two fundamental purposes:

- Firstly, it enabled the study of participants' social media practice over a substantial period of time (in comparison with the pilot study). This introduced the potential for incorporating several distinct stages of each participant's PhD, multiple doctoral activities, and shifts in practice in using social media.
- Secondly, it enabled significant periods of analyses in between the rounds of participant interviews, allowing where necessary, refinement of the analytical model in addressing the research questions and the flexibility to modify and refine research instruments in response to critical events and emerging data.

Participants should reasonably expect a fixed set of requirements regarding their participation over a set timeframe. The relatively long duration of participation was considered as a potential disincentive when it came to recruiting participants. However, feedback from the pilot study participants had indicated that concerns over the requirements of their participation were typically evaluated in relation to the total hours of 'active' participation (i.e. interviews and self-reporting activities) rather than the overall duration of the participation. In addition, it was noticeable that attempts at adopting a flexible approach to interviewing in

response to critical or key developmental events were largely not welcomed. Whilst they demonstrated a willingness to be flexible to some degree, they were reluctant to undertake in any additional data collection other than that which had been formally arranged.

Activity Theory-based studies typically employ prolonged engagement with participants. In describing the key methodological considerations for using Activity Theory as a descriptive analytical tool, Nardi (1996) suggests researchers:

- allow for long enough research time frames to understand participants' objects, and to study changes in objects and their relationships over time
- pay attention to broad patterns of activity rather than narrow episodic actions that fail to reveal the overall direction and import of an activity

The pilot study demonstrated that critical incidents in the use of social media (such as adopting a new tool or platform) could be observed in the relatively short time period in which data were collected. However, there was little evidence of major shifts in adoption and use. The significantly longer timescale was seen as enabling the examination of major shifts or patterns in:

- the adoption, development, maintenance and withdrawal from specific social media
- the development or transference of recognisable tasks within and across different social media

In addition, the longer timeframe was seen as enabling the examination of social media adoption and use in context with:

- distinct stages of PhD (e.g. literature review, data collection/field work, and writing up)
- specific activities (e.g. preparing for and attending a conference, writing a journal article, participating in a student project or internship)

However, the pilot study also highlighted the need to use interviews to explore participants' historical accounts of prior academic experiences and use of social media. Therefore, whilst discussions related to social media activities observed through the data collection period were given priority, and were seen as having

the most validity (in relation to its immediacy and the reliability of observed phenomena), each participant's accounts of their own pre-doctoral academic (and in some cases, professional) activities and use of social media (both recreational and professional and recreational) were sought. In addition, to further contextualise the analysis, participants were asked about their plans for the near future (specifically, up to and immediately after the completion of their PhDs), and their intentions related to their social media development.

#### **4.4.4 Data Collection**

##### **Digital Sites**

An initial, largely informal face-to-face meeting was arranged with each of the potential participants (including those that were not selected as final participants). Though these were not recorded, notes were taken providing basic contextual information that was useful in the early stages of analysis. A key task of these meetings was to determine which social media were to be included as online sites for data collection. These were negotiated with the full agreement of each participant and, as part of the ethical procedure, documented in the Participant Research Sites Agreement (P3). In order to inform the participants' historical accounts of their social media practices, digital artefacts created before the commencement of the data collection period were also included (unless requested otherwise by the participant). If, at any time during the data collection period, a participant began to use an additional social media, which he or she agreed to be included as a site for data collection, it was added to the Agreement form and countersigned by the participant. Participants were reminded that they had the right at any time to ask for any social media (and any data related to it) to be removed from the data corpus without having to give any reason.

The specific sites of data collection for each participant are discussed in the following chapter and are documented further in Appendix 1, but in summary they primarily included the following social media:

- Individual and group blogs / websites
- Social networking sites (e.g. Facebook)
- Microblogging sites (e.g. Twitter)
- Social community sites (e.g. Facebook Groups, 'Ning' sites).

- Content sharing sites (e.g. Slideshare, Flickr)
- Social bookmarking sites (e.g. Delicious, Pinboard)

There were additional social media in which some participant's were active, which, after discussion with the participants, were excluded from data collection. This was for one or more of the following reasons:

- Access – sites, or parts of sites, that were not accessible to the researcher
- Relevance – sites, or parts of sites, that were considered not to be relevant to the study (primarily because they were being used exclusively for recreational i.e. non-academic activities).
- Consent – sites, or parts of sites, that participants' did not want to be included in the study. (Participants were not under any obligation to disclose the existence or nature of any sites they did not want to be included, nor their reasons for exclusion.)

The vast majority of the social media in which data were collected were openly accessible, or required sign-in or registration (in some cases, such as Twitter, I was already an active user). Several sites (such as some Facebook Groups and Ning sites) required me signing-in or registering for the first time (see 4.4.1), and in some special cases, authorisation from the participant was required. On several occasions, participants also provided access to personal pages (e.g. social networking and community sites), editing or 'back end' sites (e.g. blogs and websites), or draft texts (e.g. blog posts) during interviews when they were relevant to the discussions.

### **Digital Artefacts**

All original digital artefacts produced by each participant (for example, blog posts, tweets, contributions to online forums etc.) were collected throughout the period of their participation. In order to inform the participants' historical accounts of their social media practices, digital artefacts from the agreed sites that were created before the commencement of their participation were also collected (unless specified otherwise by the participant) in the first stage.

The collecting of all of these artefacts was initially undertaken using a personal and private page on the web-based social annotation platform, Evernote. The URLs, reproduced texts and other content were then recorded in Nvivo, enabling

a format to be adopted to incorporate coding sheets. Additional digital artefacts, predominantly consisting of personal profiles referencing identity, professional status, achievements, and other information, either created originally by the participant (such as an 'about me' page on a personal blog) or through a template (such as a profile on a Social Network Site) were also collected and recorded in the same way, primarily in the initially stages of data collection. In addition, all participants were asked to record any additional activities on sites external to those assigned for data collection, that they considered relevant to the study (for example, commenting on another blog). Two of the participants (Michelle and Paula) used Evernote to 'bookmark' and send through the site's private file sharing service. A guide to setting this up was provided (see Appendix 5). The other participants chose to use other methods where necessary, such as e-mail notification. Participant-reported artefacts were added to the other collected artefacts and recorded in the same way.

## **Interviews**

An attempt was made to conduct each round of interviews on a relatively fixed schedule with alternate stages of analysis. Keeping to a schedule enabled cross-referencing across participants. It was sometimes necessary to be flexible to accommodate participants' own research and studies, but generally, I was able to conduct each round of six interviews within a two- to three-month window. A minimum time of 60 minutes per interview was initially agreed with participants, though I found they were generally willing to contribute more time as the research-participant relationship developed. As such, most interviews were conducted between 90 and 120 minutes, with the longest running to nearly 160 minutes.

Interviews were carried out face-to-face whenever possible, using a private study room within the participant's university, with access to a PC or laptop with an internet connection. However, four of the interviews (Amy's second and third, and Jack and Michelle's third) were conducted remotely using Skype. On these occasions, I requested participants bookmarked each of their social media sites before the interview for quick reference, and I was able to live-text the unique URLs of specific artefacts when necessary. Face-to-face interviews were recorded using a voice recorder, whilst Skype interviews were recorded (video and audio) using compatible software. I transcribed all of the interviews in full. Following my experience of conducting interviews in the pilot study, I developed a routine of

first listening once to each interview (without transcribing), making notes of the key themes alongside the general preparatory notes I had made prior to the interview, before commencing with the full transcription. In several cases, this initial stage highlighted minor factual points that were ambiguous or needed clarification. Where it was felt these could hinder subsequent analysis, they were resolved by contacting the participant by e-mail. I decided not to send completed transcripts to the participants for verification as, after initial conversations, the participants largely saw this as an unnecessary imposition on the requirements of their participation. However, it was made clear to the participants that they had, as part of ethical procedure, access to the transcribed texts at any time, as they had to all other data and analyses related to their participation.

Interviews were broadly semi-structured in nature. Generic interview plans - customised for each participant - were drawn up to guide the structure and key areas of enquiry, though these became more flexible in the later interviews in order to address specific aspects of each participant's social media practices. (The roles of each round of interviews are described further in 4.4.5). Whilst the time between the rounds of interviews enabled the in-depth stages of analyses required for the study, they did allow for significant periods without discussions with participants. And therefore, whilst the participants' activities were partly evidenced in their digital artefacts, each participant was asked to provide a summary update of their progress in their PhD since the previous interview. This was conducted in e-mail conversations prior to the interviews, and then summarised in discussions in the early stages of the interviews.

### **Sharing Analysis with Participants**

Several of the participants expressed an interest in the analytical process I was using. I was keen to be open about my use of Activity Theory, not only as a gesture of transparency and inclusivity towards my participants, but also with the aim that it would provide them with an informed understanding of the nature of enquiry I was conducting the interview discussions (particularly in relation to the social and cultural aspects of their doctoral studies). Therefore, I summarised the key concepts of Activity Theory in 'layperson's terms' in each of the first interviews, briefly explaining why I was using it as an analytical framework. This was repeated at various stages of subsequent interviews whenever I felt it was relevant to the discussions.

The 'triangle model' of the activity system provides a compact visual representation, which has been utilised in research studies to help participants in the research to interpret and verify data analysis (Yamagata-Lynch, 2010). However, whilst this was considered as a option in the participant interviews, I chose not to use the notations, conventions, and terminology of the activity systems themselves, but rather translate the relationships between the key components and contradictions defined within analytical models in more accessible and authentic terms. Whilst my reasoning for this was partly pragmatic: in that it would have required a significantly greater investment by the participants in understanding key concepts of the activity system, my primary concern was to uphold the authenticity of the participants' process of meaning making and descriptions of the phenomena under discussion.

This became a key methodological decision, which I saw as being rooted in the fundamental differences between using Activity Theory as a prescriptive and interventionist developmental methodology (typified by 'Engeströmian' approaches) and as a primarily descriptive tool (Guy, 2005). A key value of activity systems is the ability to identify solutions, examine how these might potentially lead to new activities, and evaluate the effectiveness of these processes (Engeström, 1987). Much of the literature on third generation Activity Theory is primarily framed within these developmental contexts, advocating interventionist and participant-collaborative approaches to finding solutions through continued discrete stages of analysis, evaluation and implementation.

In a descriptive approach to activity system analysis, solutions are limited to those enacted by the participants, and conceptualised through their own meaning making process. For me, this related closely to the development of critical and reflective practices in using social media. I was keen to retain the terms expressed by the participants themselves (as evidenced in the transcripts of previous interviews). For me, this enabled me to maintain a more authentic dialogue with each of the participants for the duration of their participation. I was concerned that, in introducing the conventions and notation of the activity systems, it would potentially disrupt and overtly influence the way participants reported back, and compromise their cultural understanding. I found it was possible to utilise the structural and discursive properties of the emerging activity systems to guide and shape discussions without imposing their terminology, but rather maintaining and adopting the participants' own contextual terms. This ensured the authentic voice of the participants and a consistent dialogue across

successive interviews was maintained.

## **Supplementary Data**

### **Field Notes**

I kept a research diary throughout the duration of the study, in the form of daily entries in monthly Excel worksheets. The diary contained both types of what Esterberg (2002) refers to as *procedural* memos and *analytic* memos. Therefore, it firstly provided an opportunity to conduct an ongoing self-commentary on the research process (including conceptual ideas, literatures and methods), which was useful in mediating and documenting my reflexive understanding of the progress of the study. Secondly, it was also used to collect additional forms of data. As a result, this latter type played an important supplementary role during the period of data collection. I recorded any significant events, incidents or changes in circumstance related to participants' doctoral studies that were evident from the content of their digital artefacts. Examples included participants' teaching, internships and conference attendances. Whilst I encouraged participants to alert me of any significant information related to their doctoral studies between interviews, it was not a requirement of their participation, and as such, they chose not to. Therefore, when I asked participants at the beginning of each interview to summarise their activities since the previous discussion, it became necessary to clarify supplementary information that arose from any of these data, so that any key implications that arose could be integrated into the subsequent interview process.

Additional data were collected through two interrelated sources of enquiry:

### **Site Demographics**

It was necessary to explore the context of participants' specific social media sites, particularly communal and special interest sites such as group blogs, Facebook Groups and Ning sites. Notes were made on site features and components, and on the generic content of key sources including 'about' and profile pages, and other members' contributions. (Summarised forms of some of these notes are presented in the participants' site profiles in Appendix 1).

### **Personal Demographics**

Key demographic information of people within participants' social media networks and communities was also collected, primarily from user profiles, about pages or

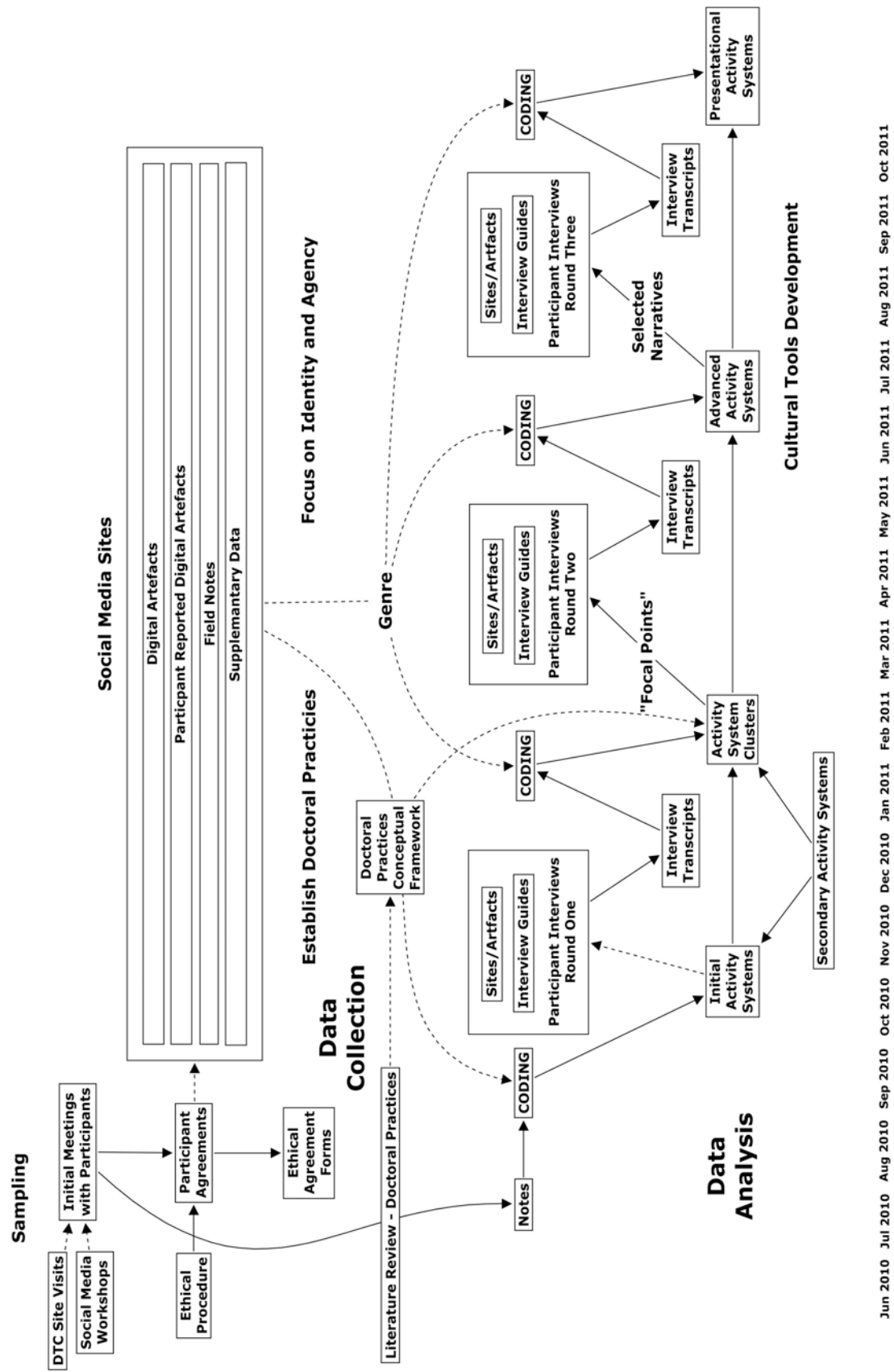


social directory sites. The key demographic information related to location, academic role/status and discipline. It was not possible to deduce this information for all individuals. And whilst participants could have been consulted on ambiguous or unknown entities, it was not considered an important enough criterion with which to spend valuable discussion time, unless specific individuals were central to discussions. No formal quantitative analysis was made of the participants' community and network members. As such these data are not formally presented in the findings, but relevant examples are summarised in the participants' site profiles in Appendix 1).

The majority of this data collection was carried out prior to the first interview, though additional or updated data collection was undertaken where necessary through the remainder of the research period. All these additional data were collected in NVivo, and where applicable, appropriate links were established with the main data. It must be noted that, as supplementary data, these were primarily seen as providing information about the networks and communities that the participants were engaging with through specific social media and the type of content that was being produced, with which to develop a greater and broader understanding of the cultural and technological aspects of their membership, participation and interaction. As such, these proved useful when preparing for and conducting the participant interviews.

In sum, these data provided only rudimentary qualitative value in support of the main modes of enquiry (i.e. the participant interviews and analysis of the digital artefacts). However, given that the role of developing the activity systems was partly to represent an interpretive understanding of the participants' own perception of their online communities and networks (and how these perceptions influenced their own identity and participation within them), these data enabled me to have a more informed understanding of their social and cultural contexts. Additionally, in some cases, these data were used to inform the construction of secondary activity systems in the early stages of analysis (see 4.5.3).

Figure 5: Research Design



## 4.5 Data Analysis

### 4.5.1 Single- and Cross-case Analyses

Whilst case studies are distinguished less by the methodologies that they employ than by the subjects or objects of their inquiry, there is frequently a resonance between case studies research and interpretive methodologies. And whilst case studies are suitable for exploratory, descriptive and explanatory research (Yin, 1994), the interpretative approach shares a tradition of viewing phenomena through the eyes of participants, developing narrative accounts through thick description, and developing conceptual categories inductively in order to examine initial assumptions (Merriam, 1988). Stake (2000) and Robson (2002) both identify the value of multiple or collective sets of individual case studies in gaining a fuller picture of the phenomena being examined. Case studies are typically defined by and within the parameters of the contextual factors that shape them and the characteristics of their participants. Claims to generalisation are limited. Rather, their strength lies in their attention to the subtlety and complexity of the cases in their own right. And whilst the significance of phenomena (often reported as 'critical incidents') is typically considered more important than frequency and commonalities in case studies, Yin (1994) argues the use of multi-case sampling adds to the validity and generalisability of the findings.

In developing a set of individual case studies, the activity system-based framework provided the opportunity for cross-case analysis. The analytical process described here broadly constituted a trajectory of multiple individual case studies that increasingly integrated cross case analyses, but the relationship between the two was dynamic, complex, systematic and iterative, with relevance not only to the analytical process presented here but also in the reporting of findings (Chapter 5) and developing discussion (Chapter 6).

It is useful here to draw on Engeström's (2009b) two 'directions' of third generation activity theory, which can be seen to equate to the 'horizontal' narrative of participants' actions and situations and the interrelated 'vertical' structure of activity systems defined by common object-orientation. Both were crucial to the analysis. Essentially, the emerging themes required to address the research questions were derived from both the horizontal narrative of the

individual case studies and the systemic forms of cross-case analysis. The intersection of these two directions was conceptually represented and analytically derived by the reciprocal relationships formed between key contradictions and cultural tools.

The initial open coding of participants' digital artefacts and the first round of interviews that established the key doctoral practices, which would constitute the object-orientation for developing activity systems. The conceptualising of these in correspondence with the holistic models of doctoral education explored in literature review provided a heuristic framework with which to compare and contrast across the individual cases. Beyond this, an instinctive and systematic process of cross-case enquiry was maintained throughout the analytical process. Broadly, whenever a specific phenomenon was observed or discussed in relation to one participant, I was compelled to explore possible relevance with the other participants. This ensured an ongoing and comprehensive process, helped and established measures of uniqueness or commonalities. Further, whilst not all of the analytical development of the participants' activity systems is presented in depth in this thesis, systematic cross-referencing between the individual case studies was maintained throughout the selection process to ensure representative and/or significant findings.

Towards the final stages of the analysis, several attempts were made to develop activity systems that aggregated some or all of the participants, with a view that these would systematically encapsulate key findings and – just as importantly – present an opportunity to visually augment their dissemination. Given that the increasingly refined activity systems of the individual participants commonly shared their object-orientation (corresponding with the key doctoral practices), this seemed a feasible and logical progression and one analogous with most Activity Theory based empirical studies. However, the process resulted in an abstraction and generalising of participant-specific activities and sociocultural contexts at the expense of the richness, nuance and significance encapsulated in the original activity systems. Further, as many of the participant-specific narratives were realised by the intersection and interrelation of multiple activity systems (with separate object orientation), the necessary disruption of these structures resulted in the omission of key findings. The general ineffectiveness of this process emphasised the analytical value of the contradictions and cultural tools that underpinned these narrative compositions, and these therefore became the main focus of cross-case analysis towards the end of the analytical process.

Further, the process of thematising contradictions and cultural tools drew on key factors highlighted in the literature review, and therefore provided the opportunity to develop the Discussion Chapter.

## **4.5.2 Coding**

### **Coding Digital Artefacts**

Reviewing the pilot study (see 4.2.3) highlighted the problem of attempting to analyse digital artefacts across multiple social media (e.g. blog posts, tweets etc). The 'technology-led' rather than 'practice-led' approach, which was initially largely independent of the doctoral context, resulted in separate platform-specific data sets with which I oriented towards developing unique coding criteria. Whilst this approach was suitable for drawing comparisons across the participants, it remained ineffective at aggregating multiple data sets related to an individual participant's social media. And whilst it was possible to develop core themes across all social media, much of the fine-grained detail was lost. The pilot study highlighted the need to incorporate examples of interconnectedness and transference of tasks across the social media ecologies of individual participants rather than within their discrete technologies. This highlighted the usefulness of developing analytical methods that enabled the identification of digital artefacts and critical events, and I was particularly interested in the type of narratives that might emerge from such an approach. Analysing a blog post for example, might elicit questions regarding the motivations for writing it and how that might involve other modes or media, such as attending a conference, reading a journal article or in response to another blog post. In the case of the latter, one might then ask how it was sourced, from Twitter, or an RSS reader? Further, one could examine the external resources the post might link to, or embedded content from other sites. And finally, what happens after the blog is posted? Is it promoted on Twitter or Facebook? Does anyone leave a comment, or bookmark it?

For this main study, I therefore adopted an approach to coding digital artefacts that supported the enquiry of individual social media practice and the development of rich narratives. This was achieved by developing a coding system that integrated broadly practice-led and genre-oriented approaches. This inferred a relationship between the content and the socio-technical and cultural contexts of the individual artefacts, and incorporated historical and developmental

trajectories and potential connectivity and transference across multiple social media. This approach also brought together multiple digital artefacts determined by their shared context to help establish key critical incidents and narratives. To avoid the platform-specificity of the pilot study, no distinction was given to whether these were contained within a single tool or platform or across several multiple social media, though it often resulted in the latter (for example. tweets, blog posts and Slideshare presentations related to a conference). It also established key relationships with other actants across the participants' online communities and networks, thus incorporating necessary sociocultural contexts. Key artefacts were selected for discussion in the interviews, primarily in the second and third round interviews.

### **Coding Interviews**

The broad-brush approach of the first round of interviews (see schedule, below) presented an overview of each participant's social media practice. I use open coding of the transcripts with which to cross-reference and develop themes to determine the key doctoral practices in which social media were being employed. Subsequent coding of the second and third round interviews was more selective, focussed on the identification of the established themes alongside emergent themes derived from the activity system analysis primarily related to contradictions, cultural tools, genres and figured worlds. The coding process integrated content from interview plans and notes that were taken during the interview. A second round interview transcript and coding sheet is included in Appendices 3 and 4.

### **Coding and Drafting Tools**

In the early stages of this study – like the pilot study – all data collecting and coding was undertaken using digital word processing and spreadsheets programmes. I began using NVivo, a qualitative analysis software, during the analysis period between the first and second interviews, though I only used it to code the third round of interviews. My hesitation in adopting the tool was regretful, but I imported all data and analysis that had been undertaken up that point. Though I acknowledge I only used the basic level of tools within NVivo, it provided a more integrated platform for sorting, coded and thematically categorising the data. I used CMapTools, an open source concept mapping software, to construct all the activity systems diagrams (including those

presented within this thesis). I often used printed sheets of 'bare' diagrams (showing only the triangular structure and basic components) to annotate rough drafts by hand, before formally completing them in the digital format. Whilst it was possible to import these diagrams into NVivo as images, it was not possible to select the text within the images to integrate and cross-reference with other text-based coding. I therefore tended to draft activity systems in tabulated form, which incorporated the key components of the activity systems and additional features such as contradictions, cultural tools, genres and figured worlds). As texts within NVivo, I was able to integrate these with other coding.

### **4.5.3 Activity Systems Development**

Key conceptual and theoretical factors underpinning the development of the activity systems are described earlier in the chapter (see 4.3). Here I wish to focus on the activity systems construction in relation to the analysis schedule (see below) and the coding described above.

#### **Object Development**

Socio-technical practice contexts are – as I discussed in the previous chapter (3.3.1) – becoming increasingly recognised as multiple and complex, which are transforming the role and nature of the object (Spinuzzi, 2011). The notion of objects as 'problem spaces' (see 4.3.1) provides a broader and more flexible interpretation than those that constrain objects to narrowly defined purposes or objectives. Acknowledging the interpretivist requirement of developing activity systems through the participants' perspective, I was particularly struck with Engeström's further definition of objects as 'generators and foci of attention.' With this in mind, I developed a working definition of the object with which to guide the construction of my activity systems:

*Contexts or areas of academic practice, partly or wholly mediated by social media, which individual participants recognise as significantly contributing to, or influencing, their doctoral studies.*

This definition was further supported by a set of guidelines I established by setting several key parameters:

- **Objects are broadly based on academic (doctoral) activities**

Objects should reflect broad-based and significant doctoral activities that are seen as continual or ongoing concerns (not necessarily limited to the duration or the scope of the PhD).

- **Objects are not mutually exclusive**

Objects should be flexible enough to enable complex and dynamic relationships to be determined within, between and across overlapping and simultaneous activity systems.

- **Objects are not necessarily exclusive to social media practices**

Whilst it is necessary activity systems are primarily related to social media practices (there is little point in developing them otherwise), it is important to contextualise these with other practices.

Indeed, the key strength of activity systems in their ability to incorporate other (often more established) processes and actions oriented towards the same objects (in this case, related to doctoral studies) presented the opportunity to examine how the adoption and use of social media were potentially challenging, supporting or disrupting them.

Whilst developmental models of using activity systems - generally associated with Engeströmian approaches to using Activity Theory - may encourage prior observations, and the collaboration and shared understanding of relevant stakeholders, objects tend to be established through pre-defined objectives and agendas. However, given the grounded approach of this study, it was important that objects were largely developed through emergent open coding that represented the authentic experiences of each participant.

There was a need to establish objects that were firstly: representative of the doctoral activities as described in the literature (see 2.1.2), and secondly: substantive enough to be applicable to as many of the participants as possible so that commonalities and contrasts could be sought. With this in mind, it was important that analysis was informed by the ongoing development of a conceptual framework of doctoral activities, established through reviewing the literature on doctoral education, and refined through the open coding. This ensured a systematic and systemic approach, where significant comparisons and contrasts between participants could be identified at key (particularly early)



stages of analysis.

That said, it was not necessary that all objects (and their related activity systems) were applicable to every participant, as each participant were seen to have individual priorities and doctoral trajectories characterised by their own stages of PhD progression, (inter)disciplinary research cultures, and departmental and supervisory requirements. For example, it was reasonable to assume that activities related to conducting a literature review would be of more immediate concern to an early-stage PhD student than one in his or her latter stages. However, whilst participants' stages and foci varied considerably, there were commonalities within the broad doctoral activities (such as literature review, collecting data and 'writing up'), and – given the iterative nature of doctoral scholarship – these were often seen as being concurrent and interrelated in complex ways.

Activity systems were delineated by a narrative of significant changes in practice, that enabled the interaction between different activity systems (and objects) to be examined, evidenced in terms of:

- Key contradictions
- Key interactions with other activity systems
- Key outcomes

It was crucial however, that in taking such an approach, the risk of developing over-simplified procedural, sequential and causal relationships between distinct activity systems was avoided. The flexibility of activity systems enables analysis to be conducted at different levels of enquiry. Therefore, it was possible to represent the 'messy reality' of social media practice (Selwyn, 2009) by developing interrelated, overlapping and simultaneous activity systems describing complex relationships that were potentially as concurrent as they were procedural, and coincidental as causal. This, it seemed, supported the apparent multiplicity and transference of tasks within and across different social media platforms that had been evident in the pilot study. That said, it was advantageous to maintain consistency between the activity systems of each participant – in terms of notation, definitions and parameters of scale – to enable comparisons to be drawn between them, and also with the activity systems of the other participants.

It was important to recognise the multiple perspectives inherent in the social construction of objects as they were shared across different activity systems. This required examining how emergent objects were open to contestation by different individual and institutional positions, perspectives and interpretations (for example, as determined by peers, supervisors, programme requirements, disciplinary cultures, and dominant discourses), and how these contestations were reified and shared across different tools, communities, cultural conditions and environments. However, as the limitations of the data collection dictated that the study did not incorporate the canvassing of views outside those of the participants themselves, the study was solely reliant on the participants' own frames of reference. In doing so, it is important to acknowledge the potential bias in the participants' perspectives and profiles of their peers, supervisors and research communities.

### **Supplementary Activity Systems**

In some instances at various stages during the analysis process it was useful to construct supplementary activity systems:

- for peripheral and wider contexts that were not primarily focused on participants' social media use (such as those related to local research environments)
- with key groups as the 'Subject' rather than the individual participants (such as those related to a group blog)

These two types of supplementary activity systems were not developed to the same level of refinement as the primary activity systems, but served as 'loosely sketched' models to support and inform their construction, particularly in helping to refine the 'Rules' and 'Community' components, and to establish how the role or position of the participant was represented by the 'Division of Labour' component.

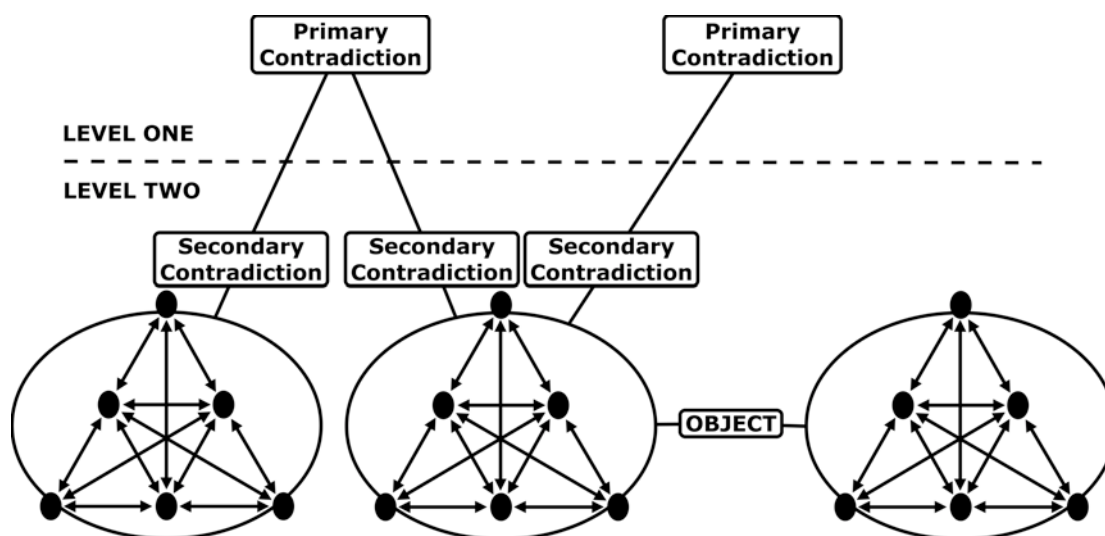
### **Contradictions**

From the pilot study analysis, it became clear that participants were identifying and describing influential factors that were realised at a level specific to their own social media practices, yet were also drawing on generic contextual themes in common with the other participants.

Yamagata-Lynch (2010) attempts to avoid the confusion over the terms contradictions and tensions (discussed in 4.3.2) by making a clear distinction between them. The former describe the systemic sources of influence that exist outside of, and cut across, multiple activities within the context of the study. The latter describe the pressures influenced by the systemic contradictions that subjects encounter while participating in an activity. Her notion of contradictions as 'source of influences' identify them as overarching factors that have the potential to be in opposition with activities enacted by the participants across a range of different contexts.

Although tensions were specific to participants' localised situations described by their activity systems, it was necessary to identify recurring patterns in their related objects and contradictions. These were cross-referenced across all participants to enable common themes related to general doctoral practices to emerge, which were used to identify new or refine existing systemic contradictions. In establishing the contradictions, it was important to develop criteria around broad themes applicable to general academic and doctoral practices and the use of social media. To enable appropriate and continued models of enquiry and reporting of findings, it was necessary to develop contradictions that were distinct, easily discernible and describable.

This required interpreting how systemic contradictions inherent in doctoral education have influenced tensions in activities systems describing the individual participants' social media practices. This is shown conceptually in Figure 6.



**Figure 6: Conceptual Levels of Enquiry**

These tensions are subject-specific (i.e. unique to each participant's activity systems), yet commonalities may be apparent in the shared objects they are oriented towards. Each systemic contradiction may exist, outside of, and across, any of each participant's multiple activities. In this perspective, tensions and contradictions can be thought of as operating at micro and macro levels of enquiry. Each participant has a unique perspective and level of understanding that is partly determined by the nature and stage of his or her own doctoral experiences and practices. Broadly speaking, the participants' ability to recognise and articulate factors that resemble these tensions, and to be able to link them with factors that resemble the systemic contradictions that are influencing them, can be seen as an indication of their ability to develop reflective and critical thinking around their own social media adoption and use.

It is important to emphasise that the process of identifying and refining common objects and their related activity systems, and that of identifying and refining contradictions, were undertaken in a largely simultaneous manner. Establishing key objects helped recognise contradictions and vice versa. This reciprocal process ensured a systematic approach and a comprehensive review of the possible comparisons and contrasts between the individual participants. Also, note I have opted to use the term 'common objects' rather than 'shared objects' here, as the latter is often used in the Activity Theory literature to describe an object shared (and potentially contested) between participants in the research within the same bounded environment (such as an institution), where their activity is interdependent and potentially influential in shaping the object. However, in the present study, where the focus is on unconnected participants, activities are not necessarily shared in similar departmental or disciplinary contexts, but the participants are engaged in a 'common' endeavour, i.e. a doctoral education.

## **Genres**

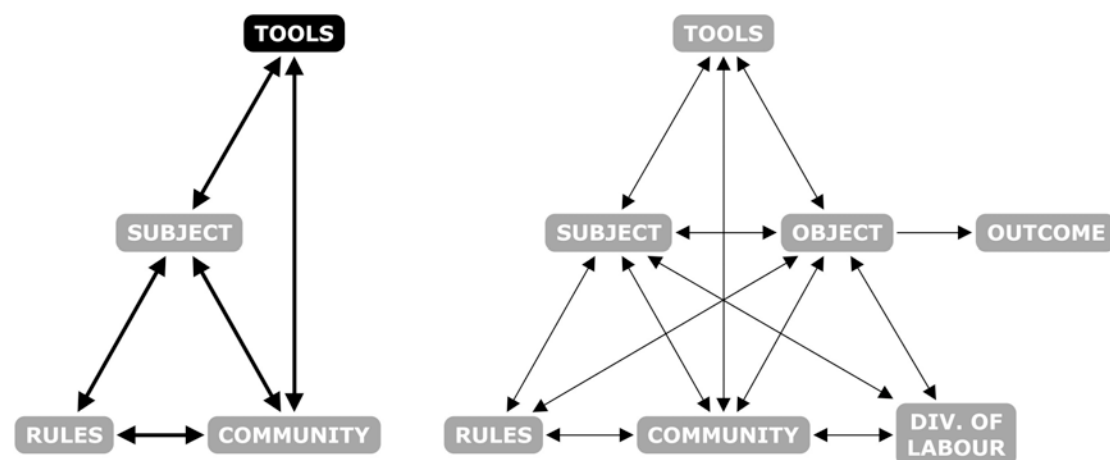
The potential analytical value of genres to activity systems was identified in 4.3.3. Russell's (2002) description of genre as 'classifications of artifacts-plus-intentions' would seem to position the genre less as a device that is complementary of the mediating artefact or tool, and more one that is a unit of analysis comparative to much of the activity system itself, in the way that it also seems to incorporate elements comparative with the Subject, Tool and Object components. This is generally the view that Engeström (2009b) takes, but what particularly interests him is the ability of genres – perhaps in a more traditional

formalist interpretation of the term – to cross boundaries, leaving trails across multiple activity systems.

In considering the requirements of the present study, the Vygotskian tradition presents a problem with a conceptualisation of the 'Tool' component that is, a duality of related to:

- The materiality of mediation
- The development of cultural tools

Genres present a way of conceptualising the materiality of Vygotskyian mediation within activity systems, whilst presenting the possibility that the use of genres, and with it the application of genre knowledge, can be seen as constituting – or at least contributing to the development of – cultural tools. These are not necessarily discreet sequential or causal processes, but can be seen in a reciprocal and ongoing relationship, within the object-orientedness of the activity system (see Figure 7).



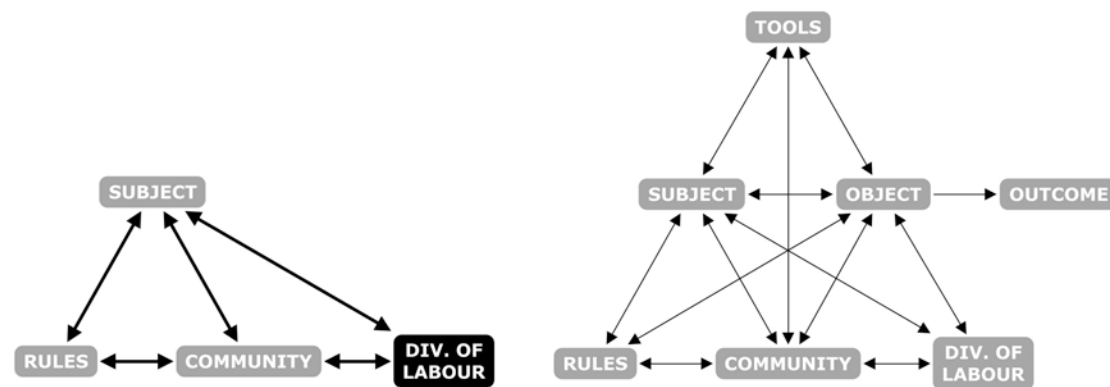
**Figure 7: Genre Conceptual**

### **Figured Worlds**

Further to the discussions on the theoretical and conceptual links between figured worlds and Activity Theory (see 4.3.4), I employed the concept of figured worlds to describe how participants heauristly distinguished between, and negotiated, different practice contexts. This required examining how the participants, through their historical and cultural experiences – partly enacted through their engagement with social media – used these interpretations to understand their

own participation, interaction and positionality with others.

Consequently, figured worlds were not adopted as an alternative or additional components to, but rather to inform and enrich the conceptual understanding of key components within the activity systems. More specifically, consideration was given to how useful figured worlds could inform the development of the 'Subject' and 'Division of Labour' components in constructing activity systems, in relation with the sociocultural contexts described by the 'Rules' and 'Community' components. I saw the 'Division of Labour' component as particularly problematic for the methodological and analytical concerns of this study. Holland et al. suggest the ways of interacting as envisaged through figured worlds are similar to 'roles' but not in the formal and static sense that is often attributed to the term (see Figure 8).



**Figure 8: Figured World Conceptual**

#### 4.5.4 Schedule

According to Yamagata-Lynch (2010), the key analytical decision in using an Activity Theory based framework is establishing the point at which the necessary drafting of activity systems is undertaken; that is, to break data into analytical units which focus on object-oriented activities.

Whilst many developmental or interventionist studies tend to use activity systems for pre-defined coding (such as Mwanza's (2001) 'Eight-Step Model'), descriptive approaches to using activity theory are better served by adopting a more open and emergent coding process. Yamagata-Lynch (2010) describes how she often doesn't begin to identify activity system components until the final stages of grounded and open coding procedures.

My largely unsuccessful attempt to apply activity systems retrospectively to data collected in the pilot study highlighted the importance of developing object-oriented activity systems early in the coding process. Combining open coding and thick description with the drafting of activity systems presented the opportunity for developing an iterative relationship between the two processes to enable a refining of data during key stages of the data collection process. Throughout each stage, the development of the activity systems guided the coding of the interview transcripts and the digital artefacts.

A visual summary of the key stages of participant interviews and analysis described below is presented in Figure 5 (page 135).

## **0 Preliminary Meetings**

I held preliminary meetings with all potential participants as part of the sampling process (see 4.4.2) to help assess their suitability for the research. The meetings provided me with an opportunity to discuss the terms of participation, run through ethical procedures, and establish – or set in motion the process of establishing – the social media sites that the participants agreed to include in the research.

As these meetings were relatively brief and informal in nature, no recordings were made. However, any notes that were taken relating to the participants' PhD topics, study environments and social media activities were added to the data used in the first period of analysis prior to the first round of interviews.

## **0 > 1 Analysis**

I constructed a series of preliminary activity systems for each participant based on analysis of the first period of observations of participants' social media activities, related digital artefacts (blog posts, tweets etc.) and participants' online networks and communities. I adopted a grounded approach to developing the activity systems rather than pre-conceived categorisation.

It is important to emphasise that the activity systems development at this stage was undertaken before the opportunity to formally interview participants. Whilst the preliminary meetings (above) provided some basic information, this was very

limited. Therefore, information on sociocultural contexts regarding academic activities and environmental factors were drawn almost exclusively from content of the digital artefacts collected (e.g. blog posts, tweets, forum postings, profiles etc), including those from before the observation period. Supplementary data related to networks and communities (see 4.4.4) were also useful. Therefore, the preliminary activity systems were primarily based on - and to an extent defined by - contexts that were relatively easily determinable at this early stage of analysis:

- Specific social media platforms (e.g. Twitter, a blog, a Facebook group)
- Specific stages of study (e.g. literature review)
- Specific peer groups, communities and networks

In effect, these contexts acted as 'entry points' with which to start drafting the preliminary activity systems.

I acknowledge the approach I took at this initial stage of activity system development was partly as a result of my relative inexperience with using activity theory as a research framework. If nothing else, the large volume of activity systems (between approximately 20 and 40 activity systems for each participant) served as a useful training exercise, and provided tangible evidence of my analysis process in discussions with my supervisors. But whilst many of these preliminary activity systems were discarded in the subsequent stages of analysis described below, some of their key conceptual elements were merged or integrated into the more refined activity systems that are presented in this thesis.

In sum, whilst this initial stage of analysis was sufficient to begin to 'build a picture' of the participants' social media practices, the inter-participant inconsistency in the data meant the analyses varied in quality. However, in that respect, the activity systems were effective in identifying specific gaps in my knowledge – of participants' academic activities, their PhD progress, and social and cultural aspects related to their research environments – which I was able to incorporate in the first round of interviews.



## **1 Round One Interviews**

At this initial stage of enquiry, it was necessary to take a 'broad-brush' approach in the first round of interviews to ensure they covered all contexts related to the participants' past and current academic activities and social media use.

I adopted a semi-structured format for the interviews, developing a standard interview guide with a number of open-ended questions (Cohen et al. 2007) to ensure consistency across the participants. Specifically, participants were invited to discuss issues related to:

- PhD topics and research interests
- Local research environments
- Current use of social media

Participants were also asked to provide detailed historical accounts up to the beginning of their participation regarding:

- Previous social media use (for academic and non-academic purposes)
- Previous academic and work activities

Within these topics, I sought to guide the discussions towards key stages in participants' PhD programmes, activities that had impacted on their social media use, and any formal or informal training related to their social media activities.

I developed a standard interview guide (shown in Appendix 2), which I annotated for each participant with references to specific contextual topics, issues and queries that had been highlighted in the preliminary activity systems. This gave participants the opportunity to clarify or challenge any assumptions, thus ensuring any 'gaps' in my knowledge were addressed.

Whilst I referenced participants' social media sites during these interviews, the viewing of these sites with the participant was largely related to summarising key elements (for example, profiles, content and networks) rather specific content, which is became the focus in the subsequent rounds of interviews.

## **1 > 2 Analysis**

The preliminary activity systems I had developed prior to the first round of interviews tended to resemble 'snapshots' of practice, in that they were largely episodic and situated within specific technology-based or social contexts. Individually, they lacked coherent historical perspective, and collectively, it was clear there were inconsistencies within and across the different participants. Yet it became increasingly evident during the first round of interviews that they were interrelated in interesting ways.

Foremost, the interviews represented the first opportunity for participants to provide the rich contextual (including historical, pre-doctoral) information that was either incomplete or lacking in the initial construction of the activity systems.

The components of the emerging activity systems were developed from the following analysis:

- Open coding conducted from transcripts of the first round interviews helped establish categories that were triangulated with doctoral activities identified in the literature review
- Notes on each participants' social media sites based on interview data and supplementary data (see 4.4.4)
- Open coding of digital artefacts, developing key genres

Crucially, the preliminary activity systems developed prior to the first round of interviews were not necessarily object-oriented. In defining each of the activity systems by the 'entry points' described above (i.e. a specific social media, social group or study stage), discernible objects were rarely apparent. Rather, objects were either difficult to define or several fragmented objects could be attributed to single activity systems. In order to begin to develop activity systems oriented towards culturally and historically defined objects, it was useful to construct 'clusters' of the initial activity systems for each participant by using the commonalities and connecting factors identified by the open coding employed in the initial stage of analyses. Establishing these activity clusters served three main purposes:

- Firstly, in collating a number of related actions over time, the activity clusters introduced historical perspectives, indicating how communities and the roles the participants adopted changed over time. In some cases, these indicated instances of causality across activity systems, which may have been the result of purposeful, serendipitous or habitual actions.
- Secondly, they helped me establish the nature of the partiality of each participant's use of social media in relation to the wider context of their doctoral practices, and to specific stages of their PhD.
- Thirdly, I was drawn to compare and contrast this partiality with the other participants at similar or different stages of their PhD.

In effect, the activity clusters served as 'building blocks' in the process of identifying objects that were authentic and analytically reliable. At this stage, it was also important to recognise that the 'object-orientedness' of these emergent activity systems was potentially:

- multiplatform (in referencing more than one social media tool or platform)
- multipurpose (in referencing more than one purpose or use)
- multicontextual (in referencing more than one practice context)

Whilst I had no prescribed number of activity clusters for any of the participants, the clustering process I adopted coincidentally resulted in three or four for each. With this, it became apparent that they presented an opportunity to develop them as focal points for the next round of interviews (see below). The clusters were not necessarily equal in scope, but were rather defined by the interrelated practices and boundary definitions inherent in their development. Though commonalities across the individual participants were beginning to emerge, they had little influence at this stage in the development of the activity clusters. Each participant was treated as a separate case study.

It was important to establish objects that were broad enough in scope and generally applicable to the maximum number of the participants. That said, not all activity systems related to every participant, as each participant had individual doctoral profiles and trajectories influenced by (inter)disciplinary research cultures, local and distributed research cultures, and stages of PhD. Whilst there were clear commonalities around components of each participants' PhD within a

general trajectory (such as literature review, collecting data and 'writing up'), schedules and specific stages varied considerably and – given the complex nature of doctoral scholarship – tended to be concurrent, interrelated and cyclical.

With this in mind, I chose to further guide this stage of analysis by the ongoing development of an analytical framework of doctoral practices. This was undertaken by establishing categories of academic practice that were determined through the open coding of the first round of interviews and the open coding of the content of the participants' digital artefacts before and after the first round of interviews and comparing these with insight from reviewing the literature on doctoral education, drawing specifically on the holistic models of Cumming (2010), Holdaway (1996) and others (as outlined in 2.1.2). This contributed to a systematic and systemic approach to a first stage of cross-case analysis of the participants, where any significant comparisons and contrasts were identified before conducting the second round of interviews. This ensured I did not exclude participants' activities that may have been overlooked had I taken a more prescriptive approach based on pre-conceived ideas of doctoral practices.

## **2 Round Two Interviews**

In contrast to those of the first round, these interviews represented a more extensive and context-specific process of enquiry, guided by analysis informed by a much larger and richer data set built on the discussions in the first round of interviews.

Unlike the standard set of annotated questions I used previously, I referred to summaries of the activity clusters of each participant as the basis for a series of discussion prompts. In effect, the activity clusters helped divide the interviews into distinct and manageable themes or narratives (of approximately 30 minutes each) that could be easily communicated to the participants from the outset. Collectively, they provided a logical and coherent representation of each participant's specific social media practices. It was therefore necessary to create unique interview plans for each participant. Notes developed from key components of the initial activity systems which made up each of the activity clusters were effectively used as 'focal points' to inform participant-specific questions and discussion prompts. Particular focus was given to exploring emerging contradictions, genres of social media practice and the development of cultural tools.

Priority was given to activities and related digital outputs in the period since the first round of interviews as these were seen as most relevant to current practice and would be foremost in the participants' minds, and of course, these new interviews provided the first opportunity to discuss them.

Participants were given the opportunity to summarise the progress of their studies since the previous interviews and asked to identify any key activities or events they wished to discuss. This was done early in the interviews to ensure any new concerns or perspectives raised by participants were flagged up, so they could be integrated into the interview plan and addressed further at appropriate times in the subsequent discussions.

In contrast to the first round of interviews, in which sites were only broadly referenced during discussions, key pre-selected digital artefacts (e.g. blog posts, forum discussions and tweets) were viewed and discussed at length with the participants. These artefacts were selected for being either representative of, or unique to, a specific type or genre, or because they were of particular significance to current practice.

## **2 > 3 Analysis**

Continuing with the grounded approach developed after the first set of interviews, the transcripts from the second round of interviews were coded in relation with the key doctoral practice categories, and the emerging themes explored in the previous analysis period. All new digital artifacts collected through this period were added to the data set and the ongoing coding process, through priority was given to those related to emergent genres of each participant.

New activity systems developed from key changes in the participants' social media practices were integrated as required. Further refinement of the existing activity system clusters was conducted using the new contextualised information from the transcripts of the second round of interviews, to create advance level activity systems. In developing these, further analysis provided new insights into specific contradictions, genres, figured worlds and cultural tools.

Crucially at this stage, a full assessment of the total social media practice narratives drawn from the activity system clusters across all participants was

undertaken so that the most appropriate could be selected to be presented in the thesis findings. These would consequently constitute the primary narratives to explore in depth in the third and final round of interviews.

### **3 Round Three Interviews**

In this third and final round of interviews, I primarily drew on the key narratives that I had selected for each participant to guide the discussion. With the aim to directly address the second and third research questions, I focused primarily on aspects of doctoral identity and agency within the contexts defined by each participant's selected narratives. Particular attention was given to emergent figured worlds, contradictions and cultural tools I had identified in the last round of analysis, though as last time, I prioritised activities and their related digital outputs in the period since the previous round of interviews for their topicality.

As I had done previously, I began by discussing each participant's activities since the last interview, so that any new concerns or perspectives could be incorporated into the interview plan at an appropriate time. The interviews were supported once again by further reference to key sites and digital artefacts from participants' social media platforms. Whilst I prioritised those from the period since the previous round of interviews, the main selection criteria were their relationship – as exemplars or through their specificity – with the key narratives under discussion.

### **3+ Analysis**

Whilst the third round of interviews marked the end of the observation period and the participants' commitment to the study, I contacted two with minor enquiries within a few months during the final stages of analysis.

Within the grounded approach, selective coding of the third round interviews primarily focused on identifying elements related to identity and agency. In a further cross-case analysis, commonalities between participants' contradictions and cultural tools were established for the Discussion chapter.

The final stages of analysis were oriented towards the reporting of the findings, preparing for organising and writing-up for the findings and discussion chapter of this thesis. The selection process for the primary narratives, which were to be

presented in the findings chapter, was undertaken in a cross-case analysis identifying secondary narratives from across the sample.

## 4.6 My Role as Researcher: A Reflexive Account

Whilst I addressed epistemological and ideological positions that underpin my key motivations introduced in the opening chapter, it is important that I also recognise my own role as researcher, and acknowledge how my beliefs, values, perspectives and experiences can potentially influence the research process. The need to recognise how a researcher's own perspectives and assumptions can potentially shape the research process, and how that process potentially shapes the researcher, are essentially methodological issues. This positions reflexivity within the context of the validity, or trustworthiness of the study. Johnson and Christensen (2012) describe how the qualitative researcher, through actively engaging in critical self-reflection, can use the reflexive process as a key strategic tool to recognise and understand the potential for researcher predispositions and biases.

In engaging in this study, I accept the responsibility to present the participants' actions and views without undue bias, ensuring that my values and perspectives do not overtly influence my interpretation of the data and the presentation of the findings. My accountability in achieving this is partly evidenced by being open, transparent and descriptive about my research process, in this chapter and throughout this thesis. But given the obvious parallels between the research topic and my own situation as a PhD student who is actively engaged in using social media, there is a particular case for providing a reflexive account that includes appropriate information about my own doctoral and social media practices. Neither can be detached from my role as researcher. And whilst I ensured participants were made aware of the nature of my online participation and potential interaction as part of the ethical process (see 4.4.1), openly describing my own scholarly position and how it may influence the research process also contributes to maintaining an ethical commitment to the study.

I see both my doctoral studies and my social media engagement as explorative, developmental and transformative processes. With an academic background in Art and Design, undertaking a PhD in a new discipline has foregrounded the related social and cultural aspects of such a transition, to the level that it has dominated other concerns and challenges faced in my personal transition into the research community. This instinctively led to a keen interest in the varied and conflicting perspectives on socialisation within the doctoral education literature



(see 2.1.4), through which I developed a particular critical admiration for Etienne Wenger's ideas on legitimate participation. Most importantly, it made me conscious of how key sociocultural factors underpinning doctoral experiences and trajectories can be pivotal in social media practice, which gave me valuable insight and empathy when it came to developing my participants' narratives.

As a relatively new user of social media (including for recreational purposes), the recent years have represented an explorative period. And whilst I have engaged in a wide range of social media in the interests of being professionally better informed, my long-term dedicated use has – in comparison with many working and studying in my field – remained largely limited to several key platforms throughout my doctoral studies (notably, my blog, Twitter, a social bookmarking tool and an RSS Reader). Whilst these were instrumental in enabling me to begin participating in a range of online activities and access valuable academic communities and networks, I came to recognise that these experiences do not necessarily reflect the vast number of PhD students. My social media workshop activities (as documented in 1.2.2) were particularly influential in highlighting the social media practices of doctoral students outside my immediate field, and raised my awareness of the cultural determinism of academic discipline.

As best practices tend to be instigated, both formally and informally, by early adopters, they are therefore heavily influenced by the cultures of the academic disciplines and specialist fields in which they reside. In actively engaging in adopting, promoting or integrating technologies and related practices into institutional platforms and pedagogies, the educational technology community form a dominant and influential part of that contingency. To an extent, this can be seen as a necessary process, drawing on their informed knowledge and expertise to provide authoritative and trusted guidance to other academics and researchers who are too preoccupied in their own work to do so themselves. However, this allows for biases, assumptions and prejudices – however unintentional – to factor, even to a point where best practice claims can become ritualised as forms of cultural hegemony. This risks marginalising those from less represented disciplines. I became particularly mindful of this, as I became active in advocating the use of social media through my workshops and other activities, often to audiences from across the disciplines. With this came a responsibility to recognise the privileged position and perspective within one's own social media practice, which I saw manifest in a number of ways:

- Social media practices are culturally normalised within my field
- I can draw on a critical mass of users within my online communities and networks
- I have a professional interest, and am well-informed, in the latest advances in social media and related web technologies

As such, the need to represent what I increasingly saw as a marginalised sector became a key motivation in the sampling process (as I noted in 1.4.3 and described in 4.4.2). These observations, in tandem with my engagement with the critical literature of the educational technology field reviewed in Chapter 2, were instrumental in my own reflexive process and identity development, positioning myself on the periphery of the learning technology academic community, and developing a broadly critical stance and sociocultural perspective on key discourses within the field.

The workshops continued to form an influential and hugely rewarding reciprocal relationship with this study. Inevitably, as they became increasingly participatory and discussion-based, the vocalised perspectives of attendees influenced and subsequently reinforced some the key assumptions that I introduced in the opening chapter, and continued to inform my understanding of doctoral social media practice throughout this study. Likewise, some of the insight gained from emerging findings (from both the pilot and the main studies) played a role in informing the ongoing development and refinement of the workshops.

## 4.7 Summary

In this chapter, I have outlined my research design and the key methodological stages that were undertaken in accordance with ethical procedures and the voluntary participation of PhD students. I undertook a pilot study to trial a number of research methods, and I have described how findings highlighted the need to extend the research questions beyond practice to incorporate aspects of doctoral agency and identity. I have outlined the process of adopting Activity Theory as the basis of my analytical framework, and described the data collection methods and processes of analyses that were employed. In the next chapter, I introduce the research participants and present the findings of the study.

### 4.7.1 Selection and Presentation of Findings

I present the findings of the study in the following chapter. In writing this up, key decisions had to be made regarding the dialogical relationship between the process of analysis and the reporting of findings. Whilst I chose to present a separate introduction to each participant – outlining academic histories, disciplinary and institutional contexts, and an overview of their social media engagement – the question remained as to how much of the individual case study format should I maintain in writing up the key findings, whilst wishing to integrate key elements of the cross-case analysis.

The solution I chose partly reflects my negotiation of the reciprocal relationship between individual narratives and the aggregated and systemic findings that emerged through undertaking the alternating rounds of observations, analysis and interviews. It is useful here to draw again on Engeström's (2009) 'two directions' of Activity Theory introduced in the discussion on case studies (see 4.5.1), as this conceptualises the interrelation between the 'horizontal' narrative of the participants' actions and situations and the vertical structure of activity systems, from which common objects and contradictions were derived from the cross-case analyses.

Under the selection processes within the key stages described above, not all of the analytical development of the participants' activity systems are presented in

depth. However, effective and systematic cross-referencing between the two directions was maintained to ensure the data presented is both comprehensive and representational of the sample as a whole.

The visual representation of activity systems (i.e. the 'triangle model') can be an effective method with which to communicate findings to the reader. As Yamagata-Lynch (2010: 131) suggests, the researcher should attempt to "maintain a rich understanding of the qualitative data whilst committing to a representation of the data using the triangle models" and I therefore present key activity systems related to the participants' narratives. A further guide to these is provided in the next chapter.

## Chapter 5. Findings

In this chapter, I present the key findings of the empirical research. Firstly, an introduction to each of the research participants establishes the subject, disciplinary and institutional contexts of their doctoral education, outlines previous academic and professional activities, and presents an overview of their engagement with social media. Additional summaries in graphical and tabular form provide the reader with a reference to the social media use that constituted the sources of data collection in the study.

The subsequent section (5.2) addresses the first research question in presenting key findings primarily related to academic practices:

- ***How do PhD students use social media in their studies?***

The literature review (Chapter 2) and conceptual framework (Chapter 3) established a close and reciprocal relationship between identity and agency, and this forms the basis for Section 5.3, in primarily addressing the second and third research questions:

- ***How are doctoral identities constructed through using social media?***
- ***How can social media contribute to forms of doctoral agency?***

The reader should note the interrelatedness of these two sections, in that they draw from the participants' same activities. As such, the division equates to a functional but approximate relationship with the research questions, and appropriate cross-referencing between the two sections is employed where necessary. Nevertheless, presenting the findings in this way provides a useful narrative for the reader, which also corresponds broadly with how the research design enabled the findings to emerge from the key stages of enquiry and analyses undertaken in and between the successive rounds of interviews.

## 5.1 Participants

The purpose of this first section is to provide the reader with an introduction to the participants, each of which is presented using the following categories:

- Position
- Thesis Development
- Academic / Professional History
- Doctoral Contexts
- Other Activities
- Social Media Use
- Perspectives on Social Media

These profiles summarise participants' use of social media during and prior to their participation in the study within the full context of their doctoral studies, i.e. highlighting their theses development, but also summarising additional activities related to their academic life, the institutional and disciplinary contexts of their studies, and their academic and professional history prior to their participation. Specific aspects are emphasised where they have relevance to findings presented in the remainder of the chapter.

The profiles are supplemented by visual representations of each participant's social media use within the period of their participation in the research (Figures 9 to 14). Specifically, these show a chronology of activity in all social media that constituted sites of data collection in relation to the stages of their PhD programme. The rounds of interviews conducted with each participant are also indicated.

Further contextual information about each participant's social media – including site and personal demographics collected as supplementary data (see 4.4.4) – is provided in tabular form in Appendix 1.

The participants' quotes are presented verbatim without any editing of grammar or language.

### **5.1.1 Amy**

#### **Position**

Amy was a second year PhD student in her twenties studying at an interdisciplinary Doctoral Training Centre in a 1994 Group university in the north of England.

#### **Thesis Development**

In its relatively early stages, Amy's thesis was exploring the concept of the spiritual in technology, and the potential to design 'soul-satisfying' technology to support creative and interdisciplinary discourses and engage with the wider spiritual needs of society. Over the course of her participation, this became more formalised around aspects of cyber-sustainability.

#### **Academic / Professional History**

Amy's passion about building conceptual foundations upon which multiple disciplines can find common ground became a recurring theme throughout her pre-doctoral education that resonated with her explorative doctoral studies.

Actually a lot of that is still relevant to what I'm doing today. I'm asking almost the same questions from a different angle now, I would say.

A US citizen, Amy studied for her first degree on an interdisciplinary programme in Human Development (specialising in sociology, anthropology and psychology). After moving to the UK with her family, Amy studied for a Masters degree in Fine Art at a Scottish University. In her degree dissertation on adolescent mental health, she was keen to exploit perspectives and dissemination across the different disciplinary fields she was studying. Similarly, the final project for her Masters in Fine Art conceptually incorporated spiritual texts with multidisciplinary quotations. Whilst Amy was enticed by the creative opportunities of studying the arts degree it made her realise her limitations as an artist.

I enjoyed the writing about art a lot more than the doing of the art. And I missed the brainy, nerdy academic stuff.

A second Masters degree in Design Ethnography at the same university appeared to offer her a combination of continuing in a creative practice but integrated with

a more rigorous social science methodological approach, and marked a return to a more interdisciplinary form of studying

### **Doctoral Contexts**

Amy acknowledged the interdisciplinary nature of her first degree and second Master's programmes provided her with a valuable insight into the research culture of the Doctoral Training Centre, with its focus principally on the fields of Design, Computer Sciences and Business Studies. Whilst considering herself as primarily a social scientist, Amy's experiences of interdisciplinary programmes and research environments influenced her choice of institution, and have, in her view, helped her negotiate particular challenges and requirements of the programme.

It was an interesting mix of basically everything I had been doing. Up until that point I hadn't really noticed a thread through until the description of [the training centre]... it seemed to kind of blend them in a really fascinating way... I saw it as a chance for me to be very idealistic again, which is my happiest place. Living in the clouds. So I felt like it gave me the freedom to explore what I was passionate about as an undergrad but now armed with some skills that I'd picked up in the master's programmes.

As a prototype programme, Amy drew comparisons with her experiences in her second Master's degree, which was also in its infancy, admitting there was a need to "figure out what they were doing, for much of the first year." But she believed her current programme had a more coherent vision and agenda, which the Centre was keen to develop in collaboration with the doctoral students:

there was a venue for us to voice our concerns about whether or not it was meeting those goals. And in those discussions, it remained clear about where we were going.

### **Other Activities**

During her participation, Amy worked part-time on a project partnership with a local design technology company as part of her negotiated study, exploring the building of social capital and trust within a business environment. She also began participating in a Training Centre group project developing ethnographic field reports. Amy was pursuing a number of publishing opportunities – specifically position papers for conferences, a journal and a book chapter – during her participation.



## Social Media Use

Amy “really, really reluctantly joined” Facebook after graduating from her first degree, primarily under peer pressure to keep in touch with ex-colleagues. It had, she recalls, become the accepted method for maintaining contacts. Her use as a PhD student was very limited, accessing it infrequently, and only to check on the status of close friends and family members. Given the limited and exclusively personal nature of her Facebook account, she requested it was not included in the data collection.

Amy started using Twitter initially to help conduct part of an ethnographic research project during her second Masters degree. This required her following and conversing directly with design practitioners. Whilst this form of engagement decreased considerably upon the completion of the project, she felt an ethical ‘obligation’ to continue participating in the platform. However, it was during this time that Amy came to realise the potential benefits of Twitter for information sourcing.

unexpectedly I found that people provided a lot of interesting... if I friended the right people, or followed them, they often pointed me to some interesting links that I wouldn't have found otherwise, so that became really useful for my general research as well.

She subsequently used Twitter to develop a small but predominantly academic network, and experimented with it as a search engine and bookmarking system. A number of her Training Centre colleagues signed up to Twitter in the early stages of their induction, which Amy partly attributed to the programme providing all PhD students with iPads.

Amy started blogging as part of her Design Ethnography Masters programme where it was a requirement of one of the modules, using Blogger.com because training was provided in that particular platform. Whilst she had ceased using this blog by the time she started her PhD, she chose to keep the blog publicly accessible, deleting some of the posts as she considered them ‘irrelevant’ or ‘immature’ compared to her new academic profile. Amy subsequently created a new blog in the early stages of her PhD, choosing once again to use Blogger.com. Early posts consisted almost exclusively of lengthy and informal ‘reviews’ of books she was reading, which she described as ‘streams of consciousness.’ These

became integral to her literature review process, and subsequently playing a key role in her discussions with her main supervisor. Several subsequent blog posts focussed on design elements of her PhD, describing concepts, ideas and activities, and engaged in wider issues of her research practices.

She selected some of her posts for inclusion in the Training Centre's student-led group blog, partly through a responsibility to contribute to the online profile of the department, but acknowledging it would help her reach a wider audience. Conscious of developing a more 'professional' identity that was representative of the main aims of the Training Centre, Amy redrafted significant sections of the repurposed posts.

Amy had previously used Scribd to publish academic texts, which remained publically accessible, and in the latter stage of her participation she experimented with Mendeley for personal bibliographic management but chose not to explore its social networking potential.

### **Perspectives on Social Media**

A self-confessed sceptic of social media, Amy was instinctively apprehensive about the benefits of social media within the academic and professional world and very cautious of sharing personal and reflective aspects of her work in the public arena. She also became increasingly conscious of the tension between wanting to engage with a wider audience and the sharing of original conceptual ideas in her design process.

It doesn't make a lot of sense to be involved with these things, which on a day-to-day basis I'm becoming increasingly critical of.

It became clear that this personal perspective was partly shaped by an informed criticality that has been refined through her previous research work on areas such as social capital, online communication and trust.

A lot of this is biased by my own dislike – even academic dislike of the impersonal nature of social media... I really wonder; is this even a healthy activity to be involved in?

Amy was not entirely dismissive of the perceived benefits of social media, and acknowledged the expectations of engaging in these activities both at departmental level and within the wider academic community. However, she

remained cautious of how representations of her work might influence her professional reputation as a new researcher, and was particularly mystified and intrigued by how some academics purposely chose to use social media to communicate their ongoing activities and opinions in ways that overtly revealed their personality traits.

# Amy

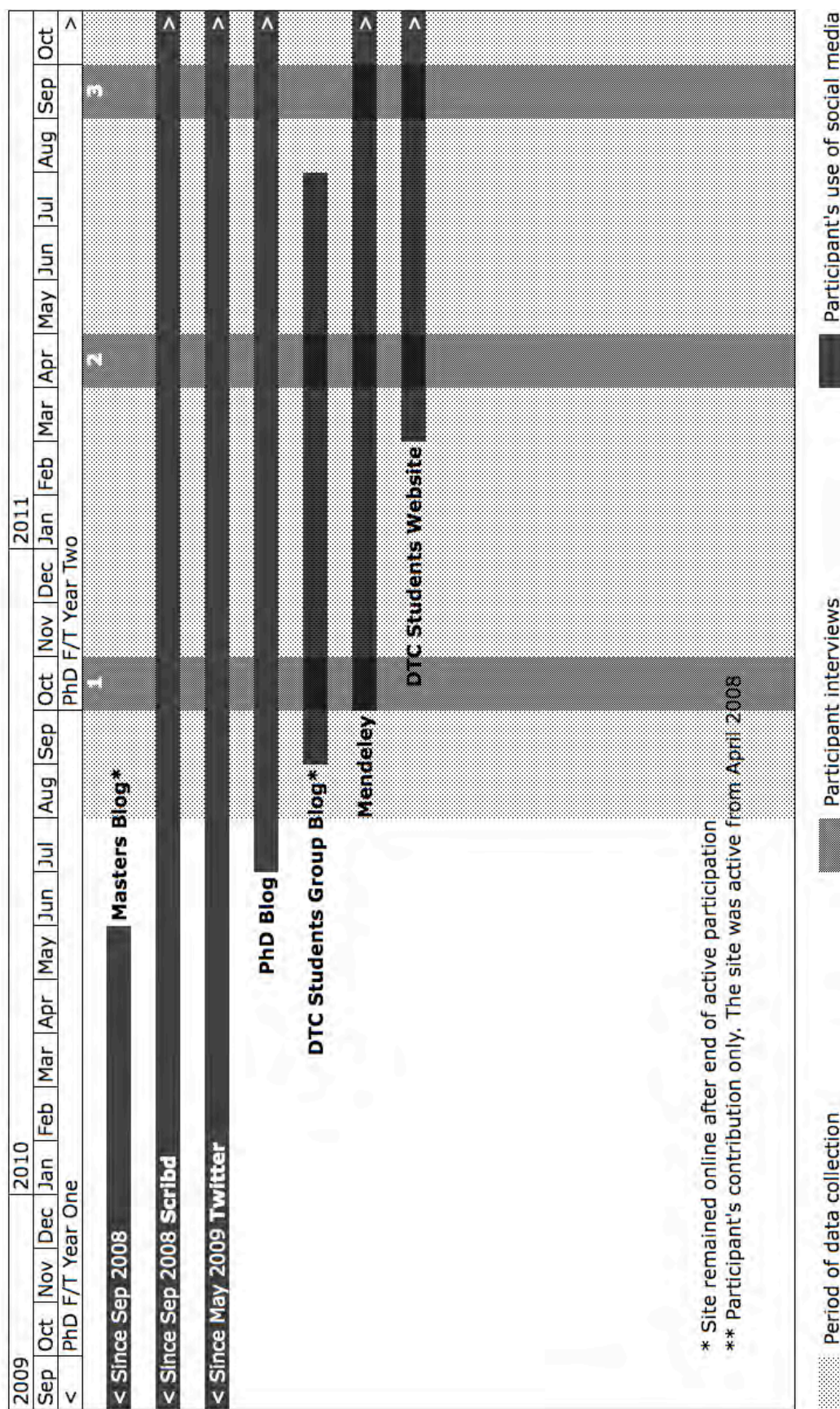


Figure 9: Amy – Timeline

### **5.1.2 Ben**

#### **Position**

Ben was a part-time second year PhD student in his forties studying at a School of Film and TV Studies at a Russell Group University in the Midlands.

#### **Thesis Development**

Ben began exploring the material culture of fandom within the context of collecting film and television memorabilia. He was interested in theorising the economy of collectability as a productive activity through three different dimensions of the collecting process; systematic, fetishistic and performative collecting. His initial proposal reflected a personal interest, drawing on his own experiences as a collector, and he planned to empirically research collecting at conventions, auctions and specialist stores. At the time of his first interview, Ben seemed confident in his understanding of the existing research in the field, and saw how the potential methodological approaches he could develop from this personal perspective could represent significant claims for original research.

I really think I'm making an original intervention into the field. Because a lot of fan scholars don't really get much further than the computer screen or the campus. And I think I'm well positioned with my experiences and perspective on this.

However, it became clear Ben's PhD topic was undergoing a prolonged period of negotiation with his supervisors.

basically my supervisor was saying well what else have you got. His exact words were 'I don't buy it.'

For Ben, his focus on the collectors' community "just didn't fit in with departmental expectations," which he felt were increasingly oriented towards commercial research agendas.

I've had to really work hard to get this accepted. The department generally are only interested in industrial hierarchies and convergence and iPhones and stuff like that - a lot of this boring stuff.

He found an ally in a lecturer in a neighbouring School who's writing about the everyday through a cultural and critical perspective was more aligned with Ben's

previous areas of study.

She's the only person who was really behind what I'm doing... She thought it was great.

However, having established communication, his supervisors discouraged him from continuing conversing with her as it could compromise her position as a potential internal supervisor.

By the second interview, Ben's thesis had become more focussed on the specific cultural 'texts' of a subject (a contemporary film) and an object (a film 'prop'). And whilst Ben admitted his relationship with his supervisors was initially strained, the relationship 'warmed' over the period of his participation as his thesis became more focussed.

### **Academic / Professional History**

Ben worked in the music industry for over 10 years after leaving school. He returned to education via a two-years Humanities access course, which led to a him undertaking a degree in Cultural Studies and a Master's degree in Contemporary English Literature and Critical Theory, both at the same university in the north of England. In between, Ben did a screenwriting MA, which he was unable to finish. He had a year's gap from studying before securing his doctoral position.

### **Doctoral Contexts**

A single parent, Ben had found it necessary to switch from full time to part-time study early in the programme. Based over 100km from his university, he found it increasingly difficult to attend regularly and became isolated from the majority of social and academic activities in his department.

Well I've got nothing. I come from nothing. I try and live on £50 a week. I'm skint, I can't afford half of the things others have. And life is tough. Not having any money. It's difficult. I'm a stone alone. And I feel kind of cut off from things.

Ben's interaction with other PhD students in his department was almost exclusively limited to voluntarily attending weekly 'work-in-progress' group sessions (nicknamed the 'WIPs') mediated by faculty members. Designed to

create a supportive and critical environment, each student took turns to submit texts of their work in progress and present the following week, followed by feedback and discussion. Ben tried hard to integrate. In the first year of his PhD, he took on a job as articles co-editor of the departmental online journal, primarily engaged in copy editing of conference reports. But at times, Ben became exasperated with academic culture.

The writing is one thing, but fitting into academic society is another. The pressure to be an academic... I find that quite difficult... I'm not even sure I want to be an academic. I'd be happy to leave here and open a tattoo studio or something like that. Something that isn't this. If I had a supervisor who was supportive or encouraging then maybe things might be different.

Despite these reservations, Ben admitted he was drawn to the 'edges' of academia, and was interesting in pursuing teaching opportunities, particularly in supporting under-represented sectors.

### **Other Activities**

Towards the end of his participation, Ben began participating in courses at a major film studio, which was instrumental in developing closer links with film production, establishing links with key film industry contacts and associated journalist and media representatives.

### **Social Media Use**

Ben's earliest experiences of social media were heavily influenced by his work in the music industry (particularly the role of MySpace in promoting bands), and through his association with collectors' online communities and networks. Whilst continued to use both Facebook and MySpace recreationally, though attempts to utilise them to access potential participants and sites for his research were largely unsuccessful.

Ben's initial interest in using social media for his PhD was oriented towards their potential to facilitate his ethnographic research work and initiated an attempt to become socialised more into the collector's online 'community.' (He had previously participated in collectors' forums and specialist online communities.) However, his initial hopes of this activity 'snowballing' through various forms of social media were largely unrealised.

Ben created a Tumblr blog specifically for his PhD, and its ease-of-use provided

an effective platform for early short experimental posts. However, as he began to develop longer, publicly conscious posts with greater multimedia content, Ben set up a new blog in Blogger.com (Tumblr's comments feature is restricted to the Tumblr users). He revised his use of Tumblr towards a more informal and personal bookmarking site of ideas, content and connectivity, continuing to use it for short postings and access to collectors within the Tumblr community:

More posts for a start. Shorter posts. For everyday, for little things. I've seen how others are using Tumblr in that way, little things, I like that a lot. And I can do that, it's easy.

The new blogging platform enabled the development of longer, more complex posts, which gradually evolved into highly a refined genre of blog writing, honing a populist, journalistic style of writing with which to explore opportunities for a wider dissemination of his work in non-academic publications. Over time, the development of these blog posts became integral to Ben's writing practice, creating a complex reciprocal relationship with the development of chapter drafts and other formal academic writing. He also exploited the multimedia support of the blogging platform, supplementing blog texts with images, video and sound files.

New to Twitter, Ben adopted it primarily to develop links with collectors and, with limited success, with other academics studying within his field. Over time, he developed strategies for more effective networking and impact, including the use hashtags, 'crowd sourcing' activities and blog promotion. He began using LinkedIn at the end of his participation, to support newly established links within the film industry.

### **Perspectives on Social Media**

Ben attended a series of social media workshops at his University, which helped 'legitimise' social media as viable academic tools. They were particularly useful in providing guidance on specific blog platforms and highlighting the potential of Twitter.



## Ben

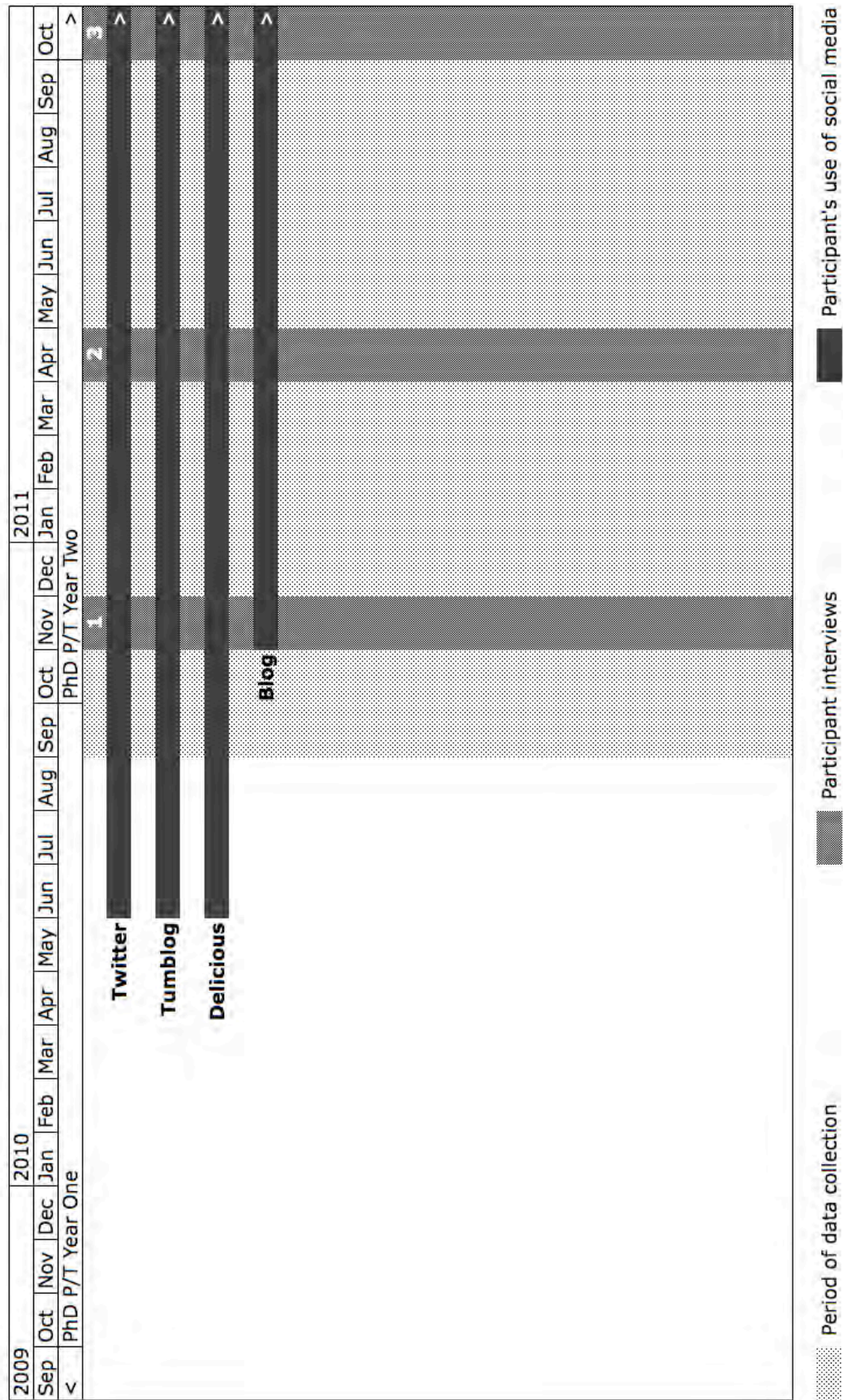


Figure 10: Ben – Timeline

### **5.1.3 Jack**

#### **Position**

Jack was a full time second year PhD student in his thirties studying at an interdisciplinary Doctoral Training Centre in the south of England.

#### **Thesis Development**

Jack's research interests lay at the intersection of digital technologies, the arts and community engagement. He set out exploring the conceptual frameworks to help develop creative theatrical practices through the use of digital tools. For Jack, the interdisciplinary nature of his thesis enabled him to explore a number of key research interests. Speaking in his first interview, he stated:

I'm really happy at this conceptual stage. It brings together a lot of things I've wanted to explore at this level of academic enquiry. But it's hopefully going towards project that's rooted in the community arts genre.

The thesis subsequently became more focused, with an agreement to collaborate with a theatrical company to develop a programme of events and a related community workshop initiative.

#### **Academic / Professional History**

Jack studied for a degree and MA in Fine Art at a university in the Midlands. He subsequently worked there briefly as a research assistant, exploring visual methods of ethnography, and later at a college of art in London helping develop digital solutions for a start up company. A qualified teacher, Jack taught in a number of schools and colleges, and had recently joined an alternative pedagogy group in London exploring links between community arts and the educational sector.

#### **Doctoral Contexts**

As part of his negotiated programme with his Training Centre, Jack undertook an internship in collaboration with a digital media laboratory at a university in London. His work was focussed on the use of digital hardware in an educational project for children with communication difficulties.

## **Other Activities**

During his participation in this study, Jack was actively involved in a number of high profile events as apart of the protests against university fees and cuts. More specifically, he got involved in a number of alternative or so-called 'feral' education projects in London developing sustainable alternative community learning spaces for under-represented sectors of society.

## **Social Media Use**

Jack was a prolific user of Facebook for several years prior to commencing his PhD, in which he engaged in discussion and activities related to his studies and work, particularly through membership of a significant number of Facebook Groups. Whilst many of these were temporary - related to specific events - or had since discontinued, they contributed to a sustainable network of community arts practitioners. He signed up to Twitter before starting his PhD, primarily to "capture the overspill from Facebook" and once he started his PhD, several colleagues from his Doctoral Training Centre joined his network.

Jack had run several blogs related specifically to his previous Arts-based education and research, combining conceptual and theoretical texts with reflective practice. Rather than developing a dedicated online portfolio, Jack has frequently integrated publicity of his work within his and friends' blogging platforms, often utilising embedded media. Indeed, Jack had gained considerable experience of using multimedia platforms supporting video, photography and sound files. Jack had also contributed texts to a number of long-running blogs, websites and various social networking accounts related to his visual and performance arts activities that were, at the time of his participation, "in various states of use and non-use."

His created a personal blog specifically focused on his role at the doctoral training centre, to document the development of both his thesis and report on his internship, though he used it little during the period of his participation. He did however, become far more active on a Posterous blog, which he originally set up to share events, conferences and call for papers within the academic and arts sectors, but which he subsequently repurposed as an experimental digital curation tool. A long-term user of Delicious, Jack transferred his substantial

collection of bookmarks to Pinboard, in response to change of ownership and design at Delicious, relinquishing shared links with a number of other users in the process. Jack was a guest blogger on a couple of high profile academic websites towards the end of his participation, writing about alternative educational projects and community arts.

### **Perspectives on Social Media**

Jack's experience with social media had been shaped more by his work as an arts practitioner than as an academic, where his social media use tended to be integrated within the web-based platforms that he used to promote and disseminate artistic work. He described a strong commitment to open-source platforms in the arts community, yet acknowledged his reliance on a number of proprietary social media.

## Jack

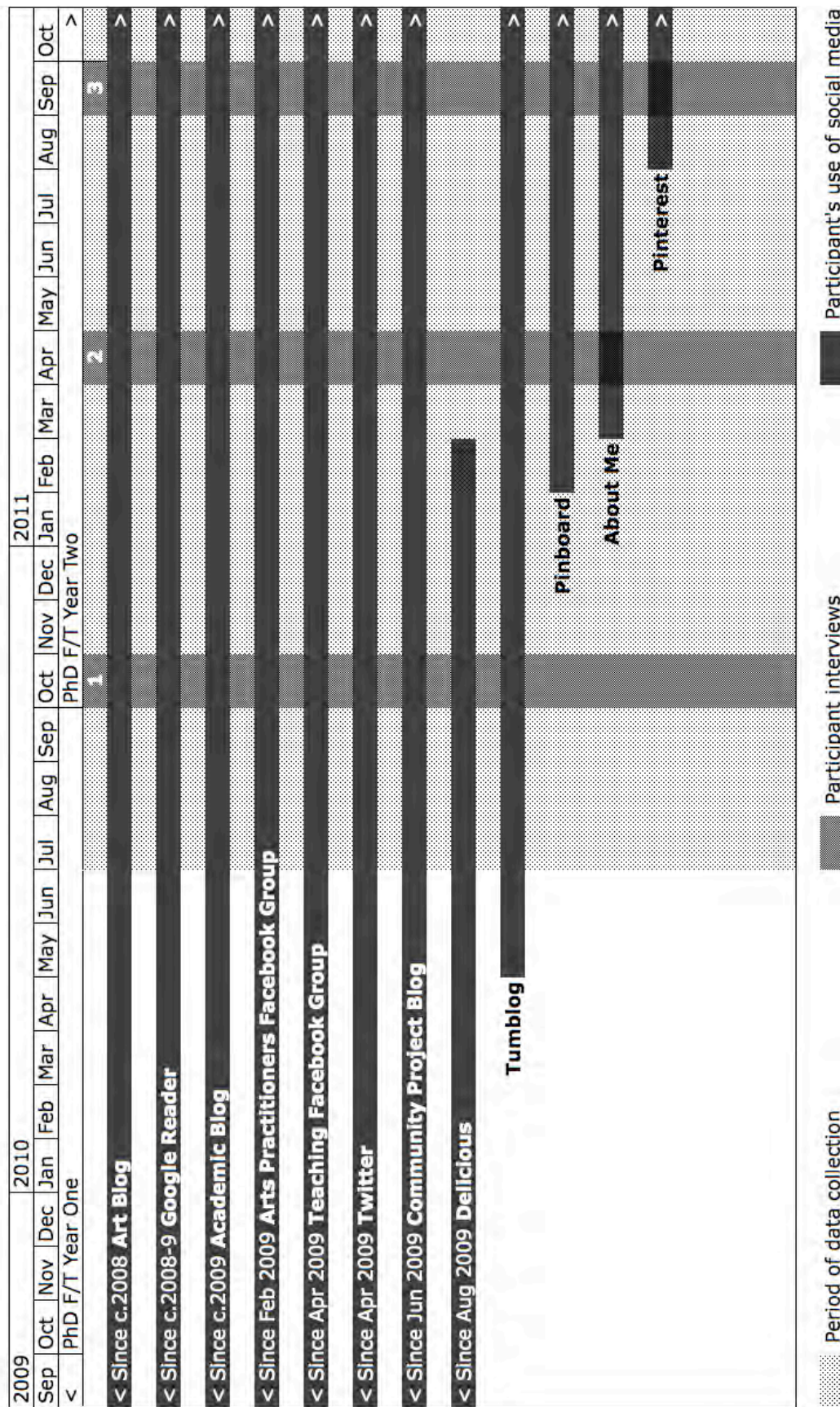


Figure 11: Jack – Timeline



### **5.1.4 Jenna**

#### **Position**

Jenna was a full time third year PhD student in her twenties and based in English Studies at a Russell Group University in the Midlands.

#### **Thesis Development**

Jenna's thesis was focused on the representation of the suffrage movement in the press, and the developing nature of the debate over equal franchise and their acquisition of political and social legitimacy. Specifically, she was examining the corpus of a major British newspaper during the militant campaign: a previously unused data source in corpus research. Increasingly used to investigate social and political discourses, corpus linguistics involves collecting together a large amount of texts and using computer programs to look for pattern formations. Jenna saw her research as interdisciplinary, providing a language-based perspective and methodology for understanding historical and contemporary political discourses, ideologies and social movements. She added:

You know, my PhD topic has been pretty amazing because it does incorporate so many of my interests.

#### **Academic / Professional History**

At her Sixth Form College, Jenna's interests were initially in the sciences, but she switched to English studies, and subsequently took her first degree in English Language and Literature at a university in the North West of England. Jenna was introduced to corpus linguistics in a final year module, and with the encouragement of her lecturer, she opted to study it as a Masters degree. She took a one-year break in her studies to work as a dictionary editor at a well-known university press, before returning to her old University to develop a PhD proposal with her lecturer as supervisor.

#### **Doctoral Contexts**

Following a major departmental reshuffle, Jenna was required to follow her main supervisor to her present university to resume her PhD. Once there, two further shifts in her supervisor's departmental placement resulted in Jenna also being

transferred twice, giving her little opportunity to establish herself within a stable departmental postgraduate community.

So they were a bit confused about me turning up and sort of where do we put you, I don't understand. And because there weren't other postgrads it was quite hard to have any community going. So while I went along to a few of the English Studies events I didn't really feel like I had a place here.

These disruptive events characterises Jenna's 'nomadic' doctoral experience, significantly influencing her social media use (as described in

I've got fed up of trying to re-establish myself every year. You know, you like do it in your first year and meet all the other new PhD students and you have this kind of cohort really, and then leave. And then you go somewhere else and there aren't any PhD students and you kind of work out who the admin staff are and get friendly there, and I actually worked there over the summer, and then leave again. And then you go to a new department, and by now it's just a bit like, this again.

### **Other Activities**

Jenna regularly related her historically based thesis to her activities and discussions around ongoing politicised academic and social discourses. Throughout the period of her participation, Jenna was involved in a number of student-led events protesting against university fees and cuts, which fostered a significant interdisciplinary activist network within her University and with other institutions. She was also an active member of her University LGBT group. In the absence of a cohesive departmental student community, these became important social groups within her University. During her participation, Jenna attended and presented at corpus linguistic conferences in the UK and in the US, and a number of national student LGBT events.

### **Social Media Use**

Jenna created her first private online journal aged in her mid-teens, primarily consisting of "typical teenage angsty stuff."

If you're in this generation of young researchers, your web presence is part accident, and part by design.

Years using Dreamwidth, and later, its forked-development platform LiveJournal, helped facilitate a trusting and cultured network within an academic-oriented

community. Jenna started using Twitter before her PhD, developing it as her primary public-facing social network – a network drawn predominantly from her academic and social fields, whilst regularly referencing student activist and LGBT related activities, and specifically contributing to discussions on epistemologies, research methods and academic writing.

In recognising she was working towards the completion of her PhD, Jenna created a new Wordpress blog as a more 'professional' external-facing platform, with which to present a more focussed representation of her academic activities to a wider academic community, and to gain greater visible presence online. In time, the blog shifted from its early focus on thesis development, to becoming widely adopted to reflect of all aspect of her academic life, and towards the end of her participation, Jenna was looking to develop a 'portfolio' design to present a more coherent online academic persona.

Jenna's early academic engagement with social media developed primarily through literary networks. Though she has used Delicious and Library Thing primarily for personal bookmarking and curation, she experimented with the social features. During her participation, Jenna also began using the bibliographic tool Mendeley, though remained unconvinced of the potential of its online platform for social networking. In a previous capacity as a moderator with a web-based forum, Jenna had also helped set up a wiki.

## **Perspectives on Social Media**

Jenna was familiar with a range of social media tools and practices, well versed in the cultural aspects of early academic student networking, and had a working knowledge of coding. Through her experience of online journals and blogs, she could boast up to ten years of online writing, and remained committed to future use of social media:

I'm definitely going to keep writing something on the internet, but its dependent on the changes in technology. I quite like having my own sites as there's something a bit more stable about that.

A keen supporter of the principles of open scholarship and shared practice, Jenna had attended a number of workshops and training initiatives but was cautious of their usefulness:



I've often found things pitched at a weird level for me, because I have had a fair bit of experience. So I'm a bit wary of them because I think is this going to be the idiots guide to setting up a Twitter account or is it going to be actually relevant... Well there hasn't been a great deal of shared practice that's been communicated. As far as I know there's not been any university guide to using social media, and this is how you should be, you know, what you should be doing when you're representing the university online. As far as I know, it's not even codified yet. I think it's such a new thing, that people are working out you know, what can we allow them to do, what can we allow them to say, at what point do we have to step in and say actually that's not ok, you know.

Jenna's involvement with student activist events was highly influential, demonstrating both the effectiveness and the problems associated with collaborative engagement with a range of social media tools and platforms. She was particularly active in managing the Wordpress blog for the University student protests group.

## Jenna

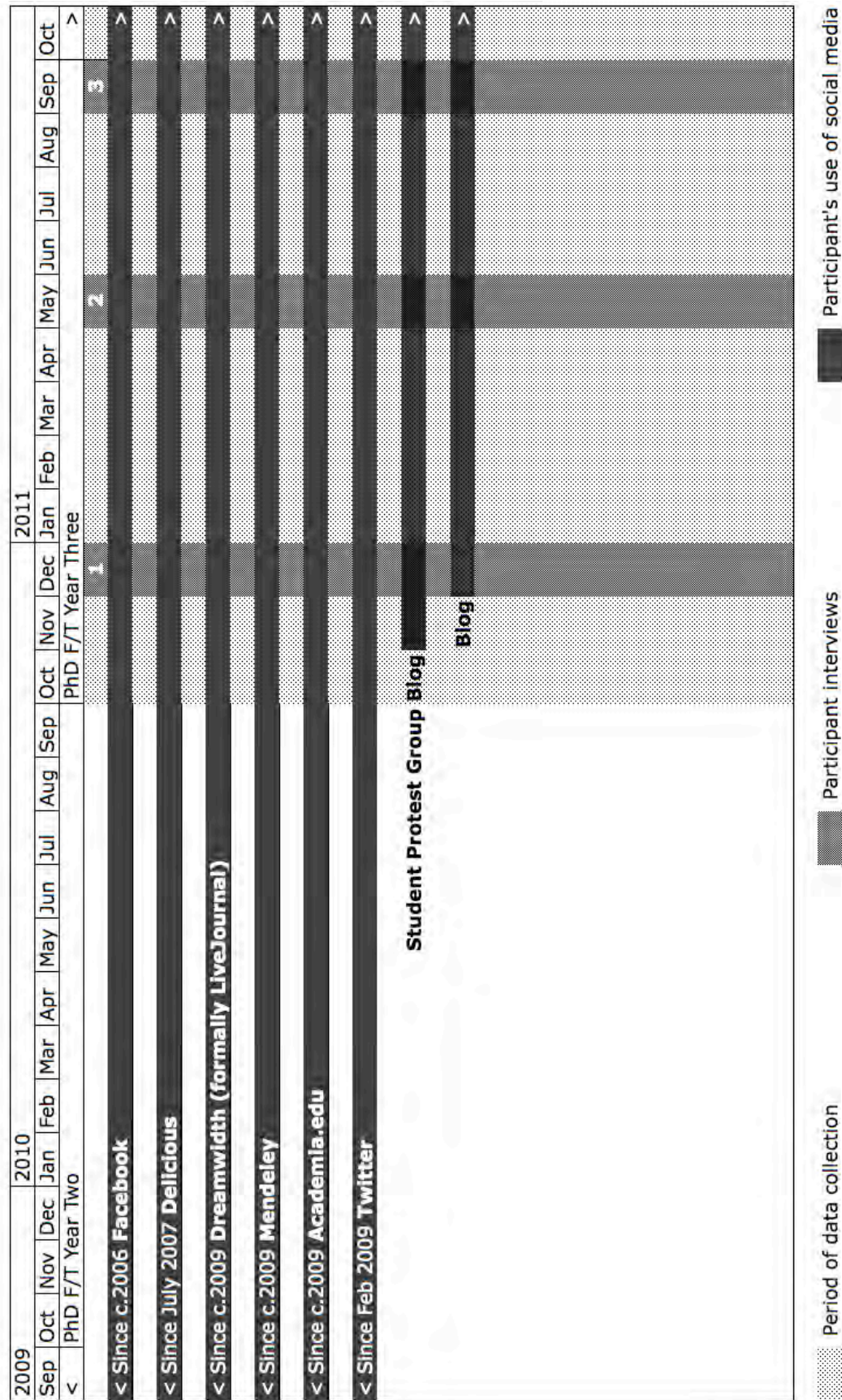


Figure 12: Jenna – Timeline

### **5.1.5 Michelle**

#### **Position**

Michelle was a second year PhD student in her thirties at an interdisciplinary Doctoral Training Centre in a 1994 Group university in the north of England.

#### **Thesis Development**

Michelle's thesis underwent considerable changes in the first year of her PhD, as she fashioned her initial proposal exploring the democratisation of design through participatory and collaborative into a more personalised and reflexive socio-technical agenda. By 'reconstructing' the professional role and identity of the designer, new models, services and approaches to innovation can be developed.

#### **Academic / Professional History**

After graduating in her first degree in Human Geography in the south of England, Michelle studied Mixed Design as a postgraduate. In between she worked briefly for a charitable trust in London engaged in social justice causes in urban management.

#### **Doctoral Contexts**

In situating her thesis within the wider contexts of the digital economy, new technologies, economic development, social progress and cultural change, Michelle believed her research foci resonated with innovative practice in the design industry and with academic policy manifest in her Doctoral Training Centre.

#### **Other Activities**

As part of her negotiated studies, Michelle completed a formal industrial placement at a multidisciplinary design studio in London in her first year, which she undertook simultaneously with another student in her Training Centre. She worked primarily on a collaborative project with an energy group, utilising open-source participatory design methods and online communities to design and

develop physical infrastructures in the home. The placement helped Michelle shape the development of her thesis.

## **Social Media Use**

Michelle participated in the Training Centre Google Group – an internal site initially set up by the programme facilitators – contributing posts discussing elements of the doctoral programme, and sharing links to resources. Student use of the site varied considerably, but Michelle took an active role in supporting and promoting it within the Centre in its early days. Her strong sense of identification with the Centre encouraged a sense of affiliation, and she further established the role of the platform through developing a resources wiki and an online reading group.

Michelle had established a portfolio-themed website on a Content Management System (set up by a colleague) a year before starting her PhD. She adopted the blogging component specifically for her doctoral training. Her posts encompassed a range of academic activities, including proposal and literature review development, conference and seminar attendance and work related to her industrial placement. During her time there, she also contributed to a project blog. Of all the participants, Michelle was the most inclined to include images in her posts, often related to the content of the text when it was design-focussed, though occasionally they performed a primarily decorative role giving meaning to the text through their associative value.

Michelle had been using Twitter two years prior to the start of her PhD and continued to develop a professional and academic-focused network, increasingly in support of conference and seminar events she attended. She was particularly active in establishing links with PhD students from other Doctoral Training Centres. Michelle also became an infrequent contributor to #phdchat, an informal, student-led initiative centred on a global hashtag community of multidisciplinary PhD students within Twitter. She initially engaged in the weekly themed chats but found the generality of the discussion and multidisciplinary nature of its contributors made it largely ineffective in comparison to more specialist Ning-based networks and communities. She did however continue to support the initiative by including the hashtag in relevant tweets and retweets. Michelle had used LinkedIn extensively to make contacts within the design industry, and began

to integrate academic links once she commenced her PhD. She joined Academia.edu at the end of her participation in the study.

### **Perspectives on Social Media**

Despite her considerable experience at managing online sites and resources, Michelle was relatively inexperienced in using social media before starting her PhD. In particular, her enthusiastic adoption of social media practices around events and conferences represented a steep learning curve. She received no formal training at her Training Centre in using social media, though she did attend a (non-academic) blogging workshop by a media consultant facilitated by the University's Graduate College.



## Michelle

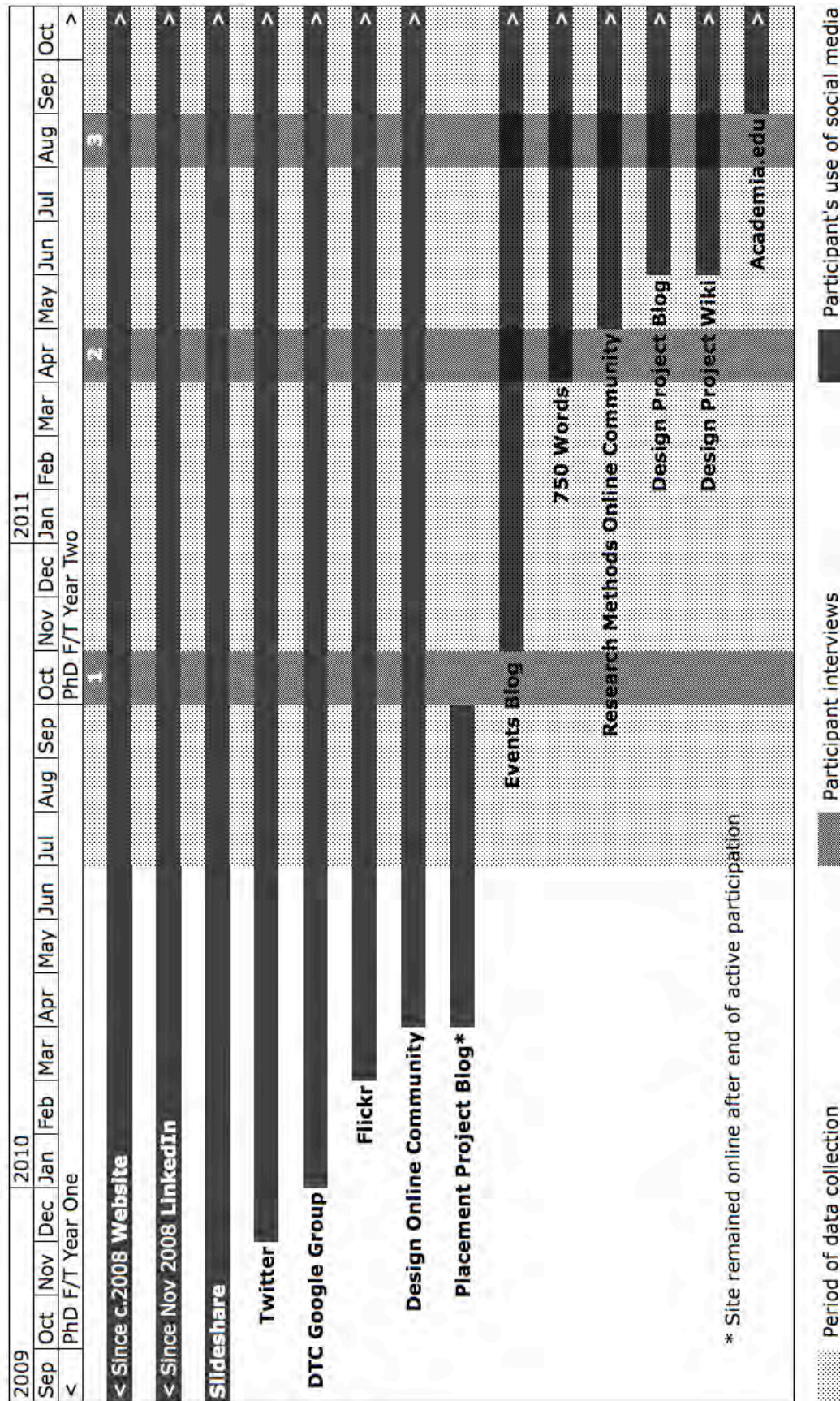


Figure 13: Michelle – Timeline

### **5.1.6 Paula**

#### **Position**

Paula was full time thesis pending PhD student in her twenties studying American and Canadian Studies at a Russell Group University in the Midlands.

#### **Thesis Development**

In the stage of writing up, Paula's thesis was relatively fully formed. Her PhD explored the culture of surveillance through the representations of an inner city neighbourhood in North America as portrayed in traditional media such as fiction, documentary film and television, and emerging creative and activist media arts.

#### **Academic / Professional History**

Paula studied both her first degree and her Master's degree in American and Canadian Studies at her current university, with several of her cohort also transferring to doctoral study. Throughout her postgraduate studies, Paula presented papers at conferences in the UK and overseas.

#### **Doctoral Contexts**

Paula's fieldwork centred on two trips to a North American city. The first in March 2010 encompassed a month-long research visit funded by Universitas with formal ties to two of the city universities. She established links with key academics and doctoral candidates with similar research interests, attended classes, and presented her work at three conferences. She was able to access key texts, artistic and photographic representations of the neighbourhood, and engage in a range of collaborative activities with residents and activists. She also attended several meetings and events organised by a community based media arts association and independent media centre. She became an active participant in their online social networking activities, which she continued to use after returning to the UK. Paula visited the city for a second time in March 2010 for a non-funded field trip to coincide with the hosting of a major sporting event. She was able to reconnect with key academics and the community arts group, and it was largely through the latter she was able to engage in a number of activist events and alternative media activities.

## **Other Activities**

Throughout her PhD, Paula was actively engaged in additional student projects and initiatives. She coordinated a postgraduate cities studies reading group, which led to the development of a psychogeography event she co-organised at her University in June 2010. She also undertook an internship through her Graduate Centre as part of a public programme of an exhibition at a local contemporary art gallery, overseeing the production of a pamphlet and a blog exploring utopian writing and art through the collaboration of by, an academic, an artist, a poet and a group of local young people. She subsequently helped co-ordinate an AHRC-funded student initiative involved in creating a multidisciplinary and multi-institutional regional network of postgraduate researchers with a focus on alternative and creative research dissemination in the city space and cyberspace, culminating in an event in her local city centre in December 2010. The project utilised a number of social media such as blogs, a wiki and content sharing sites.

Whilst finishing her PhD, Paula's time was also taken up in developing potentially beneficial careers and research networks as she actively looked for work and opportunities for research. She was uncertain about her long-term career aims, though admitted she did not expect to be a full time academic in the future. Paula was particularly passionate about the type of public programmes that she contributed to in her internship, and in the short term, she was open to opportunities across the academic and arts sectors. On completing her PhD, Paula successfully landed a part-time position in the careers office of a Russell Group university.

## **Social Media Use**

At various stages of her PhD, Paula's use of social media was characterised by her engagement in project-based activities across multiple online sites and platforms, and was strongly community-focused around the key collocated and distributed groups and events in which she participated. These represented a key element to her doctoral practice, and she became increasingly adept in setting up and coordinating – either individually or collaboratively – such groups herself in the second and third years of her PhD. She was also very active in posting a wide range of content within the online groups in which she participated. Through most



of her PhD, Paula used Twitter as her main academic network, which brought together many members from these distributed and diverse communities.

Unique amongst the participants, Paula chose not to develop a personal website or blog. Over time, Paula developed Academia.edu as her main reference site to present a formal academic profile and provide links to other sites. She also used it to share these papers online and to search for other academics using keywords of key interest categories.

Her association with the North American community arts group was instrumental in introducing her to a number of social media, particularly highlighting the effectiveness of these within community arts and media, and activist contexts. She continued to share research with other members of this group through their social network.

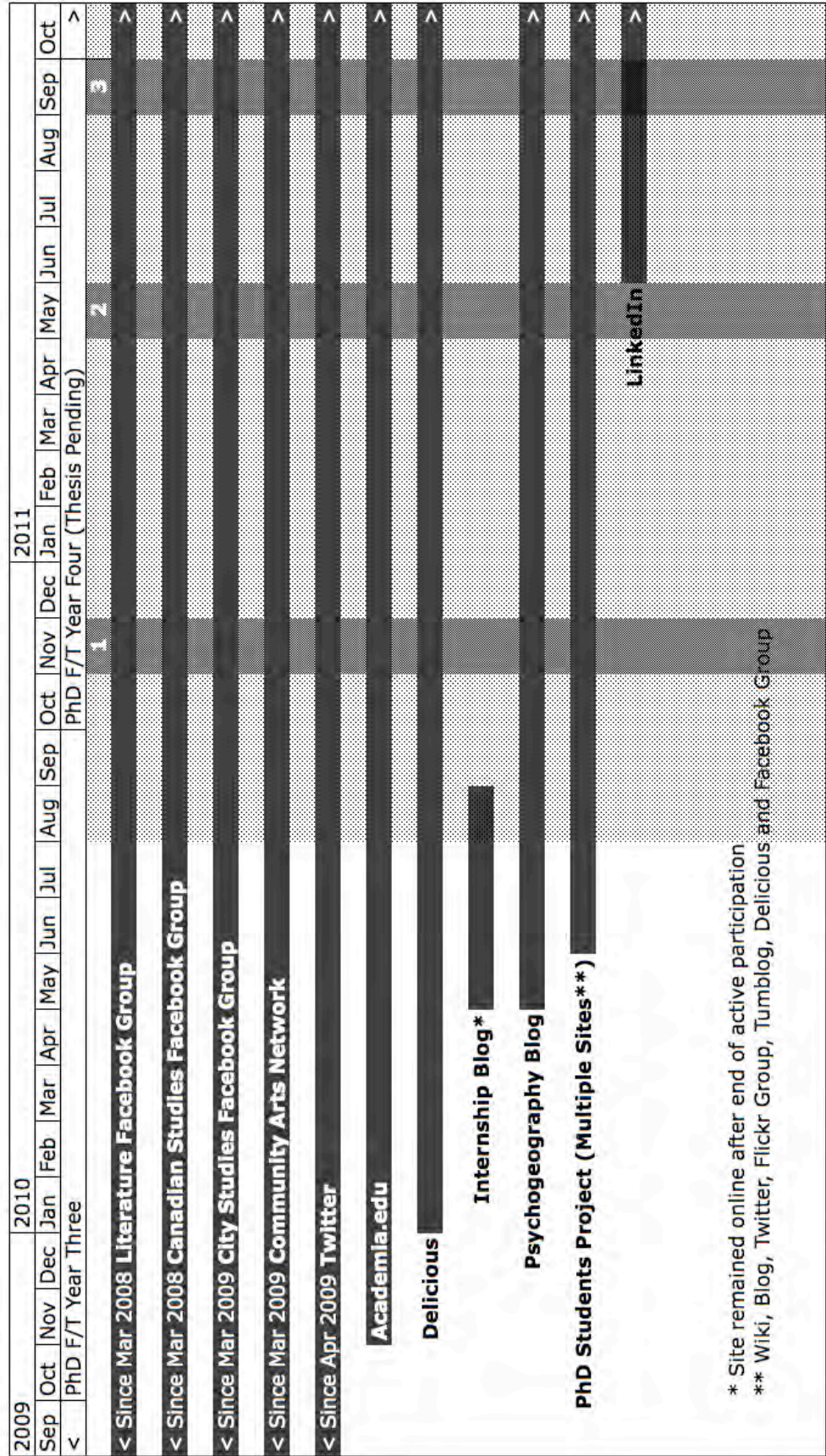
Although Paula relied primarily on traditional web-based resources in her job-hunting process (such as dedicated academic job websites), she did access some positions that were of interest - particularly in the arts - through social media sources (such as Twitter and Facebook groups). She also made a point of ensuring she was connected with the social media outlets of organisations, funding bodies, and other potential sources of academic jobs or research opportunities. LinkedIn, Twitter and Academia.edu in particular. At the very end of her participation, Paula joined an additional Facebook group based around a specific academic publishing group in her field.

### **Perspectives on Social Media**

Paula attended postgraduate social media sessions in 2010 at her University. She was very supportive of the ethos of open and collaborative practices – in both academia and the arts – and expressed admiration for people who commit to developing social media practices, though she felt she had not personally achieved as much as she would have liked during her doctorate.

I think there's a real science to getting people to follow your blog and things, which I never really put as much effort into as I should.

Paula was resolved to try and get published exclusively in open access publications.



### Figure 14: Paula – Timeline

## 5.2 Mediating Doctoral Practices

In this section I address the first research question by presenting the findings primarily related to doctoral practices.

The following sub-sections correspond with the key doctoral practices that emerged in the analytical process, and provided the object-orientation of the activity systems.

- Developing Networks and Communities
- Sourcing and Managing Resources
- Synthesising and Reflecting
- Dissemination
- Writing Practice
- Discussion, Feedback and Collaboration
- Research and Ethnography

Within these, the primary participant narratives that were selected as part of the analytical process (as described in the previous chapter) are presented with corresponding findings relating to other participants added as supplementary evidence. As a useful reference, these key narratives are summarised in tabular form in Figure 16 (page 194).

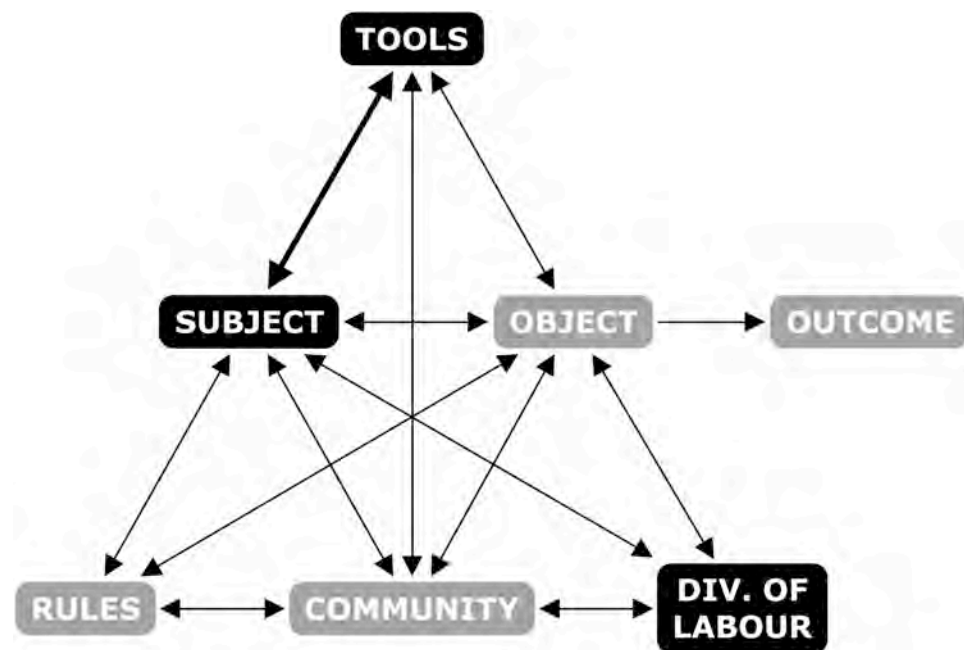
### **Activity Systems**

Activity systems were constructed throughout the analytical schedule (see 4.5.3) from preliminary to advanced stages of development. In the process, drafts were combined, aggregated, partitioned and deleted, and informed by developing supplementary activity systems.

The participant narratives presented in this section are annotated by key advanced level activity systems that were developed towards the end of the analysis process and selected for this thesis. Whilst these are included primarily as evidence of that process rather than necessarily additional dissemination of the findings, they provide the reader with a supplement to the text and a further insight into their development.

The activity systems are shown with the components of the triangle structure annotated with summaries from the analysis. Additional information regarding cultural tools, social media, genres and figured worlds are also indicated where applicable.

The contradictions indicated in the diagrams are shown embolden where they are seen to primarily occur in the activity system, which can be within specific components (e.g. within 'Division of Labour') or between two or more components (e.g. between 'Subject' and Tools') as shown in Figure 15, below.



**Figure 15: Contradictions**

	Amy	Ben	Jack	Jenna	Michelle	Paula
<b>5.2 Mediating Doctoral Practices</b>						
5.2.1 Developing Networks and Communities				'Nomadic existence' and pre-doctoral networks		Facebook group
5.2.2 Sourcing and Managing	On 'being resourced'					
5.2.3 Synthesising and Reflecting			'Scrapbook' blogging			
5.2.4 Dissemination	Genre, imagined audience and the Google 'incident'			Blogging, academic legitimacy and context		
5.2.5 Writing Practice		Developing blog post genre			Public to private	
5.2.6 Discussion and Collaboration						
5.2.7 Research and Ethnography						
<b>5.3 Mediating Doctoral Identities and Agencies</b>						
5.3.1 'Mapping' the Research Field					Live blogging and event tweeting - amplification as mapping	
5.3.2 Doctoral Scope and Peripherality	Blogging and peripheral reading					
5.3.3 Locating and Positioning		Industrial relations				
5.3.4 Negotiating Multiple Practice Contexts			Twitter contexts and context collapse			
5.3.5 Local Agencies	Departmental blogging	(Dis)locating				
5.3.6 External Agencies				Blogging and peripheral expertise		Digitally mediating project work
5.3.7 Managing Online Identities						

**Figure 16: Participant Narratives**

### 5.2.1 Developing Networks and Communities

The participants' online networks and communities were seen as partly initiated through augmenting and sustaining existing connections with department colleagues, formal academic cohorts and local discourse communities. These links became particularly important when student activities typically shifted from local, modular and cohort-based modes of study, to those that were more dispersed and independent. Whilst online networking and community development beyond these local research environments tended to be defined by platform-specific customs (both purposeful and opportunistic), they were also seen as augmenting both organised and spontaneous 'real world' networking activities, most typically associated with participating in interdepartmental or multi-institutional conferences or training events.

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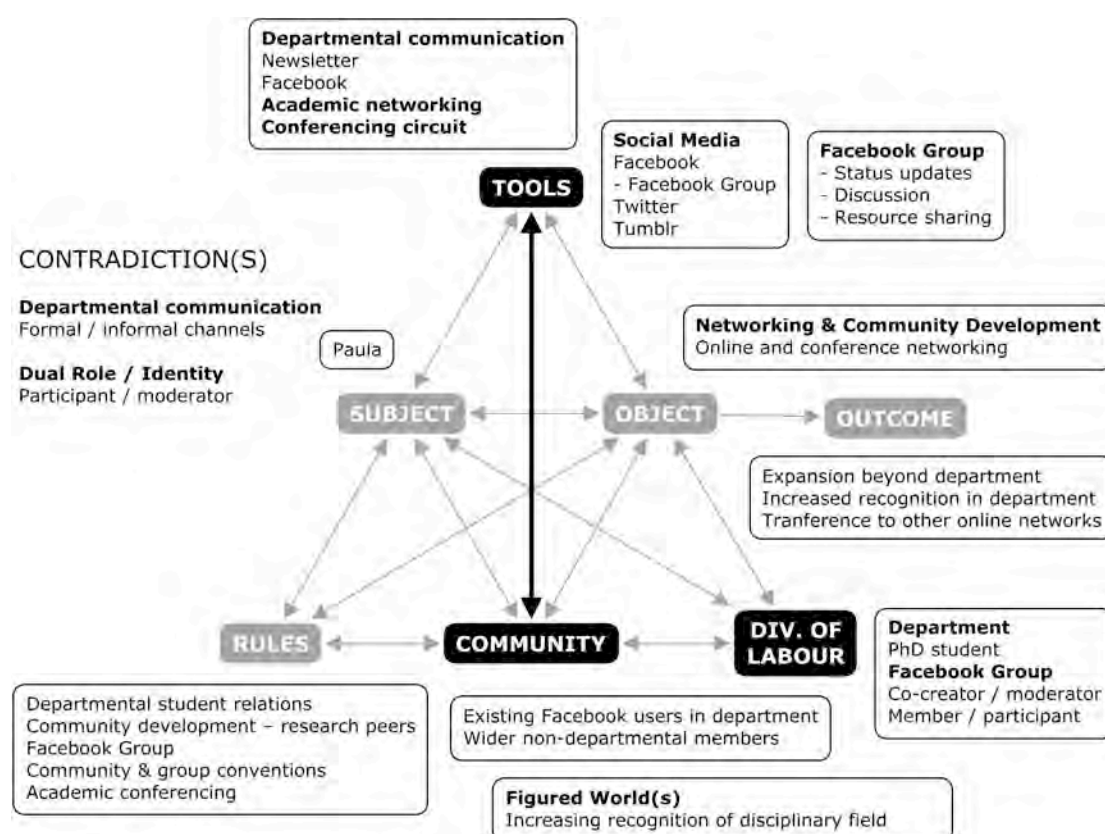
#### ***Paula: Facebook group***

Initially responding to a suggestion from one of her supervisors, and influenced by a similar initiative in a neighbouring School, Paula set up a Facebook studies group for postgraduate students in her department. It initially sought to link useful information from institutional and external channels of communication (such as calls for papers) with an already existing informal network on Facebook. In doing so, the group effectively channelled the occasional, inconsistent and fragmented academic-related discussion that had begun to occur within the mainstream chat into a bounded, recognisable and purposeful community defined by its disciplinary focus and the geographical limits of the university campus.

Paula described the strong emphasis placed on conferences in her department, even during her Masters degree, and the expectancy that students not only participated in them, but also helped set up and facilitate their own. Therefore, subsequent networking activities by Paula and other early members of the Facebook group (which included actively promoting and inviting members to the group itself) corresponded with increasingly active participation in the conferencing circuit. As a result, the group expanded beyond the immediate network to attract increasingly significant numbers of postgraduate students from other UK and eventually international institutions, as well as researchers from related and peripheral disciplines.



This, along with her participation in a series of student initiatives and projects, contributed significantly to building Paula's personal academic network on Facebook. However, during this time, her Twitter account had also become increasingly important as a networking and information resource – she was particularly surprised how many journal articles and calls for papers were shared. In addition, through using the Tumblr blogging platform on several projects, she became aware of its usefulness in locating key contacts and groups. Hence, many of the original contacts and activities of the Facebook group became increasingly distributed across additional platforms and as a result, its initial usefulness became less important to Paula as she progressed in her PhD. Indeed, looking at Paula's contributions to the Facebook group over its three-year history, distinct stages of development, maintenance and a gradual relinquishing of her stewardship of the group are evident. Not only did her contributions to the group generally decrease in number as she increasingly engaged in other social media, but also in response to the expansion and maturation of the Facebook group as it became more self-sustainable.



**Figure 17: Paula – Networking and Community Development**

Paula discussed the difficulties in negotiating a 'dual identity' as participant and coordinator in the Facebook group, and explained how she gradually relinquished the formal role, as she became increasingly engaged in other social media. In contrast, Michelle extended her dominant participatory status in the Google Group of her training centre to increasingly adopt an informal role as self-assigned moderator, creating, coordinating and promoting specific activities and features within the student community. These examples remind us that the participatory status of actors are rarely static within online groups and networks, nor necessarily bound by formal or singular roles.

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### ***Jenna: 'Nomadic existence' and pre-doctoral networks***

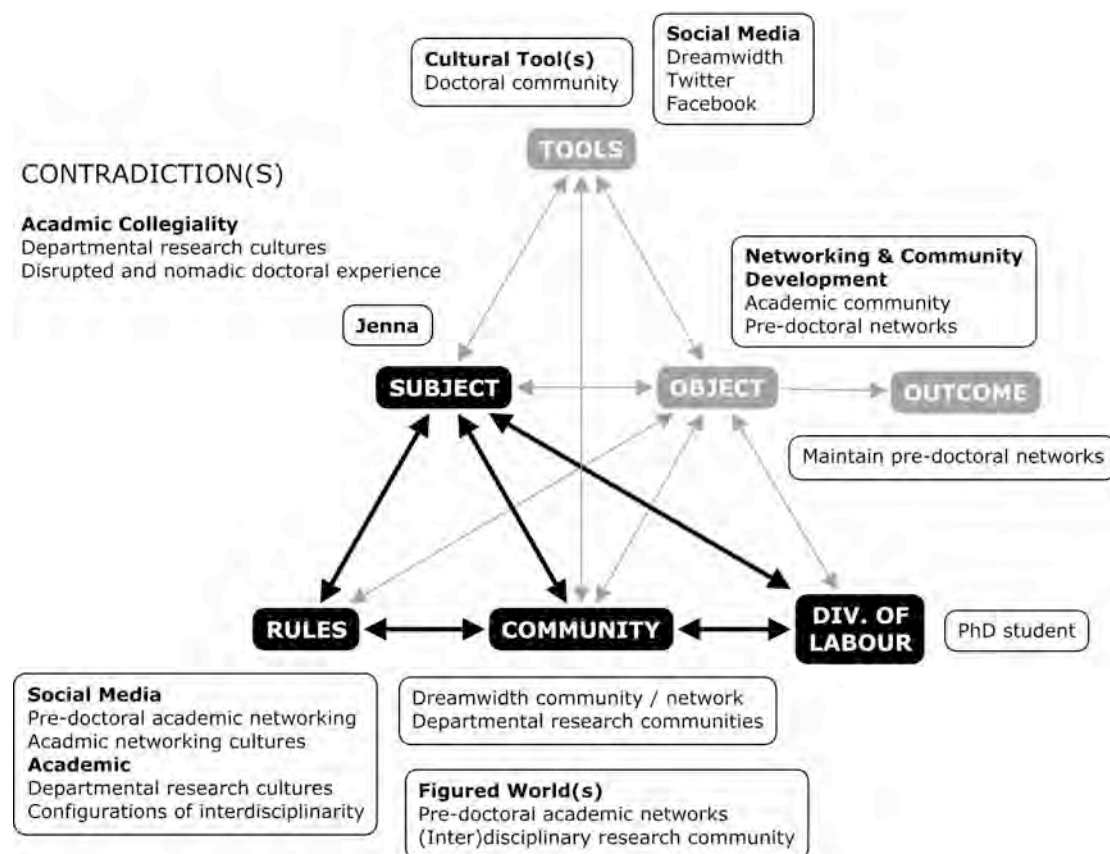
We have seen how Paula progressed – along with several of her peers – from a Masters degree to her PhD within the same department and institution. In contrast, Jenna's early doctoral experiences were significantly shaped by the series of enforced transfers between institutions and departments.

being in to two different universities and three different departments over the course of my PhD... you know, kind of having that nomadic existence... it's been very hard to, kind of, be in one department; told you are moving university, being in a another department that doesn't have a research culture, so, no other PhD students around, and then going into yet another where by now you kind of feel like: what, really! Do I have to try and establish myself all over again?

Jenna was quick to challenge any significant distinctions that might made between online and physical environments: "Real life happens wherever and whenever you're interacting with other people" she insisted. "In the end it's just different formats." In absence of a consistent and reliable physical student cohort, Jenna repeatedly drew on her pre-doctoral networks to provide a cohesive social academic support base. Whilst these included colleagues from previous courses (some of whom she continued to meet with occasionally), the majority had been established through purely online acquaintances, particularly in those networks established and refined through her extensive participation in LiveJournal and Dreamwidth.

My online life has been the constant more so than my offline life... It's kind of having that continuity and in fact, Dreamwidth has probably been essential in providing a kind of academic social circle. Also my networking is kind of me kind of me, trying to get these connections because I'm not getting them in the actual department that I'm based.





**Figure 18: Jenna – Networking and Community Development**

Dreamwidth provided Jenna with fine-grained options regarding access and various levels of viewing and interaction permissions. As such, her networking patterns tended to be multi-directional with complex and nuanced patterns of communication, exchange and community development. Jenna also described the high expectation of engagement and interaction within Dreamwidth through various modes of commenting, discussion and chat. In comparison to open social and blogging networks sharing publicly to wider academic audience, Jenna suggested Dreamwidth is generally regarded by its users as a highly personal network, where connections are founded and developed on relationships of openness and trust. Personal profiles of academics tend to be revealing about non-academic interests, and many academics in Jenna's network also used the site to engage in other activities and creative outputs, such as fan fiction. The majority of this network was established from her participation as an undergraduate, and now included PhD students and established academics from a range of disciplines including early medieval history, maths, anthropology and computer sciences. Jenna singled out one particular academic, an associate professor, for the level of her interaction and influence.

I actually met [her] through LiveJournal, and then through Dreamwidth, and as she was blogging in a personal capacity, and then as I worked out who she was I thought she's really interesting. And I've actually met her since and she's looked at some of my work as well.

Whilst there was a significant overlap between her Dreamwidth community and her network on Twitter, Jenna's increased engagement with the latter marked a significant shift towards networking on a more open platform and with a more diverse group of people. Crucially, as she gradually withdrew further from using Facebook, she found Twitter increasingly fulfilled the task of creating short status updates to a wider audience. Despite the historical academic significance of her formative years with Facebook, its eventual ubiquity led to her Facebook friends representing too wide a social group (including ex-secondary school colleagues) to effectively use it professionally. It provided little of the customisability in the sub-dividing of networks she had been able to employ in LiveJournal and Dreamwidth, and the difficulty in separating different social groups, and their related social and professional contexts rendered it increasingly impracticable as an academic network. As a result, her use of Facebook increasingly became more responsive rather than proactive, using it primarily to keep in touch with updates from several specific social communities. During her participation, she rarely looked at the status updates, and contributed even less. As a casual and infrequent user, Jenna had an ambivalent attitude to 'friending' on Facebook. However the non-reciprocal following metaphor of Twitter, enabled her to become more strategic with Twitter. She quickly dismissed early concerns about 'following back,' and admitted to adopting a more 'mercenary' stance.

I've heard it described as... Facebook as the people you went to school with, and Twitter as the people you wish you'd been to school with.

Despite the community development of LiveJournal (later Dreamwidth) and even the academic historicity of her Facebook account, purposely developing a more focussed network through the open and public Twitter helped Jenna establish her social capital within the academic field.

Twitter's about establishing credentials really. You know, like I'm here, I'm engaging with this community, or with that activity. I'm interacting with x, y and z... Twitter shows I have the means to do this, but also shows I have the initiative and the inside knowledge to be able to do this.

In keeping her Facebook account – albeit somewhat reluctantly – Jenna was able to maintain key social, non-academic connections with minimal status updates and interaction, without the need to compromise emergent, culturally relevant and strategic networks on Twitter. The risks of context collapse and the related management of multiple online sites such as this were evident with all participants, and these are further explored later in this chapter (see 5.3.4).

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Whilst Jack set up an additional and dedicated academic blog to document his doctoral training, he continued to post to his arts blog – occasionally with content related to his doctoral work – and engage with the informal blogging network in which it was established. Jack attributed this high level of interaction and discussion to the unique cultural demands and expectations of arts-practitioners.

There's a culture of promoting one another's work, basically. Often around events and things. It was partly social, keeping everyone informed about when something was happening; a gallery opening, an event, a gig... It sort of shifted over to Facebook, and Facebook events and group, which is partly why I'm still on there so much. But some of the bloggers kept it going on their blogs. And mixed it up with writing interesting texts, some of it quite academic. There's quite an overspill into other fields, some of it quite political... which is great.

Indeed, it is interesting to note the commonalities in the sustained culture of discussion, sharing and support that was evident in Jack's open blogging and loosely-connected social network of arts-practitioners with those within the bounded networking community of Jenna's Dreamwidth site. One open, the other bounded; one defined by a shared disciplinary practice, the other by a communal socio-technical environment. Yet they both served as important pre-doctoral digitally mediated communities, and continued to perform a consolatory role as the two participants explored new networks and identities as PhD students.

## **5.2.2 Sourcing and Managing Resources**

Participants demonstrated how they used social media for sourcing, managing and distributing a wide range of web-based content, including new publications, call for papers and news of conferences, and links to other social media content such as blog posts, videos and podcasts. The sourcing, saving and sharing of web resources were shown to be instinctive, interrelated processes, routinely

undertaken through tweets, Facebook status posts and blog posts. Most participants 'followed' academic blogs (some using an RSS reader to aggregate blog posts), though the numbers varied considerably. Several had occasionally engaged in direct information sourcing using social bookmarking and Twitter platforms as alternatives to search engines, though this wasn't established as a sustainable practice. Participants also adopted methods for the online 'bookmarking' of links and web resources, in most cases through shared public spaces. The majority of participants adopted dedicated social bookmarking sites (Delicious or Pinboard), and Jenna and Amy signed up to Mendeley, a social citation and referencing tool. On Facebook, and on Twitter particularly, sourcing and managing was seen by the participants as an informal and communal activity, dependent on a culture of reciprocity and reputation, though the use of the hashtags (for example #phdchat) pointed to more purposeful and collaborative initiatives. Collaborative resource sharing was evident in the participants' formal, bounded and specialist online communities, such as Jenna's Dreamwidth network and, to a limited extent, in Michelle's two Ning sites. As we have seen (in 5.2.1), Paula's Facebook group - initially focused on providing information such as call for papers - became increasingly social and interactive, as group members began providing their own links to sources of information and dissemination of their own papers.

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***Amy: On 'being resourced'***

In the first year of her PhD, Amy began regularly collecting web resources using her blog (primarily embedded videos, images and short texts), and, to a lesser extent, using Twitter's favourites feature (tweets with links to web resources). An attempt was made to begin categorising them, in particular through tagging the blogging content. This represented what can be called an 'anticipatory' stage of information gathering and processing, as key concepts and ideas related to early thesis work were still being refined. However, during the period of her participation, as more pressing workloads were prioritised, Amy found it increasingly difficult to maintain these activities. This resulted in a significant shift from the speculative collecting of resources that may be useful to her general thesis development, to a more responsive and purposeful information sourcing related to the immediate needs of her writing, which at the time included specific chapter elements and additional texts, primarily conference papers.

Right now I just don't have time, 'cos I'm doing all this writing now. To all these deadlines. So now, I'll just take it. I'll read something. I'll go hunting for something, a gap in whatever I'm writing. So it's like, I need to know something here, in this paragraph. I'll go hunting for it, and go find it and drop it right in. Rather than doing a block of reading and digesting and taking that and putting it into the paper. It's very directly feeding into my writing.

Whilst Amy attributed the relinquishing of these systematic methods of collecting and organising content to purely time-constraints, she acknowledged their effectiveness.

It's a much less organised way but it's purely a lack of time thing. I wish I was much more organised like I was earlier in the year.

She looked forward to recapturing some of the more "rigorous" methods of resourcing later in her PhD but was unsure which platforms and processes she might adopt. In addition, and partly as an evolving function of her writing process, Amy began utilising existing drafts more to support the contextualising of supplementary material, as key narratives and conceptual arguments were refined. Not only can this be seen as an indicator of Amy's progress in distilling ideas into concrete and contextualised texts, but also the emergence of these texts as key resources themselves.

I'm using previous drafts of things that I've written as my archives now. So, a lot of times I'll write much longer versions of the paper than I'm allowed to write for the final draft, but that will be a way of ensuring I include everything, and then I can go back and say 'I remember writing about something, and I'll go to my finder and just type in and find it in whatever draft it was in.

It is also important to record how this exploratory shift from anticipatory to purposeful resourcing coincided with other cultural shifts in Amy's doctoral activities, most notably in an equally fundamental shift towards a more personal, localised and institutional process.

I think I've tried perhaps incredibly consciously to be more one-to-one in my communications strategies rather than broadcasting online.

Foremost, Amy was increasingly able to capitalise on the orientation of her Doctoral Training Centre as a department that was actively engaged in establishing its own unique interdisciplinary identity and status. As a high profile venture, the centre had quickly attained gravitas within its university, able to attract interest and support from multiple faculties across the campus. Amy

particularly acknowledged the role of the course director in actively sourcing the potential cooperation of individual academics in other departments and identifying potential common research interests, some of which could be seen as being complementary to the emerging research ideas of its PhD students. In a number of specific cases, the centre's PhD students, including Amy, played a part in establishing these interdepartmental links.

I've found that writing an e-mail to, say, a professor in a sociology department or something, and saying, hey I'm in [the training centre], this is what I'm thinking, here's a paper that's been published, has been a much more meaningful way of establishing connections with people and sharing information.

This effectively 'localised' Amy's information sourcing strategies, contributing to the development of a smaller and more interpersonal model of physical networking.

When I first started, I didn't even know who the people were to ask. There was only one person at the university who was my course director who I would even think to ask. Now I have an overabundance of material really. I have two supervisors, both of which keep throwing books at me saying read this and read that. And then I have this growing network at the university that's getting stronger. I know exactly who to speak to if I don't know something.

The shifts in Amy's notion of 'being resourced' through the traditional and established sources of supervisors and academics within her institution and recommended sources of literature can partly be seen as a process of socialisation into the local academic environment and interdisciplinary culture of her university. In addition, Amy knew she could rely on informal but supportive guidance from her parents (both studied PhDs) and several of their academic friends.

I'm much more resourced now, in terms of the network I have here at the University. So I have people that I know... If I have a question, and I say I need to know something about this, I know exactly who to go to that's a real person. I don't have to go and shout out at the ether and say 'does anyone know about this?'

Generally, the participants' utilisation of academic-oriented networks and forms of aggregation resulted in a significant shift towards a more dynamic, ongoing and sustainable method of enquiry in which resources are provided through distributed sources, effectively 'outsourcing' the gathering of important content to trusted and respected knowledge providers in their social media networks and

communities. However, Amy's withdrawal to local resources reminds us that they may sufficiently serve the immediate thesis-oriented requirements of the PhD student as research foci and their related parameters of knowledge are refined. And whilst it can be expected this shift was partly a rejection of the web environment, given Amy's cautious and critical attitudes to online networking, it demonstrated how dominant established and trusted sources of expertise can reduce the need or reliance on those that are accessible through emerging social media practice. It also highlighted how specific critical incidents or stages (in this case, the need to prepare conference papers) can significantly focus needs, disrupting social media practice in abrupt and potentially irreversible ways.

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Participants generally found their use of social media for sourcing and managing information amongst the most successful and sustainable of the emerging practices associated with these tools, partly because they replicated established browser- or desktop-based activities, and partly because they required limited commitment to social interaction. Whilst participants indicated they had explored some of the social, collaborative and networking features of these tools, there was a general perception of low audience and non-participation, and their use therefore tended towards individual and personal practice.

However, the study revealed several significant examples where sourcing and managing activities were utilised towards more purposeful and creative processes and outputs, resembling what has become commonly referred to as digital curation, which broadly describes a set of practices and tools engaged in ordering, thematizing and presenting resources in the public arena. This is most notably demonstrated in Jack's use of his Posterous blog – a process described in depth in the following sub-section (5.2.3). Similarly, Ben's initial ethnographic exploration of online collectors communities on his Tumblr network was soon integrated with an experimental 'curatorial' use of the platform, in which he used his Tumblr posts to collate sources and resources whilst developing ideas and themes through short textual notes and jottings. These became shaped into embryonic blog posts, which he was to subsequently develop further as he transferred these to his new Blogger blog (see 5.2.5).

### 5.2.3 Synthesising and Reflecting

The participants indicated they would typically have multiple texts (or at least ideas for texts) 'on the go' at any one time. As Jenna indicated:

A lot of the time I have a lot of ideas in my head and I really want to write them down somewhere, but I don't necessarily develop them well enough into fully formed blog posts, at least not immediately.

According to their own accounts, the participants typically created numerous short-form and informal texts in their everyday academic activities; to make notes, to record events and projects, and to conceptualise and synthesise ideas. In some cases, these multiple concurrent texts served as embryonic writing towards thesis chapters or at least, working texts to share with supervisors, whilst some of the participants systematically collated them in formal formats consistent with a research diary or journal. In addition, writing proposals for papers and conferences, developing posters or presentations or indeed, engaging in any other activities requiring participants to summarise ideas and expose them to specialist or non-specialist audiences were seen as stimulated processes of reassessment or affirmation of work in progress. Amy for example, suggested the pressure to commit to establishing the key topics for her conference papers in her second year was instrumental in motivating her to synthesise ideas and formalise the key foci of her research, whilst the expectation to produce original work encouraged her to take risks (see 5.3.2).

Social media, particularly blogs, provided the participants with additional platforms on which to engage in these writing processes and ideas syntheses, with the consequence of introducing a range of new incentives and challenges conversant with undertaking these activities in the public arena (see 5.2.4) and developing new forms of academic writing practice (see 5.2.5). However, it is worth noting at this stage how the structural forms and underlying technologies of these platforms were utilised by the participants to synthesise and reflect on work in progress.

The default reverse-chronological ordering of blog posts is a familiar and powerful organisational metaphor common to blogging platforms. It establishes the immediacy and currency of blogging, ensuring casual readers view the latest posts when accessing the home page, but also provides a logical narrative of the posts retained in date order. Whilst all content are typically accessible through



calendar or monthly page views, several participants successfully appropriated other platform-specific facilities and generic web 2.0 technologies to contextualise their blog posts and other digital artefacts. This enabled novel methods of cross-referencing, linking non-consecutive posts to create new conceptual narratives. Both Amy and Jack saw their approaches to indexing posts through tagging as a supplementary method of organisation, and Jenna discussed the potential use of tags as menu categories in her plans to develop a more portfolio based blog (as described in 5.3.7). Further to this, both Amy and Michelle engaged in commenting on their own blog posts, not in response to other people's comments, but as appendices to original posts. "It helps keep things in context," Amy suggested, whilst Michelle admitted:

I think I'm a bit too eager to put things out there to be honest... without really thinking them through sometimes. So often I'll think of something else to add later, and this way the comments become more of an extension of the original post. I should really be a bit more patient, but I like that instinctive feel of blogging. If it's a big enough response or an enlargement on the original post, maybe taking it in another direction, then I might decide to create an entirely new blog post, and you can always link it to the original. But sometimes, it's just handy to throw it in as a comment.

Michelle extended the tagging metaphor beyond platform-specific domains by appropriating several tools - primarily the social bookmarking site Delicious and Google Reader - to aggregate content from her events blogging, Flickr account and Twitter, using hashtags to develop distinct themes and contexts. Paula was able to participate in a similar process in the postgraduate student network project, linking and tagging content to consolidate multiple platforms and share with the emergent participatory community. As a result of these activities, distinct genres emerged that were not bounded by specific platforms or single authors, but represented collaborative and distributed processes of documentation and meaning making.

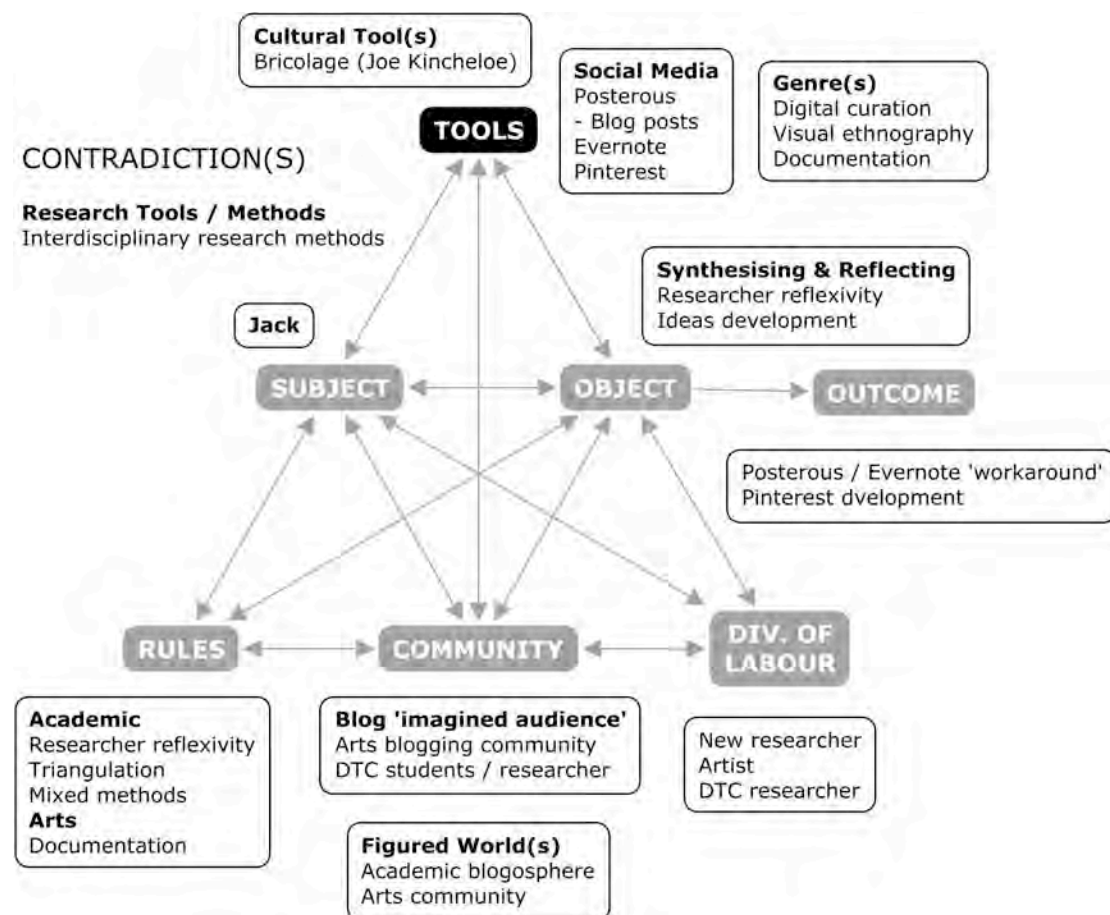
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### ***Jack: 'Scrapbook' blogging***

In adopting and refining a 'scrapbook' or 'serial style' of posting he had developed in previous Arts-based blogs, Jack used his Posterous-hosted blog to produce consecutive short, quirky and ideas-based 'jottings' that contrasted sharply with the longer and more studious posts on his Wordpress blog. He also collected visual scans of his mindmaps and sketches, digital photos and short videos embedded from his YouTube site. Seemingly held together solely by the physical

order in which they were presented (i.e. chronologically), this miscellany of digital outputs appeared to be little more than a creative yet haphazard outlet. However, when we had the opportunity to collectively examine the site, he explained the patterns of thought related to the succession of posts. Most days - usually a lunchtime - Jack allowed himself a thirty-minute break to explore some of the deeper meanings behind his thesis, and engage in the potential wider concepts of his research, addressing largely conceptual themes - he gave examples of engagement, participation, and rejection - through primarily visual metaphors and pattern forming techniques.

I just see it as a way of expanding on the potential conceptualisation of the project, the PhD generally, and where I am right now. It's an identity thing, a way of sort of re-establishing myself in the project everyday.



**Figure 19: Jack – Synthesising and Reflecting**

By the time of his second interview he had begun tagging these posts and experimenting with a blog gallery theme that enabled him to reassemble them in any order. Jack referenced the term 'bricolage' - usually associated with Claude

Lévi-Strauss - when drawing on the work of educationalist Joe Kincheloe, which had been introduced to him several years ago by a colleague on his teacher-training course. According to Jack, Kincheloe had adopted the term to advocate a more holistic framing of research projects, in which the role of researcher positionality is recognised as a legitimate methodological tool. Jack explained how he had initially engaged in similar activities 'offline' using paper and pens and crayons and magazine clippings, before experimenting with the digital note-taking site Evernote. The shift to the digital space provided him with the opportunity to develop a more sustainable and flexible platform for idea development, whilst the eventual transference to his Posterous blog and subsequent experimentation with gallery themes enabled Jack to transform the activity into a more coherent design process. "It's bloody brilliant," he remarked, adding:

It connects with the idea of documentation. Within the conceptual framings I can develop narrative around these ideas... as I cultivate these ideas. It's recordable, and transportable.

Interestingly, Jack's experimental work in this area within the period of his participation coincided with the widely-publicised growth in popularity of Pinterest, a pinboard-style image sharing site, and the appearance of blog posts and articles on academics using curation tools. Jack began exploring the potential of Pinterest towards the end of his participation in this study, though he made little progress to indicate he would look to transfer, maintaining the activity on his Posterous blog.

## **5.2.4 Dissemination**

There are a number of opportunities for the 'induction' of doctoral researchers into recognised formats and environments for disseminating work, such as seminars, conferences, summer schools, and journals, established within departments and across institutions and beyond, and all the participants had at one stage or another engaged in such opportunities. Social media provided them with additional options for both supplementary and alternative modes of dissemination of their research and related activities, most evident in personal blogs, group blogs and postings on community sites. These and other artefacts of original content were routinely promoted through Twitter, Facebook and other social networks, whilst conference papers, presentations and other formal texts

were shared through sites such as Academia, Scribd, Slideshare and Mendeley, or directly through blogs, websites and social networks, usually achieving greater viewing numbers than their original audience contexts. Indeed, the participants demonstrated the use of social media prior to, during, and after academic events, seminars and conferences, with widely varying degrees of interaction - Jenna was particularly frustrated by the lack of engagement within her discipline. But for some of the participants, the repurposing of artefacts for secondary online consumption raised additional concerns. With her background in design, Michelle's experience was particularly interesting. The radical designs of her presentations challenged orthodox conventions of bullet-pointed Powerpoint slides, particularly through the creative use of images. However, when she began sharing these presentations on Slideshare, Michelle was surprised by the relatively large audience ("several hundred viewings within a few days") and the number of comments they attracted, mainly from people who had not attended the physical presentation. She became aware of how much her highly visual designs compromised textual information and contextual relevance for those viewing online, leading to her creating more 'traditional' text-based Powerpoint files in subsequent presentations.

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### ***Jenna: Blogging, academic legitimacy and context***

Jenna drew on her familiarity with critical discourse analysis, and work established in her undergraduate dissertation, to contextualise the nature of online texts and her blog writing in particular within the wider scope of academic writing. Through this lens, she positioned the doctoral thesis as a limited singular voice constrained by academic protocols:

The thesis is an extended argument in a fairly... you know, your voice has to be there and be fairly consistent... Thesis writing, the actual writing itself, is this kind of arcane skill you learn through long years of academic apprenticeship. But that doesn't really help explain what you do for those people who aren't really familiar with those kind of conventions

In particular, Jenna drew on her knowledge of Douglas Beiebert's speech-writing continuum to compare and contrast the multiple forms and formats of academic dissemination, such as those related to theses, but also conference presentations and posters. Online journaling she felt, falls loosely somewhere in between the two variations, incorporating aspects of both speech and writing. In doing so, this helped Jenna place her social media practice within the wider context of academic

dissemination, in particular when conceptualising the potential role of her PhD blog and in addressing issues of impact and public engagement. Throughout her interviews, it became clear Jenna was influenced by the outreach activities of her sister (also a PhD student, but in the sciences). "There seems," she suggested, "to be a lot more opportunities for scientists to engage in these different activities," referring particularly to non-traditional forms of dissemination such as 'unconferences' and podcasting. She was also mindful of the applicability of emergent forms of dissemination in relation to the current state of Arts and Humanities, in particular the widespread cuts in funding that were being announced at the time:

If we are ever going to get public support and public funding we have to make it interesting and accessible and relevant. It makes me think about what I can get from my thesis, and how I could reformulate it, or repackage it, into something different. So, in a way, I think my blog is a way to make these links.

In choosing to develop blog posts referencing key elements of her thesis with contemporary political and cultural events, and her ongoing participation in a number of activist groups, Jenna engaged in purposely relating multiple strands of her doctoral practices and research interests to develop informal academic texts that engaged wider audiences. Jenna suggested she was, to an extent motivated by acknowledging personal experiences, political beliefs and influences

in a way it would be quite dishonest to not say that I'm involved in modern protest movements because that's going to affect my work. And when I was reading more theoretical academic stuff about that, it was saying you've got to acknowledge these things. It's almost part of this participant observer situation.

But she remained cautious about incorporating too much 'activist' content in her posts, in case it may compromise future job prospects, but she acknowledged her research topic 'legitimises' her writing about activist activities.

It's about the academic community you are in. I think being an activist in the social sciences or arts and humanities is probably more expected than other disciplines. The blog might be a very different beast if I was in a different subject. I'd have to choose topics more carefully.

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### ***Amy: Genre, imagined audience and the Google 'incident'***

Amy primarily saw the early posts on her PhD blog as 'evidence of productivity,'

as much for herself as for her peers and department. However, she did acknowledge the blog provided a self-contained and easily accessible platform to direct interested parties to if it was ever required. Amy had little regard for disseminating to a wider audience, or awareness that others may be reading it. She rarely promoted her blog, and assumed there was little additional audience outside her 'known' readers, which primarily consisted of departmental colleagues, several ex-colleagues from her previous courses, and some friends and family (her father was revealed as one of the few people who commented on her posts). However, this assumption was challenged in an incident that took place just before her first interview:

I was trying to remember something specific about an author who I had blogged about. And I just typed into Google his name and some key words to try and figure out what he'd actually said, and the first result was my blog. And I freaked out. It got me thinking if someone else had done that...

Given Amy's established cautious and critical perspectives on the use of social media, her assumptions around the exclusivity of her blogging audience might be seen as naive, yet she underestimated the powerful combination of the highly specialist nature of this particular doctoral enquiry with the effectiveness of the search engine algorithms of her blogging platform. Several of the other participants indicated that their own social media platforms frequently 'outperformed' similar profiles and content related to them on formal institutional platforms in Google searches. (Whilst it is worth noting that Google search returns are, by default, bias towards users' previous searches, and therefore more likely to include participants' own sites, there was no indication Amy or any other participants were aware of this, and it was not discussed in the interviews.)

Already cautious and reserved about her own social media practices, the incident made Amy further question the ambiguity of social media audiences and her lack of control in publicly exposing her writing. Two further elements are of particular importance in relation to the present study. Firstly, the incident alerted Amy to the possibility of misinterpretation of the developing genre of her blog posts. The online book review is an increasingly common genre of blog post amongst academics (Laquintano, 2012), and Amy realised how easily her posts might be mistakenly identified as such. Both the process and the intention that underpinned the development of these blog posts might easily be misconstrued by the cultural norms of the media.

I don't want to be seen as the authority on this guy's book, because I was just, you know, writing out loud... The problem with these being on a public space is that they do appear as being reviews. I wasn't meaning to review them, I was just meaning to digest and process them.

Whilst Amy was prepared for these to be repurposed as 'evidence of productivity' for a select audience, in exposing these 'stream of consciousness' texts on a public blog, she ran the risk of elevating the status of these relatively innocuous and informal texts into formal artefacts of conscious and considered academic critique. Secondly, it demonstrated Amy's awareness of her potential positioning within the emerging figured world of her interdisciplinary academic community: that of an identity of an academic with the authority and confidence to provide critical commentary on a wide range of academic literature. In doing so, it also potentially risked elevating her own status and effectively exposing her beyond her academic comfort zone.

This was promoting me to a higher level. I just thought, I'm not ready for that yet.

In addition, this experience can be seen as further enhancing Amy's genre knowledge when she subsequently republished some of these posts for the doctoral training centre student blog (as described in 5.3.5), where it was necessary they became more purposefully oriented towards disseminating to a perceived broader and partly non-academic audience.

### **5.2.5 Writing Practice**

Amy explained how, during the relatively short and intensive period of her blog writing, she came to think of her blog as a 'crutch' upon which she could develop a regular and consistent writing discipline. Most of the participants discussed the role of writing online in the wider context of developing a writing routine and discipline, and how, particularly in developing a blogging practice, it had influenced and contributed to the process of writing regularly, efficiently and effectively. The two key determinants that emerged concerned writing frequency and writing style.

The need to write regularly and early within the PhD programme was seen as instilled in doctoral folklore, continually emphasised by supervisors and within writing courses. In addition, there was a perceived understanding of the need to

blog frequently and regularly as a normative feature of academic blogging. Therefore, participants encountered multiple and conflicting motivations and considerations as to when they decided to publish posts, and in what state, resulting in the accumulation of a number of unpublished drafts, at various stages of completion, at any one time. Topicality was a key factor here. Participants felt it necessary to draft a blog post quickly if it was in response to another blog post, or if it related to a breaking news story or an event. This was particularly evident in Jenna's posts relating aspects of her research with contemporary news stories (as described in 5.2.4), and in Michelle's commentaries on academic events. However, participants admitted to posts remaining dormant and incomplete for some time with little impetus to finish and publish them. Jack, Jenna and Michelle had all, at one stage, 'stockpiled' completed drafts. For Jack in particular, having a number of posts 'in reserve' was seen as being useful for busy periods when blogging was a low priority, thereby ensuring that a more regular posting schedule consolidated erratic patterns of blog writing. In addition, some posts may be temporarily withheld if they compromise formal publication opportunities, or as Jenna suggested, simply kept for a time when they will have the most impact. However, attitudes to how 'well-written,' substantive or formalised a blog post should be to be considered 'finished' and ready for public view varied considerably depending on attitudes to writing styles (see below).

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### ***Michelle: Public to private***

Michelle maintained her 'diary-style' blog on her website for several months, partly in a conscious attempt to also develop a regular writing routine. However, influenced by discussions in the Twitter hashtag community #phdchat, Michelle began to use 750 Words, a social media platform that 'rewards' users writing every day to achieve the eponymous word count. This further reinforced the personal narrative that blogging on her website had initiated, whilst adding an increasingly disciplined, self-regulated and quantifiable routine. But whilst she continued to post occasionally on her website, the majority of Michelle's informal writing shifted offline as she opted to use 750 Words privately, it meant, and as a result, she began blogging less regularly in the public arena.

It's more of a private diary now. I liked the idea of being totally open with it... on the blog, but I realised it wasn't appropriate for this type of writing, the flow, what I wanted to say.



Whilst Michelle was convinced the regularity of her blogging (and subsequently, the routine of writing for 750 Words) improved her writing 'discipline', she admitted that the shift to the private site had compromised its quality, which, free of the constraints of writing to a public audience, had become more inconsistent and informal.

It's more stream of conscious-like now, so not as much thought through... It's probably less critical and less self-regulating than I was when I was blogging, but I'm getting much more down on here now. These are now more like 'notes to self'. Some of its a bit rough, but I hope it might contribute to some papers I'm hoping to get published. Or my thesis eventually.

Towards the end of her participation in the study, Michelle had begun to transfer some of the 750 Words posts to her website blog, after developing them into more formal, coherent and purposeful texts. In effect, whilst the quantifiable and regulatory structure of 750 Words had helped Michelle cultivate a more disciplined writing routine, it had also evolved into a platform for her to create the explorative and documentative texts similar to the those produced by other participants in Word documents and paper based journals (as discussed in 5.2.3). This reminds us that many social media can often be appropriated to provide perfunctory and asocial roles similar to offline technologies.

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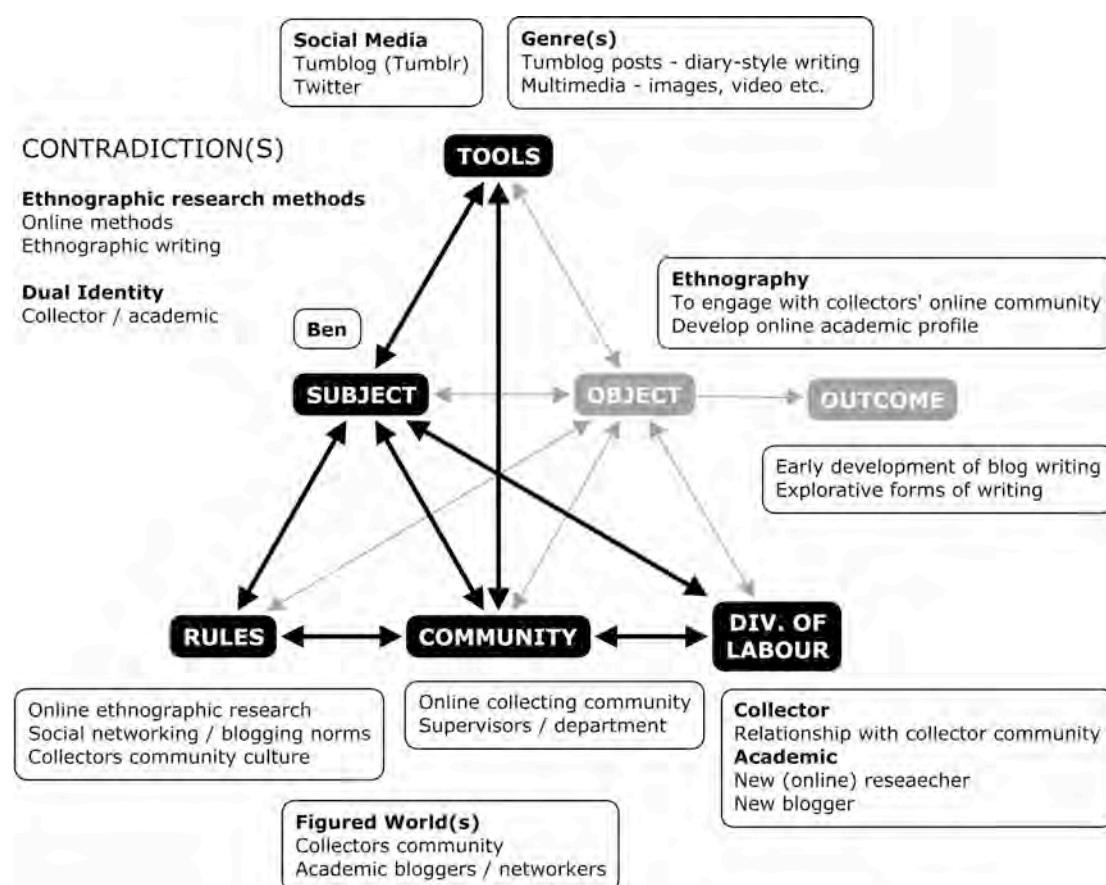
Participants had mixed views on the development of blog writing styles, broadly orientated towards one of two generally opposing approaches; one that presents an opportunity to develop a coherent and consistent academic style or 'voice,' or one that accommodates the opportunity for diversity and experimentation. Establishing a specific and coherent online 'voice' became particularly important for Michelle, requiring her to develop and refine a consistent writing style with her diary-style blog posts on everyday academic activities. Yet for Jack, the most powerful aspect of online texts was that they could be free of the 'shackles' of formal academic prose. Blogs had provided him with opportunities for experimentation in writing styles, combining texts with other media forms and artistic conventions. Similarly, Jenna saw the online environment as a space for exploration:

I don't want to have one single incredibly coherent voice, I think it's quite useful to try and write in slightly different styles, and to different audiences. It encourages me to develop a different voice, because you can get really used to writing in your academic voice, and you kind of get institutionalised

into it, and forget what a strange and specialised way of communicating it is.

Yet the relationship between blogging texts and formal text production should not be overlooked. The contrasts in the role of Amy's blog posts in the writing of her annual report and their compromising relationship with impending academic papers is particularly revealing. However, the complexities inherent in the relationship between blogging and writing towards the thesis were particularly evident in Ben's engagement with the medium.

### **Ben: Developing blog post genre**



**Figure 20: Ben – Ethnography**

In developing his second (Blogger-based) blog, Ben began to expand further on the longer posts he had begun to experiment with in his original Tumblr-based blog, but with significantly increased depth and scale. The majority of these posts drew on his early attempts at ethnographic approaches to addressing his initial

research questions, primarily recording visits to events and interviewing collectors. The posts consisted of typically long (up to several thousand words) and polished texts, though with less of the rigour and grammatical conventions associated with formal academic writing. Instead he adopts a more personalised and informal writing style. In the majority of these posts, Ben incorporated the type of images and occasionally video that had become key content of many of his shorter posts in his Tumblr-based blog, synthesising the random and distributed content associated with the first blog into larger coherent pictorial essays.

In his first interview, Ben explained how he wished to cultivate a populist 'magazine' writing style with these texts, not only as a means of developing a voice more appropriate to the blogging medium, but one to potentially engage a 'wider' (i.e. not exclusively academic) audience.

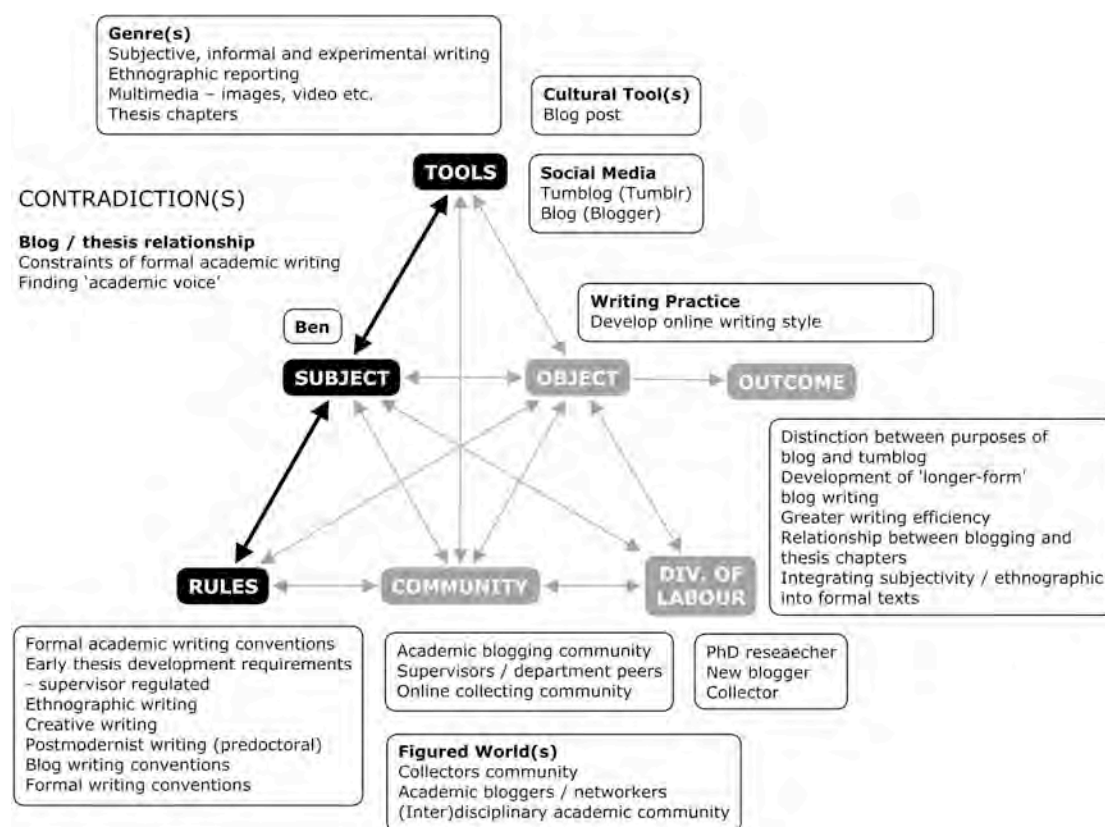
I refer to like a magazine style, more a journalistic style to that of an academic style. I don't see it as a dumbing down, but more of a pop cultural style which fits with what I'm trying to achieve here.

Ben discussed at length how freedom from the constraints of formal academic prose helped liberate his blog writing, enabling greater opportunities for spontaneity and experimentation. Reflecting on this in his second interview, Ben recalled:

There was this sort of schism between this professional way of how I was being guided to write, and being able to express myself creatively which I felt was being stifled.

Interestingly, Ben was largely unaware of existing pop-cultural styles of writing in digital media and blogs in the early stages of his blogging, though he came to recognise and acknowledge them later (see below). He had never blogged before or engaged in similar modes of writing or on similar platforms. In fact, it was largely through Ben's previous degree and Master's degree work – predominantly situated in cultural studies and framed within postmodernist methodologies and ethnographic enquiry – that had enabled him to explore creative forms of writing and dissemination within his formal academic outputs. One of his lecturers in particular had encouraged him to be more radical and experimental in his writing. Additional non-academic writing – particularly drafts from his uncompleted screenplay course – had also provided an outlet for more creative and expressive forms of writing. Whilst he admitted his writing was 'less polished' then, Ben felt

these forms of writing more closely represented his own voice. The PhD represented a significant shift for Ben in expectations around his writing. He had anticipated to an extent the increased expectations of quality, but he initially found the need to develop more formulaic and less subjective texts particularly restrictive, which he acknowledged was as much to do with the shift in disciplines as the new academic level.



**Figure 21: Ben – Writing Practice**

So whilst Ben was able to cultivate his genre knowledge of formal academic output within local postgraduate contexts through his emergent literature review and his work for the departmental online journal, he was initially unfamiliar with the type of publishing niches that may exist outside and on the periphery of academic discourse that he seemed keen to explore. However, as he engaged further in the social web, he became increasingly aware of some of these platforms and by the second interview Ben was drawing significant inspiration from academics who he felt were engaging in these spaces, some of them bloggers. Looking further ahead, he believed his research topic was suited to the journalistic and pop cultural style that populated these spaces and saw the possibilities of eventually working his thesis into a book. He found this approach

had greatly contributed to his writing process:

I realised I just enjoyed that style of writing. It was quite refreshing and liberating to do it in this way... to work it down into a magazine article and work it up into a chapter.

In this dialogic relationship, Ben saw a clear relationship between his blog texts and his thesis development (which at this stage, was limited to his first three chapters), developing and refining an ongoing and recursive interplay between the two writing activities.

Well originally, the first thing I put up there was the interview with that guy from the [] store. Subsequently I worked this into a draft for a section of my second chapter into collectability.

He admitted much of the core development of his ongoing thesis; the construction of ideas, concepts and themes around mid-level theory was almost exclusively undertaken through the processes of literature review and redrafting in his formal (i.e. non-blog) writing. However, some of his blog posts helped Ben 'get a handle' on aspects of his thesis development, providing a chance to 'sketch out' some of the ideas that contributed to continued chapter development. Particularly in beginning to loosely constructing ethnographic work that may or may not appear in his final drafts. However more crucially, blogging enabled an outlet in writing style. Ben's ability to reconcile the two writing styles in his blog and in his formal thesis development became a motivating force that inspired a more productive and creative writing discipline, not only providing new forms of dissemination but also influencing and contributing to the chapter development of his thesis.

### **5.2.6 Discussion, Feedback and Collaboration**

Opportunities for discussion and critical feedback in social media were highly valued by participants, particularly in those platforms that were most associated with these activities, such as social networking sites, forums and blogs. Occurrences of feedback and discussion were however, generally inconsistent and typically low or non-existent.

Jenna highlighted the considerable disparity between the high level of interaction within her established and bounded community in Dreamwidth, and the lack of

comments on her academic blog. She suggested discussion was more spontaneous, supportive and empathic in Dreamwith, whereas academics self-conscious maintenance of academic reputations seemed to limit dialogue on 'open' platforms. Opportunities for feedback and discussion on academic blogs seemed particularly limited to her, especially for new bloggers. Participants recognised the value in commenting on other peoples blogs, though rarely did so themselves. Michelle admitted she was hesitant when commenting for the first time on a blog. "I guess it's because it's someone's space." Amy recalled how an ex-Masters degree colleague chose to respond to a number of her blog posts via e-mail, as she was apprehensive about using the blog's formal comments feature, partly because it was so unpopulated (Amy subsequently copied these texts to the blog once she got the respondent's permission.) Ben admitted his 'very basic' comments on a number of blogs had primarily served to establish contact, though he has gone on to develop further dialogue with several of them. Initial comments were seen as serving a useful purpose of establishing a relationship, though Jack was suspicious that some of the people who had commented on his blogs were merely using the opportunity to promote their own online profiles and sites.

Participants questioned the level of criticality generally in their experiences of social media discussion and feedback. There was an acceptance that general procedures of courtesy and etiquette were to be expected in unfamiliar networks and communities during periods of initiation and socialisation. Familiarity and trust, which were particularly evident where online relations had been supported by initial or ongoing 'real life' interactions, were highly valued. Jack and Jenna's purposeful maintenance of important pre-doctoral online networks indicated the importance of developing sustainable and trusted relations where discussion and critical feedback can flourish. Despite changing disciplines, Jenna's established networks continued to provide frequent dialogue on general academic and doctoral content, with discussion around writing, research methodologies and wider doctoral experiences still serving important functions. For Michelle, discussion within specialist academic social network sites and online groups represented by far the best online environments for cultivating communities based on a culture of trust and criticality. Michelle signed up to a couple of online community sites (hosted on the Ning platform) with academic, design and business orientations. She admitted her initial motivation to sign up was to extend her 'distributed' online profile, with little intention to subsequently participate beyond creating a profile page and reciprocating 'friending' members.

However, through the selective repurposing of several of her blog posts on these sites, she received far more responses than their original sources, whilst creating additional opportunities for guest blogging. Paula's Facebook Group, initially set up to facilitate the sharing of call for papers and other resources, developed into supportive and interactive space for asynchronous chat around key topics and crowdsourcing, aggregating the fragmented academic-related discussion that had previously taken place on the mainstream chat. However, the lack of interaction and discussion in some of Paula's short-term project-based blogs was a major disappointment, though the much larger co-coordinated student network project was more successful following a concerted effort by the core team of facilitators to get participants to contribute. Michelle in particular found events and conferences to be effective focal points for subsequent online discussion and commentary, primarily through 'follow-up' blog posts and post-event documentation such as presentations, often aggregated and distributed across social network sites and the blog posts themselves through the use of tags (see an account of Michelle's exploration of 'amplifying' events in 5.3.1).

Instances of participants using social media for collaborative working were very limited, and generally restricted to short term project-based activities with clearly defined objectives. Most notably, Paula used a wiki for collaborative editing with other members of the core team of coordinators of the student network project, initially for working on the funding proposal and subsequently for project management work. In this case, specific working practices such as establishing roles, defining tasks and deadlines had to be partly facilitated through the multi-user editing capabilities, synchronous and asynchronous communication and documentation processes of the wiki. Although these collaborative activities typically take place on either private or unpublicised public media, in this case, the core team actively publicised their collaborative artefacts - by linking the wiki platform to the public space of the project website - to both demonstrate and document the collaborative process, and to promote a culture of openness and transparency.

### **5.2.7 Research and Ethnography**

Three of the participants used social media as part of conducting their own research. It is important to understand how these methodological approaches integrated with, developed from, or led to, other academic uses, and how they

influenced, supported and conflicted with their own social media practices and online identity construction. Ben initially utilised existing Facebook and MySpace connections as 'entry points' to attempt to link with specialist online communities for his research into collecting cultures, though it was his adoption of Tumblr as an initial blogging platform that subsequently led to a more successful socialisation into the community, revealing new contacts and opportunities. Further, that engagement was instrumental was notable in providing an initial audience for Ben's first forays into blogging. Amy's ethnographic research into Twitter at Masters level subsequently led to her later exploring the platform as an information resource which subsequently encouraged further networking opportunities. Paula's participation in digital communities as part of her overseas fieldwork - in particular a community arts online network - provided her with her first experience of a non-Facebook online community and a platform for blogging, but also influenced her understanding of the potential of social media practices as activist and creative forms of production, which both informed her research study and influenced her own social media use.



## 5.3 Mediating Doctoral Identities and Agencies

In this section I address the second and third research questions by presenting the findings primarily related to doctoral identities and agencies.

The following sub-sections correspond with the key themes relating to doctoral identities and agencies that emerged in the analytical process, and relate to structural relationships of the key components within the activity systems.

- 'Mapping' the Research Field
- Doctoral Scope and Peripherality
- Locating and Positioning
- Negotiating Multiple Practice Contexts
- Local Agencies
- External Agencies
- Managing Online Identities

As in the previous section, the primary participant narratives that were selected as part of the analytical process (as described in the previous chapter) are presented with corresponding findings relating to other participants added as supplementary evidence. These key narratives are summarised in tabular form in Figure 16 (page 194) to provide the reader with a useful reference.

### 5.3.1 'Mapping' the Research Field

Whilst the participants' online networks augmented individual connections and social clichés within local research communities, supplementary data from the study (see 4.4.4) indicates that external academic networks formed largely through the web were strongly stratified along disciplinary and hierarchical reputations (i.e. indicating a tendency to communicate with academics of similar discipline and equal or equivalent academic status). The opportunity to engage with other PhD students from other institutions was apparent, and these distributed peer groups incorporated the participants' most interdisciplinary interactions. However, participants repeatedly admitted to engaging in networking strategies that oriented to opportunities to interact with senior,

respected and influential academics in their field, not necessarily with the view that they may engage in direct discussion, but rather be acknowledged. As Michelle indicated:

Getting to chat with a top academic online, even small things like an acknowledgement, like a retweet, or better still, a comment on a blog post... I see these as equivalent to opportunities in the real world, like at an event or at conferences. Except, that it may be publicised to a bigger audience. In that respect, it carries even greater clout.

In the early stages of Paula's PhD, the expansion of the Canadian studies Facebook group went some way to providing her with a geographical mapping of the doctoral - and to a lesser extent, postdoctoral - researchers in her field at firstly a national, and then international level, though this was also partly mediated by her increased participation on the conference circuit.

Michelle suspected that some of the insights she had gained from following 'key players' in her interdisciplinary field, including academics, designers and industry 'gurus' through social media give her the 'edge' over other doctoral students who were not so well connected. Jack suggested the more informed perspective of he had gained by following senior academics online had helped him 'signpost' key arguments and discourses they were engaged in. Jenna drew on unreferenced research suggesting academics who chose to share limited amounts of personal interests and trivial content outside academic domains are more highly regarded. She explained how she greatly values academics who embrace the informality of social media, presenting a richer, more authentic voice by disclosing activities, interests and beliefs on matters external to, or on the periphery of, their core research interests. Such approaches influenced her own social media practices and the ways in which she chose to present herself online.

All the participants thought of themselves as interdisciplinary. But the participants from the doctoral training centres were particularly conscious of how interdisciplinarity was a necessary agenda and a foundation for developing research foci, with expectations they align with - and to an extent, shape - the programme requirements and the emergent research cultures of their new departments. As founding participants of these programmes, there was a sense they were 'guinea pigs.' Yet whilst the centres represented major new initiatives in doctoral education and training, Amy highlighted the lack of conferences and publishing opportunities to support the new interdisciplinary contexts they represented.

It is difficult to find the nexus of people... The doctoral training centres have come up with this new idea of what a PhD is, but I feel they don't necessarily have the infrastructure in place with regards to dissemination and networking for that PhD.

In her initial experiences of conference networking Amy found it difficult to locate people with similar interdisciplinary 'footprints.' Recalling one particularly bad experience at a conference, she described the difficulty in 'fitting' her research interests within established agendas based on traditional and dominant disciplines that had taken years to evolve. However, both of the other doctoral training centre participants recognised the potential role of social media in this context. Michelle suggested an emerging interdisciplinary culture had greater potential to initiate new ways of working and communicating – including the use of social media – than established disciplines that relied on traditional, established means, pointing to her live blogging and networking activities at events. Indeed, Jack believed the fluid, multicontextual nature of social media was ideally suited to specific challenges of interdisciplinary practice, enabling individual practitioners like him to coalesce around and transcend rapidly shifting communities and social groups.

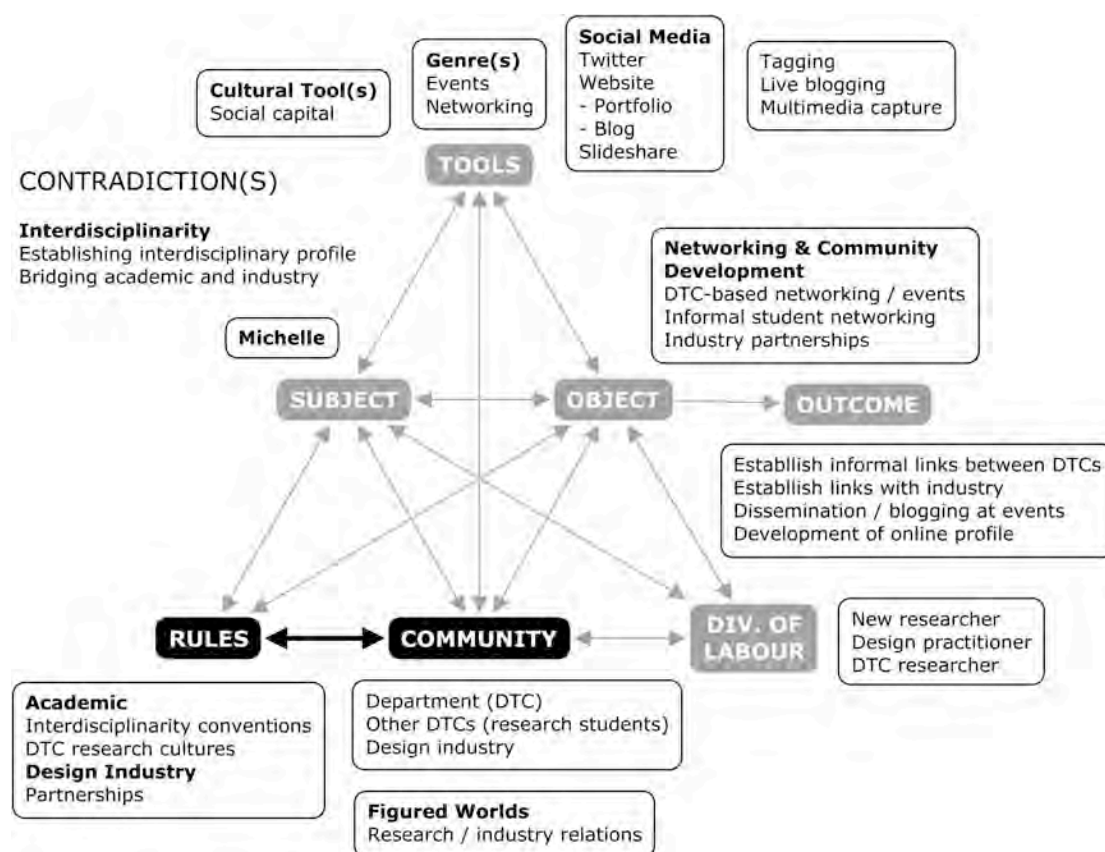
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***Michelle: Live blogging and event tweeting - amplification as mapping***

As we have seen, there was considerable evidence of participants exploring the use of social media prior to, during, and after academic events, seminars and conferences (see 5.2.4). For Michelle, networking and events became integral activities, with the post-event use of social media particularly significant in following up contacts, disseminating event activities and - through both of these - engaging in continued discussion.

Immediately prior to the period of her participation, Michelle attended several 'hack' events, attracting computer scientists and developers and - according to Michelle - a 'geek following' from other disciplines. It was through these that she became increasingly familiar with methods of 'amplifying' events in real time, particularly live blogging and tweeting. On a number of occasions, this involved Michelle taking a lead in establishing a Twitter hashtag for the event, or becoming the sole 'live-blogger. In reality, engaging in these practices represented a steep technological learning curve for Michelle. What was, at first, a tentative

exploration became recognised as a useful skill set for new forms of media production and distribution. Yet the cultural expectations of such activities vary considerably across fields. As such, it remained unclear to Michelle how these practices were viewed across different groups, where varying levels of familiarity or apprehension or distrust were evident. On one occasion, Michelle encountered 'a certain level of friction' when her social media activities at an event were seen as potentially conflicting with the formal promotional activities of the organisers. It turned out to be largely a misunderstanding, and any ill feelings were resolved. However, the incident not only highlighted the increasingly blurred distinctions between emergent social media and formal communication channels, but also pointed to the dynamic between individual and institutional agency.



**Figure 22: Michelle – Networking and Community Development**

Michelle believed her engagement in these activities contributed significantly to raising her academic and professional profile. And crucially for Michelle, the various forms of social media outputs linked with these events constituted a dominant, almost exclusive role in Michelle's dissemination activities. In the absence of formal academic outputs, she admitted to a deliberate and very conscious effort at positioning herself across these fields to gain recognition:

There is a personal motive I guess, at this stage of my PhD, I'm not likely to get published or really want to disseminate some of my ideas as they are so unformalised. I guess I see this as... It's a good way of getting noticed, though not everyone is using these media of course, so that potential influence is limited.

Common to most of the posts, Michelle's own ideas and critique were rarely expressed. She accepted the generally neutral tone of her blogged reports, though she challenged my suggestion that they lacked subjectivity:

I think there is a certain criticality in what goes in and what gets left out. I see it as a selective process. This is what I'm... this is what I found interesting today at this event. These are the cool people I saw. This is the type of ideas they're working on. That sort of thing.

Interestingly, Michelle chose to continue using her public blogging space for posts related to her participation at events (appropriately linking to other sites) when she transferred her more explorative writing on design and work in progress to the private space of her 750 Words account (as documented in 5.2.5). Thus, whilst opting not to disclose her own doctoral work in the early stages of development, she was keen to use the blogging platform to establish the key practice contexts of her interdisciplinary field and the academia / industry nexus that was beginning to shape the topic of her PhD. Further, through documenting her activities at these events, her accounts began to play a performative role in helping to develop and transform her online identity as a new researcher.

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Discussions with the participants continually reinforced the impression that active engagement in social media encouraged and supported an approach to academic enquiry that linked the key discourses, arguments and perspectives related to their research topics with the contextual and social dynamics of the research communities in which they were engaged. Their contemporaries; peers, fellow researchers, supervisors, each have personal perspectives and motivations, influenced by ongoing professional incentives and constraints, and research agendas and relationships. As academics become more engaged in the social web, they are providing an increasingly accessible window to the personal traits, professional circumstances and social relations that underpin academic discourse. In doing so, the nuances, cliques and hierarchies of faculty and the wider academic field are more explicit, potentially reinforcing or challenging assumptions based on offline and formal academic communication channels.

### 5.3.2 Doctoral Scope and Peripherality

Delimitations regarding the scope and periphery of doctoral research are typically defined by (inter)disciplinary boundaries, and one can draw on a number of indicators such as research foci, methodologies and literature reviews. Even if we exclude those elements of doctoral enterprise beyond the thesis that may be considered as separate practice contexts (for example, teaching or internships), it is difficult to make clear distinctions between each participant's core research or thesis and peripheral interests and activities. For the purposes of this study and the analytical frame, it was necessary to determine the participants' own understanding of this, and how their engagement in social media influenced and shaped their reflexive processes. Understanding how the scope of doctoral enquiry may be represented and conceptualised through social media practice required an approach which recognised it is implicit not only in the content of participants' digital artefacts, but also in the content they curate and share (links, retweets etc.), and in the identifiable communities and networks with which they interacted.

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#### ***Amy: Blogging and peripheral reading***

Under pressure to submit her end of year report before the deadline, Amy commenced on an intensive writing process. To an extent, securing her industrial placement had partly fulfilled the requirements of her funded position, in that its aims were related to aspects of her initial PhD proposal. However, her original proposal was still causing her some concern.

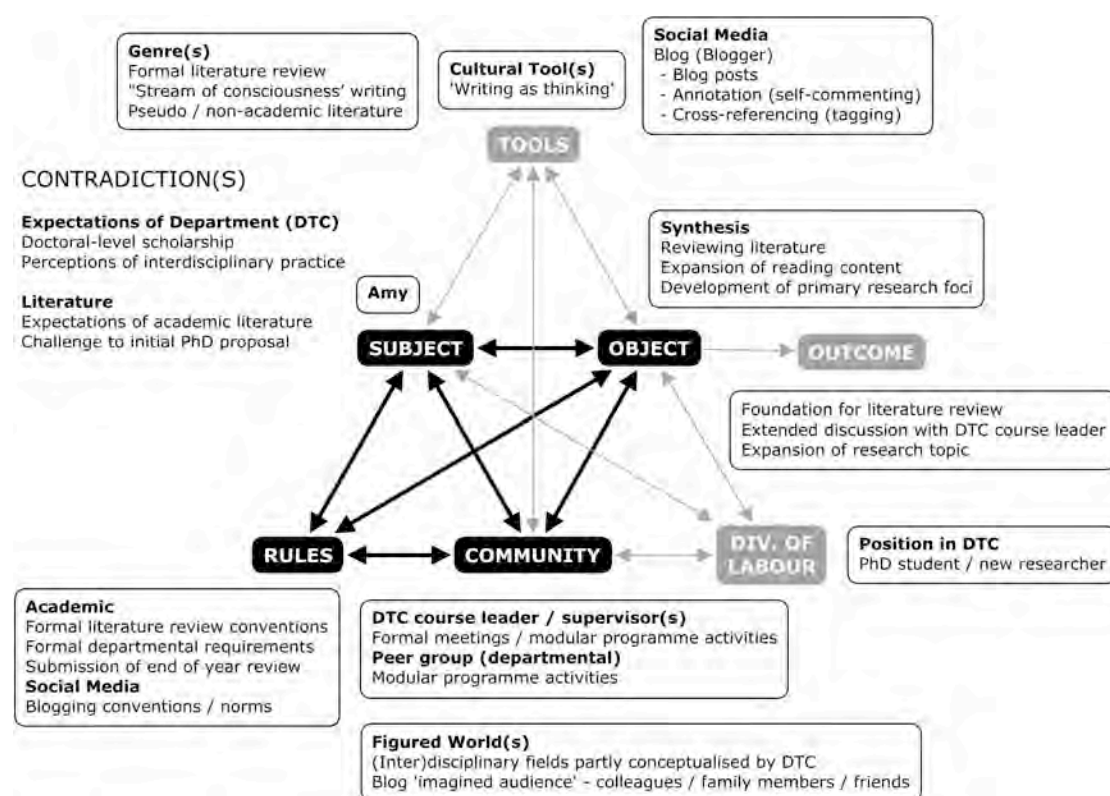
I dug down deep and thought is this really gonna make me happy. Doing this for another 3 years. You know, this was supposed to be the thing where I fulfilled my dream, being really idealistic and ambitious, and that did not seem to be the answer really, at all.

As she became more exposed to the high expectations of both the doctoral position and the training centre, apparent limitations of her thesis were highlighted. Her research topic resonated with previous studies and research foci, but Amy admitted her initial proposal was unimaginative. She began fashioning a redevelopment of sorts, but realised the potential for a more expansive and innovative approach:

I still wasn't testing the limits with what [the training centre] would let me get away with doing.

On realising this, Amy drew on the books she had been writing about in her blog posts. These introduced a new genre of resources; including more informal 'populist' academic and non-academic texts, many of which introduced or expanded on some of the wider contexts of her research enquiry.

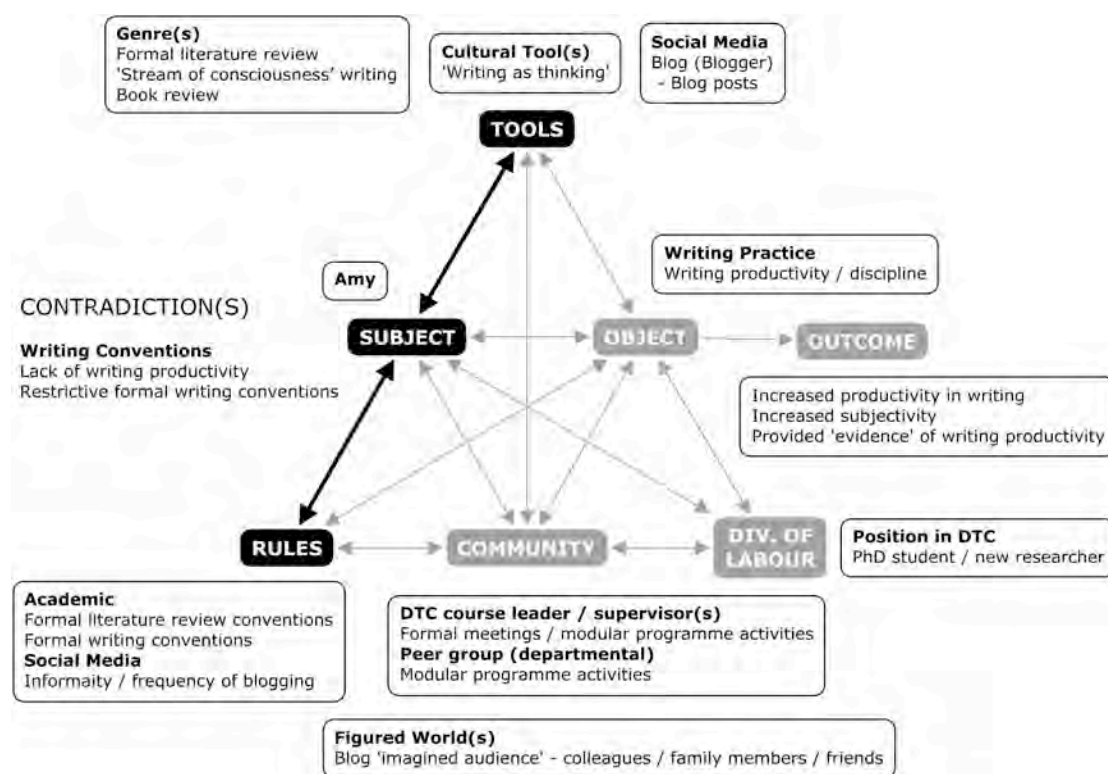
So I sat down with [the course director] some time in the summer term, and said look, this is what I'm really passionate about. In my free time, these are the books I'm reading, this is what fires me up, is it even possible to do a PhD in this... And he thought it was great so we went with that. Once I was given the green light, it's been great ever since. I was feeling very paralysed up until that point, I think.



**Figure 23: Amy – Synthesising**

Amy acknowledged the significant role her blog posts played in mediating the negotiation of her thesis topic, and their contribution to developing an innovative thesis proposal. By engaging immediately in emerging research interests identified in her peripheral reading and quickly disseminated via the blog, she revealed latent conceptual themes, that represented a greater engagement with the wider concepts of her initial proposal than those that were being explored

within her formal texts working towards her end of year report. Subsequent posts became further legitimised when her supervisor started reading and commenting on them at supervisor meetings alongside discussions around formally submitted texts.



**Figure 24: Amy – Writing Practice**

Whilst no two PhDs are alike, there are recognisable commonalities in the trajectory of doctoral programmes. Particularly in the later stages of a PhD, any inclination to explore wider contexts of the research field is countered by the necessity to 'focus in,' as research questions and problems and research designs become formalised. However, an expansive exploration of the field can contribute to final stages of the PhD when it is necessary to relate research findings, discussions and conclusions to wider contexts that have been mapped out in the introductory and literature review sections of the thesis. For example, Paula's project work and her internship helped her gain an awareness of what she referred to as 'peripheral theories.' In her final interview, Paula recalled how aspects of one particular peripheral field of enquiry was discussed in her viva:



[the examiner] told me that I could have had more about urban geography, for example. I mentioned it but though it wasn't really a key theme. He suggested it could have been worked more into the introduction perhaps. He said you might want to think about that for the book. And I had spent all this time sharing ideas and resources on the reading group and sharing on the Facebook site etc. but in the end it didn't really go in my thesis, but I'm far more informed than if I hadn't been involved in these things. Some of these things happened too late in my thesis. Some things I got really excited about, but it was too late to make them a really strong element. I guess a lot of this stuff I almost assume, but when I think about it, it comes from these activities. I don't always cite it as such, but it informs the constructing of ideas, or helps you gain an understanding.

Paula acknowledged that some of these ideas construction were not necessarily undertaken with the academic rigour associated with the formal literature review process. Rather, they are more likely to represent a more particular aspect, contextualised within the activities or discussions of the projects or the online groups which Paula created and participated in. Interestingly, Paula admitted:

Sometimes I might sort of retrospectively cite these from a credible source, but that might not necessarily be the source that originally informed my thinking.

It is interesting to compare this with the previous description of Amy's blogging, and how these occur at very different stages of their PhDs. However, the two examples demonstrate a willingness of each participant to pursue interests beyond the immediate concerns of their theses, whether it be through Amy's wider reading of the literature, or in the case of Paula's project activities, a combination of reading, and networking and engaging in dialogue with her peers. In both examples, these activities were not initially undertaken with the intention of informing thesis development, but were shown to be contributory, either in directly shaping it or introducing complimentary concepts and contexts for potential further enquiry. And whilst neither was exclusively facilitated through social media, these provided important platforms for the production and reification of these processes.

### **5.3.3 Locating and Positioning**

The act of 'locating' or 'positioning' oneself within the research field has been widely explored within the doctoral literature, particularly in the context of writing practice and reviewing literatures (as described in 2.1.4). In interpreting and conceptualising selected arguments, PhD students are expected to take sides; to

critically evaluate different perspectives, look for synergies, contradictions and gaps in the constructed debate. It is seen as a crucial component of doctoral study generally, indicating the student's development and transformation into a critical and reflective researcher, and representing the process of finding her own voice as an independent scholar. We have seen how social media helped the participants to conceptualise academic contexts, cliques and hierarchies. But by becoming increasingly participative and visible themselves, in these environments and in the social discourses that shape them, they have the capacity to reveal their own emergent positions and allegiances within the digitally mediated discursive environment.

Through engaging with her peers external to her institution, particularly mediated through the Facebook group, other online networking activities and participation in the conference circuit, Paula explained how she had come to realise that "there are only so many PhD students" related to her specific research topic. Similar sentiments were expressed by several of the other participants, and whilst this may seem obvious, it represents a profound realisation. Through prolonged academic engagement, and in the process of mapping their research field, doctoral students also recognise they are becoming increasingly participative in a significantly smaller and elite field compared with those of their previous undergraduate and taught postgraduate studies. Whilst departmental and institutional training contexts reinforced formal cohorts and collective student identities – typically around established academic disciplines and common academic activities – exploration of the external research field (both physically and virtually) enabled similar, but less formal distributed communities to emerge. It also provided the conduit for establishing identities around more specific research foci as an emergent independent researcher.

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***Ben: Industrial relations***

In his first two interviews, Ben remonstrated about what he saw as the dominant departmental agenda oriented towards fostering greater relations with industry guilds and commercial enterprise. For him, this represented a dislocation of the academic tradition of film critique, and highlighted fundamental differences between his current department and his previous cultural studies-based education:

Previous to this, the tutors I'd had... To them, knowledge was a valuable thing, to be cultivated and shaped. This seemed important, you know? But now it seems like I'm just working for the corporation.

Whilst participating in his courses at the film studio, Ben showed his main blog to several people and received generally good responses. Amongst these was an editor representing an online magazine for the film industry published texts from a mix of academics, film journalists and people from within the film industry (including some well-known and high profile people), and combined different genres of writing (such as reports, interviews and critiques). The representative was particularly impressed by the journalistic style of Ben's blog writing, and invited him to develop several of his posts for the magazine. The first of these – a text originally developed for his blog based on an interview with a 'prop' artist – was reworked as an article for the magazine. In 'fleshing out' more of his original blog posts, Ben was planning to develop further articles that articulate his experiences "between academia and industry" and his ethnographic work. These became, in his own words, 'cultural accessories' for disseminating his academic work. He's was no doubt of the potential of this mainstream platform represented in raising his profile, albeit more within the industry rather than the academic field that studies it. But remains confident in pursuing all the opportunities:

I see this as complementary on a couple of levels. Firstly, it's getting my worked published... even if it's not academic. It's recognition and it's impact. It's ticking those boxes... Secondly, being in the mix with these film industry luminaries, that can't do me any harm. The people at [Ben's departmental online journal] said there was no value in it. My supervisors said there was no value in it. So, having this support and encouragement. That made me rethink it. And think: OK, there is a space, there are spaces. There is a forum for this sort of writing. Whether it be first or third person perspectives... it's about making academic work more accessible.

It seemed to Ben that social media were considerably more widespread and culturally valued within the industry and commercial circulation than in academia. This positive response became a key motivation for recommencing with blogging, and, despite the previous discouragement from within his department, Ben remained adamant his main blog was something he could develop and promote within the academic community. However, in negotiating the figured worlds of academia, industry and journalism, Ben was cautious about where and how he was seen to be positioning himself.

So there's this schism, which is somewhere where I see my articles potentially fit in. But I've got to tread really lightly, you know. It's tricky to try and find a balance or what to say about it. 'Cos there's potentially a job

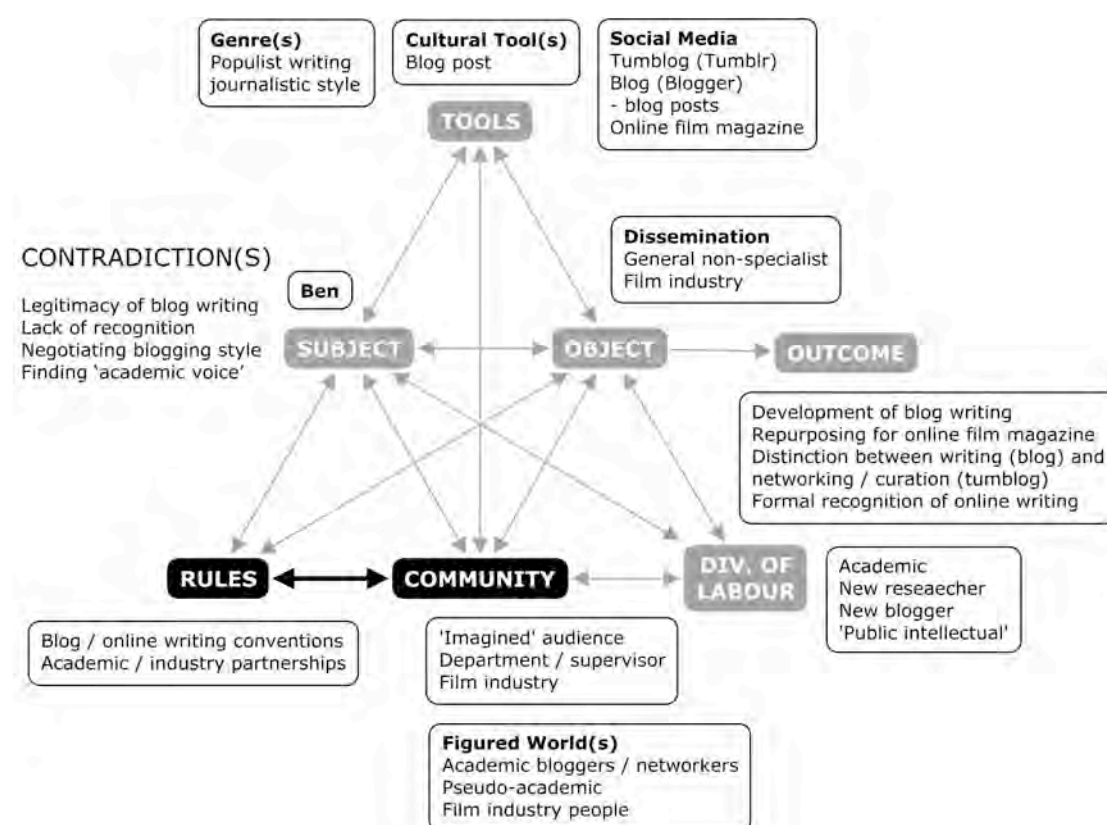
for me in production design, rather than a job for me in academia, perhaps. Or there's perhaps a meshing of the two. I don't know how it will work out. I'm just following this weird path and sort of pinballing between them.

These activities contributed significantly to developing a better working relationship with his supervisor, as she became more accepting of his ideas and complimentary of his progress. In particular the 'prestige' associated with the links to the industry magazine was welcomed:

It doesn't really mean much to me. But to her, and to her project, this is incredibly important – meshing the film industry and the film criticism.

This reflected the increased relationship with industry and shifts in the perceived focus and role of the academic:

They see themselves as problem solvers, for the film industry. They think this is the way it's going... I've seen it at [the studio]. The top brass are hiring academics as problem solvers, but they don't know anything about making films...



**Figure 25: Ben – Dissemination**

Even within the period of his participation, this was a transformative process that

shaped Ben's research focus and contributed to a more respectful and productive relationship with his supervisor. However, summarising this process in his final interview, Ben fully acknowledged the compromises he felt he had made.

I admit it, I had to suck it up bit. It was a matter of figuring out how best to play the game, to an extent. In my case, specifically, how to play it with [Ben's first supervisor]. The politics of the faculty and all that. Coming to terms with that process. Things that have frustrated me before... to find a way of negotiating those things. It's been tough, but it's been necessary. I just picked up on this industry thing and thought this is the way to go, you know. To try and do something that's fresh and original, and get a handle on it, and then use it to sort of step back into university life a bit more.

Making connections with specific industry people was instrumental in challenging Ben's initial antagonism towards his academic field's infatuation towards 'the industry,' and helped establish a more personal and informed identification with the production and journalistic communities within it. "Actually, most of these guys have come from a pretty good liberal arts education" noted Ben, adding:

I didn't think I'd find what I found in it. They, you know, accepted me, it seemed. I think there's a schism between how I look, and how I express myself, and how I might be a bit older than most PhDs, or a bit more life experienced, but there... well, everyone's a bit quirky. Importantly, it gave me my self-confidence back to associate with these people and suddenly, it's like: oh, you have got some things to offer.

Initially scathing of the commitment of his department to establish links, Ben's re-evaluation of the film industry is telling here, as it became less of an abstract 'construction' and more related to specific individuals and groups informed by his personal interaction. Not only did this experience (re-)shape Ben's 'figured world' of the film industry, but it highlighted his potential role as a new academic in its periphery and the opportunities of engaging further in the emerging digitally mediated networks and platforms of dissemination.

### **5.3.4 Negotiating Multiple Practice Contexts**

The participants engaged in a number of significant activities external to those related to immediate doctoral research foci, either through personal choice or departmental or programme requirements. These included internships and work placements, professional duties such as teaching, and participation in various student-led and special interest groups. As such, these activities required participants negotiate a number of (primarily interdisciplinary) academic

contexts, as well as engaging in boundary crossing activities within industrial and other non-academic contexts, which ranged from activist movements to entrepreneurial enterprise.

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### ***Jack: Twitter contexts and context collapse***

Jack identified his Twitter account as the place where most of his online activities 'collided,' and for several of the participants, Twitter became the platform that brought together the most diverse and potentially conflictual social aggregates. Jenna described her Twitter network as made up of fuzzy rather than distinct audience groups, and was aware of the difficulties in directed her output towards specific people.

It's having that awareness that actually I have an audience of different people and who are following me for different reasons and want different kinds of information or news.

Content related and linguistic factors – such as radical views, trivialised content and the use of slang, swearing and academic jargon – were singled out as having the most potential to interfere or conflict with overlapping audiences. Paula emphasised she was keen to share information and ideas, but not so much her opinion, admitting she was careful to adopt a neutral persona and abstained from annotating tweets or retweets with overtly provocative perspectives. Michelle also demonstrated 'neutralising' other users' tweets when she retweeted them.

In signing up to Twitter, Jack found it populated by many of his colleagues from teacher training and familiar practitioners from the performance and the visual arts. Jack was hoping to exploit the overlap between his teaching and arts background and his academic research to develop a multifaceted professional profile, partly emphasised through his online persona, but the activist contingent of his arts and teaching communities became increasingly problematic. As the most politically outspoken Twitter conversationalist of the participants, Jack admitted to having reservations about some of the content and opinions expressed in his tweets, particularly those related to his participation in the ongoing protests about Higher Education fees and cuts. These concerns were heightened when, following a short training session in social media at his University, a number of his colleagues and research staff from his training centre began following him on Twitter. This also coincided with Jack being appointed a

new role in his training centre as it adopted a structured mentoring programme for new intakes, who in turn would also join the increasingly large contingent on Twitter:

My online life felt separate to [the training centre]. Being able to engage in the student fees protests for example, and develop this sort of alternative academic persona. Then suddenly, fuck. It seems like the whole department has sussed me out.

In response, Jack considered setting up an additional Twitter account, but chose not to, opting instead to take a more measured approach to his activities on the platform. As a result, some of Jack's more radical posts, content and comments were reserved to other online communities, most notably Facebook. It also saw him returning to his old arts blog and revitalising some of the latent blogging networks that he had neglected. "Seeing this helped me identify my own identity if you like - the multiple strands and the overlaps" Jack added, "It's always there, but I think it takes something like this for you to realise it."

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Collaborating with residents and activists during her international field trips gave Paula her first experience of engaging with non-academic environments as part of her research, and her subsequent blog posts on the community arts Ning site gave her the confidence to engage in online dissemination of her work and interests openly and ethically.

I was initially uncomfortable with my position as an academic in these situations. Keeping that integrity. But I learnt how to be open about my research and respectful in my interactions.

As such, Paula saw little conflict in the different practice contexts she encountered in her subsequent project work on the fringes of academia, such as her internship, and this inclusive attitude informed her continued use of social media in support of these projects. Amy however, used the term "schizophrenic academic persona" to describe how she has felt having to balance her doctoral research work and that related to her industrial placement, opting not to refer to the latter in any of her blogging despite some opportunities to establish relative themes between the two. Jenna outlined some of the primarily activist content that she had loosely developed as blog drafts but had chose not to publicly disseminate on her blog. As a linguist, she referred to their absence as one of the key 'silences' on the platform.

I'm not really sure what to do with this in a sense... It's a question of how much material should I put about this on my blog. And it would draw in new readers but it might also mean that some of my research and academic audience stop following.

Jenna accepted that such decisions would become more acute the closer she got to completing her PhD and entering the academic job market. Whilst she had blogged some activism-oriented content, this had largely been when she had the opportunity to relate it to topics that had become legitimised by occurring events or discussions (see 5.2.4).

### **5.3.5 Local Agencies**

In being amongst the most active users of social media within their departments and training centres, the participants assumed relatively high profiles as contributors to - and in some cases, instigators of - visible social media enterprise within their local research communities. This constituted a range of what can be loosely termed formal and informal practices, serving to augment internal communication channels or facilitate externally facing representation of individual, group and (inter-)departmental research.

Commonly, most participants experienced shifts from early stages of regular local interaction in the physical environment to a more dispersed community of scholars and less frequent interaction. Amy's training centre characterised a general shift from modular to individual activity. Unlike the first year, with a programme of weekly meetings and bi-weekly research seminars, the second year had no formal requirements for meetings. She explained how her participation in an informal and regular social group outside of the departmental activities was useful to her in maintaining contact with several of her colleagues, providing progress updates and shared discussion on different aspects of doing a PhD - the type of discourse that was lacking in the student blog.

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#### ***Amy: Departmental blogging***

It is clear Amy did not anticipate the posts on her blog might potentially be disseminated to a wide audience (see 5.2.4). However, when she was



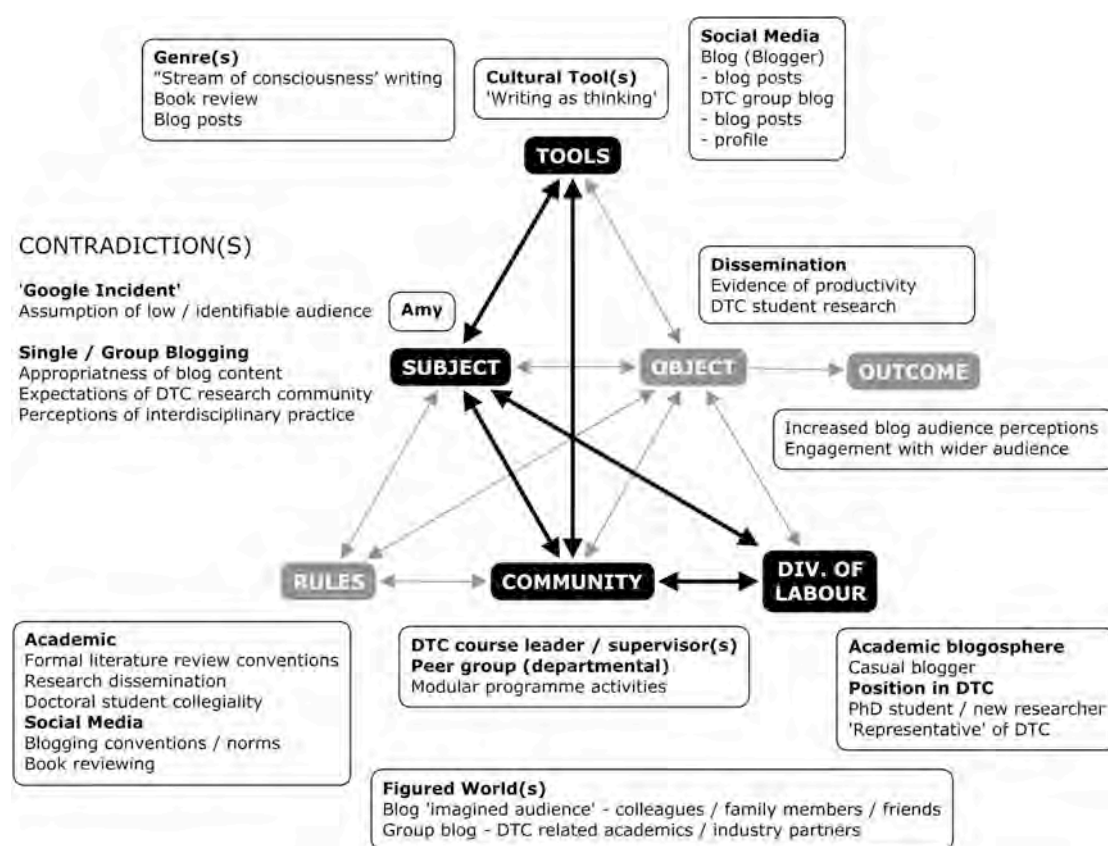
subsequently asked to contribute some of these posts to a newly formed student group blog at her training centre, Amy's blogging practice and related genre development underwent a transformative shift towards dissemination. Opting to transfer some of the posts from her personal blog, she made significant changes to the texts to make them more appropriate for a new (partly perceived) industry-related audience, mindful of the blog's role in representing student research activities, and her own responsibility to represent departmental research agendas. Particularly conscious of the 'flaky' connotations of her explorative inquiry into spiritual technology, Amy was wary of compromising her emerging online identity to the external industry and academic sectors, in which she is keen to work after completing her PhD. Amy saw her training centre as representing a top academic stream of new researchers, with the potential to attract academic and industry partners. In developing this figured world, Amy demonstrated an awareness of the type of academics, organisations and industry partners that the doctoral training centre might attract. In particular, she was concerned that these might include potential future employers or funders. Despite the need for these alterations, Amy's resource of existing blog posts ensured she was able to contribute significantly to the student blog. As a result, Amy soon became the most active contributor to the blog. Indeed, few others chose to contribute, and as colleagues appeared to lose interest, Amy soon became conscious of her own over-representation.

I didn't want to be the main voice because I'm not representative of the whole group.

To use Amy's words, the blog "just fizzled out," and by the time Amy stopped contributing, most of the other PhD students at the centre had already disassociated themselves from it.

During March 2011, the training centre students launched a new externally facing website following a six-week group project in PR development. Planning discussions had centred almost exclusively on the values of publicising the training centre to an external audience. Internally, there was also pressure to make the website technically superior to the original shared group blog. As a result, the students agreed to create a more formal website, with greater emphasis on student and project profiles and news items on research. With less demands on her own individual contribution, Amy was happy to support this new platform, to the point of adding its URL address to her business card. She actively

promoted it within the training centre, encouraging her colleagues to create personal profiles and summaries of their research projects.



**Figure 26: Amy – Dissemination**

This became a site that was consciously outwardly-facing, primarily driven by the needs of externally publicising the training centre. In effect, this represented a formalising of the students' external online space, and a shift in focus from the intended public demonstration of community engagement and discussion to a more orderly and professional representation of individual researchers linked by departmental research themes. Ironically perhaps, part of the group brief had been to give the appearance of a busy and vibrant student community with plenty of ongoing activity. And if anything, as the centre's PhD students became increasingly dispersed, the potential of the site to provide each other with regular updates of research progress became more valued. Yet Amy admitted the new website had become a more static platform; with little impetus to add new content beyond the rarely updated personal and project profiles.

### **Ben: (Dis)locating**

Ben's increasing ambivalence towards the weekly 'work-in-progress' group sessions, combined with the burdening travel costs, led him to skipping more and more sessions.

I try and find a stake in other people's work and try and talk to other people about it, but with the WIPs it was very competitive. You know, you spend a couple of days reading someone's paper and... I put a lot of effort and money into it and I just think I could have been at home working on my thesis.

Ben's attempts to 'find a stake' in other his colleagues' research was a phrase he used on several occasions in the interviews. But his lack of empathy was becoming increasingly apparent, not only in being marginalised by their research topics but also in the 'conflicts of interest' that arose between him and some of his peers over the research agendas of the department.

Ben and several other students set up a less formal discussion group within the department with the intention of partly supporting this through online resources limited to a Facebook group. He found an ally in one member of the editorial team of the departmental online journal who suggested working towards developing a secondary student-led discussion group, but their attempts to draw people to a Facebook group were largely unsuccessful. Likewise, Ben's proposal for developing social media platforms to support the journal was resisted by the editorial board.

So for over a year now I've been messing around with [the departmental journal] trying to get some sort of Brownie points when it's just turned out to be utterly a pain in the arse. And I've really got nothing out of it to be honest... I might as well have been writing more on my blog. That would have been more productive.

Ben recalled how one day, in his capacity as deputy co-articles editor, he had shown several of his blog posts to the co-editor of the departmental journal.

I suggested that some of these ideas that I floated in the blog I would like to work into articles, you know, for the journal. And his face just dropped. He said don't even mention this to anyone. It was as if it is a lower class form or medium or it was not academic enough.

Ben saw opposition to developing ideas at departmental level a cultural rather than general disregard for the use of social media. Previously, his department

had chosen not to fund his participation in developing an outreach programme of teaching in local schools.

You see, if I was a feature in the staff club or more active socially then I'd have some more credibility to put it to them. Or you know, be able to step things up and become more involved.

Ben's lack of identification with the cultural agendas of the department, his low sense of contribution, and his continued physical isolation generally conflated into creating an increasingly marginalised experience:

For a time, I just got very disillusioned with everything, the university, and being isolated from it. It was like; what am I doing? Who am I doing this for?

### **5.3.6 External Agencies**

The development of Paula's Facebook group from its departmental origins to a global network of doctoral and postdoctoral researchers reminds us that PhD students' networking activities – both online and offline – contribute to establishing informal ties across departments and institutions, that often foster more frequent and dynamic links than the type of formal communication and dissemination channels we associate with established academic and research practices.

The consequences of a continued informal dialogue that participants may establish with other PhD students from other departments or institutions or external organisations may lead to opportunities for future collaboration. Further, these can extend beyond individual benefits, with the potential to establish sustainable links for the wider doctoral community.

Participants demonstrated the capacity to network individuals and groups, with the potential of fostering sustainable links across institutions. Several events between Michelle's department and some of the other doctoral training centres had reinforced initial formal ties, but Michelle had been active in establishing more informal links with peer groups from other doctoral training centres, and representing her training centre at number of key events. Her informal social media engagement through various forms of amplification post event documentation have established sustainable links with a number of individual researchers fostering a dedicated Twitter hashtag and a wiki, and raising the

potential for project development between institutions. Following a direct invitation, Amy was one of several people who contributed to the blog of a former lecturer (now a head of department) from her previous Master's programme. She also used the opportunity to promote her own blog posts as evidence of her early ideas in her PhD. Once again, Amy's blog posts provided a visible account of early work in progress.

It was only a handful of people, and some of them I respect incredibly, so I felt honoured to be included so I felt like I owed it to myself and her to actually contribute. And also I thought it was a good opportunity for then saying to her I've done these posts can you... not like I've done these posts can you give me something, but unsaid in a way, then if it created a bridge for me to then say this is what I'm working on now, do you know anyone in the [department] who I could speak to, and then she did, so it was like a kind of karma thing or like an exchange thing that was taking place.

By her final interview, Amy was hopeful this connection would lead to establishing an informal departmental link between her former and current institution.

there seems to be at least a connection between the design departments at the two universities... So I thought it was a good idea to strengthen that tie, and to include myself in that connection.

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### ***Jenna: Blogging and peripheral expertise***

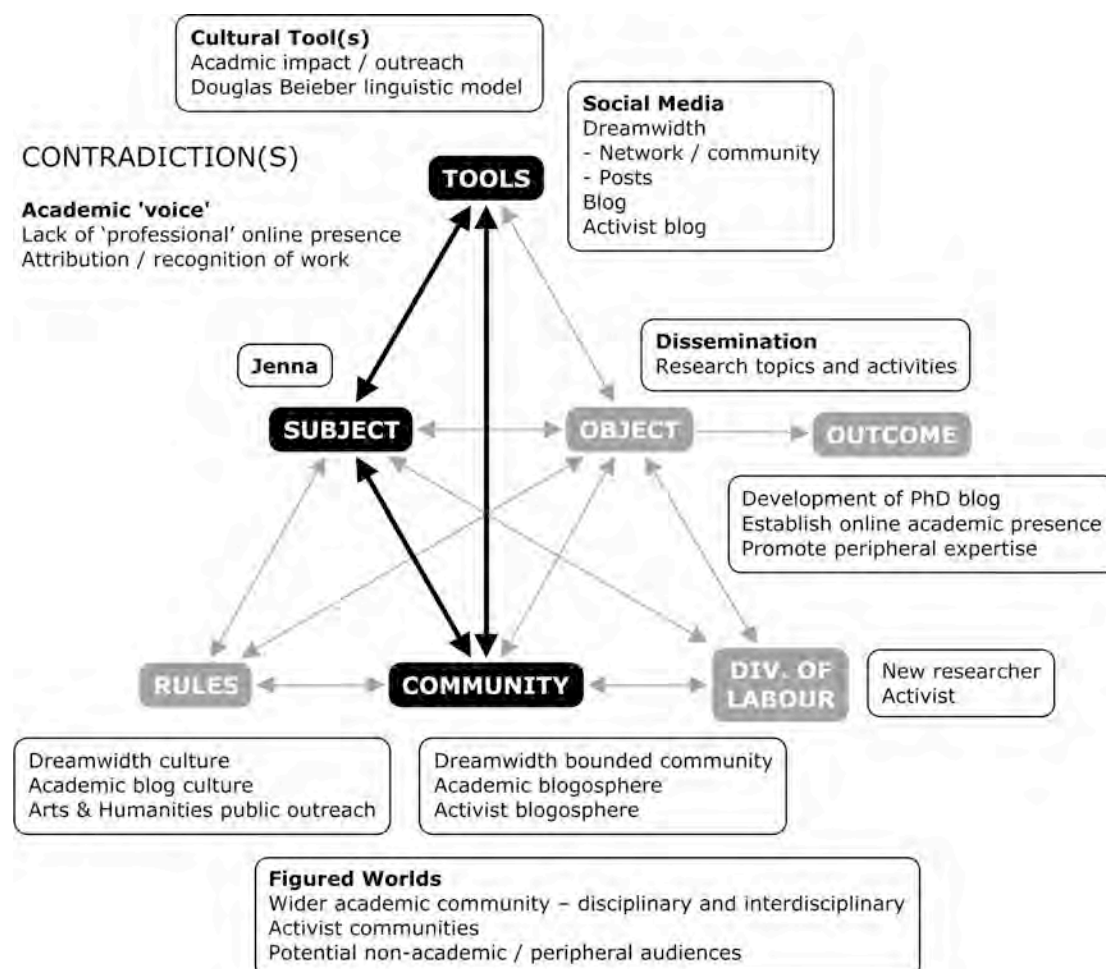
Jenna felt her blogging in particular had provided her with the opportunity to develop an independent and multicontextual academic profile, especially as she neared submitting her thesis. In particular, she reflected a lot on how much blogs can contribute to providing evidence of expertise beyond the thesis topic and their potential for promoting freelance work.

When you get immersed in your thesis, sometimes you feel like: ok, that is my only good research idea. This is the only thing that I can contribute to the knowledge in my field. What am I going to do next? My blog is there to say actually I don't think about my thesis all the time, and I want to have somewhere where I can put these other ideas.

Jenna recalled how she utilised her blog during her presentation at the international conference she attended, directing attendees to a specific post in response to a question. The post directly addressed the issue raised, which was external to the core thesis work she was presenting. For Jenna, these forms of

visibility provided evidence of research expertise and interests that were not evident in her core thesis work and that otherwise might have gone unnoticed.

If you look at my thesis topic, then I'm one kind of linguist and one kind of researcher whereas my research interests are a lot more varied. So having that blog is like saying: look I've got more than one idea than just my thesis.



**Figure 27: Jenna – Dissemination**

Another of Jenna's blog posts, related to developing workshop training for volunteers at a LGBT group, received an encouraging comment from a lecturer who had decided to use it in her teaching.

One of the motivations for this was that doing that post signalled my affiliation to both the trans community and to the academic community, and saying look, I have a foot in each of these camps. And I'm bringing my awareness of language within the trans community; I'm bringing that knowledge and that understanding, and that sensitivity to language, but also the kind of research rigour and methodology, and the way that that shapes your way of thinking.

Through creating posts such as these, Jenna had become acutely aware of their performative role in establishing her academic identity beyond the formal constraints of her doctoral role. But she also recognised the promotional value in publically declaring some of the niche academic activities and contexts in which she was engaged, being particularly mindful of the potential benefits for career opportunities and future collaborations.

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### ***Paula: Digitally mediating project work***

As we have seen, much of Paula's use of social media was characterised by her active engagement in external Arts and community-focused projects. She described at length how projects and events are often interrelated within the cultural traditions of Arts and Humanities, where the event itself constitutes a reification of the project. As such, the ability to organise academic events (from formal and departmental seminars and conferences to more informal and external student-led initiatives) is seen as a formative skill within the postgraduate community. Further, whilst exploring topics and themes beyond the immediate concerns and parameters of her thesis, the projects were legitimised through their association with recognised academic practices (e.g. internships) and agencies (i.e., university departments, graduate centres and research council – primarily because these had provided the primary funding opportunities).

Whilst often utilising multiple and interrelated online sites and platforms in these projects, the project blog in particular became a dominant and recurrent genre. Tracing the development of this not only gives us further examples of the multipurpose nature of blogs, but also indicates their potential development as a cultural tool. Typically, these blogs were created initially to publicise and promote the projects (primarily to project participants and secondarily to potential non-participatory public audiences). In addition, Paula hoped they could serve as platforms for dialogue and collaboration between project participants and in some cases external participants (the participatory social media of the community arts projects Paula encountered on her field trips were particularly influential here). Whilst this was not always successful (such as on her internship blog), it was most realised on the project blog for the research student network, where a greater cultural emphasis was placed on online interaction as part of the participatory process.

However, the dominant affordance of the project blogs that emerged and most elevated them as a potential cultural tool was their role as forms of documentation. In some cases, the blogs partly represented evidence of a project's achievement in satisfying funding requirements, either in their original form (i.e. as digital platforms), potentially alongside other more formal documentation and artefacts, or - as was particularly the case with the research student network - in a repurposed form, where the content is transferred to formal documentation. Further, in her last interview, Paula described how her project work typically constituted a significant part of her CV when she was applying for funding and job opportunities immediately after the completion of her PhD. particularly those orientated towards the Arts and social enterprise. Thus, in being able to link to her project blogs and related digital platforms, these assumed new roles as records of Paula's individual participation and engagement (as described below, in 5.3.7).

### **5.3.7 Managing Online Identities**

The study has shown the participants were engaged in online activities through multiple and distributed social media in varying levels of interaction with often overlapping online communities and networks. This required them managing their own status, reputation and identity within and across different interrelated socio-technical and academic contexts. The management of their social media practices was manifest in the organisation of their profiling and the explicit linking of different platforms and networking cohorts. Whilst the participants typically sought to establish broad distinctions between online environments for their recreational and social networking, and those for their studies, the interdisciplinary and multi-contextual nature of their doctoral practices demonstrated that the needs of online identity management often extend such simplistic dichotomies.

When they were asked which online site they would typically point a new acquaintance towards in an offline conversation, most participants readily identified a specific 'central' or 'focal' site, either their blog or Twitter account. There was a passing acknowledgement from Jack to his formal profile page on his institutional website, though this was seen more as an obligation than an effective focal platform. Early in her PhD, Paula signed up to Academia.edu



primarily because of the lack of a PhD student profile page facility within her University department website. Whilst this was subsequently rectified, she chose to maintain the Academia.edu as her primary 'professional' site on which to post her CV and conference papers, and towards the end of her participation in the study she was beginning to develop a professional / academic profile on LinkedIn. As the only participant without a personal blog or website, these became focal sites as Paula became increasingly focussed on pursuing jobs and funding opportunities. She made little attempt however, to permanently aggregate the multiple digital sites related to her project work. In choosing to keep these sites separate, they effectively constituted a more flexible and customisable online portfolio, which Paula could select and link between only when necessary, depending on the nature of a job or funding opportunity.

Jenna discussed her blog design at length in her second and third interviews, revealing plans to develop the site to incorporate elements of portfolio design. She drew on several other academic blogs and websites as inspiration, and was particularly inspired by a professor (the one she had originally 'met' through Livejournal and Dreamwidth) who had set up a 'formal, professional looking' website to separately present events, workshops and activities alongside blog posts. Jenna expressed similar ideas, but only one part of a portfolio format where static semi-permanent features such as CV, research documentation and academic profile were more openly promoted. Though she admitted it would depend on how her post-doctoral career unfolded, she was keen to develop a coordinated way of categorising different aspects of her diverse activities, with the inclusion of publications, news and evidence of teaching experiences. Jenna admitted she 'was obsessed' with using tags, and had begun to employ them more purposely to categorise her posts into thesis, academic life, and other activities. By the time of her third and final interview, she was experimenting with linking her tag-based indexing with the organisation of her pages menu (a facility enabled by a Wordpress plug-in) as part of a shift towards a portfolio-based design.

In discussing her decision to create an entirely new blog between her Masters degree and her PhD, Amy highlighted the creation of new and multiple platforms, with most of the participants engaging in such changes when significant shifts in research agendas or roles arise. Concerned about her potential "schizophrenic academic profile," Amy described how she wanted to create a 'new' online persona. "I wanted to distance myself from the old blog," she explained, "change

my personality online.” She also admitted to having deleted posts from her previous Masters blog, indicating she would consider doing the same for her PhD blog if and when she felt it necessary to respond to shifts in ideas or academic progress.

Maybe I’ll find that in a year’s time I want to distance myself from some of the nuttier ideas that I had had at the earlier stages... if I found that I was switching gears entirely then I’d probably get a new blog. It may be that a blog is not the most appropriate platform for what I’ll be doing then. But I don’t really know what else is out there.”

However, looking ahead to further developing her social media platforms, Amy also predicted a shift towards portfolio creation, with a focus on developing a coherent professional online identity to support and promote the formal dissemination of her research.

## Chapter 6. Discussion

The purpose of this chapter is to review the findings of the study presented in the previous chapter through a series of cross-case discussions, positioned within wider discourses related to doctoral education and the academic use of social media, with reference where appropriate to the existing literature reviewed in Chapter 2.

Section 6.1 draws on the general commonalities related to the patterns and trends of social media use that emerged from the findings.

In Section 6.2, I summarise the key cross-case contradictions that emerged in developing the activity systems.

In Section 6.3, I discuss the various forms and sources of cultural tools that were identified within the activity systems.

The relationship between the contradictions and cultural tools (not necessarily causal, but often reciprocal) was fundamental to the dynamics of the multiple and interrelated activity systems that were developed in the analyses.

## 6.1 Patterns and Trends in Adoption and Use

### 6.1.1 Social Media Affordances and Task Transference

The findings indicate that affordances of specific social media were broadly realised by the participants at different stages of their adoption and within interrelated and evolving contexts of use. The activity systems-based analysis has shown the complex and subtle shifts in tool appropriation as perceived affordances of different social media were aligned with specific academic activities. We have seen for example, how Amy initially signed up and used Twitter as a platform for ethnographic research before exploring its use as a search engine and information resource and developing it as a networking site. Similarly, the replication of specific academic tasks was evident across multiple social media. For example, most of the participants – like many bloggers – routinely notified their followers on Twitter of new blog posts (not necessarily their own), imitating the role provided by aggregation and syndication tools such as RSS Feed Readers. Interestingly, both Jack and Michelle had feedback on their blog posts posted on Twitter (typically over several consecutive tweets) rather than through the blog commenting system, usually resulting in quicker responses and in some cases, synchronous chat. Many of the original networking relations and activities seen in Paula's Canadian Studies Facebook group became increasingly distributed as Paula and other members of the group explored additional platforms, particularly Twitter. This not only represents provides an example of overlapping networks and communities within a specific academic and disciplinary context, but also serves as a reminder of the dynamic processes in which these emerge.

When reflecting on early stages of adoption of social media, participants recalled being particularly concerned about the perceived cultural norms of academic use of social media, both across the ecology of web 2.0 tools generally, and within specific platforms or 'brands.' (I noted that several participants used the largely pre-web 2.0 term 'netiquette' to interpret and describe these norms of behaviour). However, through increased engagement, their perception of these norms was refined within the contexts of how they were used and the social groups and networks with which they engaged. Therefore, the participants' understanding of specific social media affordances gained maturity as they

became not only shaped by ongoing doctoral practices, but also socially and culturally informed by their own digitally mediated experience and position in the (sometimes partly) digitally mediated figured worlds they constructed.

### **6.1.2 Temporality and Sustainability**

It is useful to recall White and Le Cornu's (2011) visitors and resident framework when considering temporal aspects of the participants' social media practices. The short term project-work related to some of the participants' activities, such as Amy's use of Twitter and Paula's various project blogs, was typical of a visitor, whilst other activities oriented towards supporting long term use and developing sustainable networks characterised the approach of a resident. But more importantly, the activity systems revealed the interrelated cultural and motivational factors that underpinned the complex and often-nuanced patterns of behaviour that oriented participants towards both visitor and resident profiles. In particular, they continually reminded us of the influence formal programme requirements and academic text production can have on social media practices. These formal outputs can become key motivational targets, with tight deadlines and strict formal writing requirements. For example, Amy's initial book 'reviews' on her blog were developed primarily out of the necessity to draft her end of year report, with which to ensure the continuation of her PhD. Later, a similar situation arose when she began developing positional papers for a number of conferences, crafted partly out of the ideas and informal texts she had created on her blog, she chose to undertake this within the private confines of her word processing. What she considered the most appropriate platform for this activity was prioritised over any concerns about sharing the process in a public arena. Therefore, after a period of investing time developing a set of social media practices oriented towards establishing a resident profile, Amy responded to the dominant cultural norms asserting formal publication as the established indicator of academic achievement, and exhibited a significant shift back to visitor behaviour.

### **6.1.3 Habitual vs. Explorative Practices**

The study indicated participants' propensity to both explorative and habitual use. Patterns of adoption, maintenance and obsolescence are to be expected where

access is typically free and sign up or registration is almost immediate. Tools can be used temporarily and largely risk-free. The study revealed many examples of habitual practice in the participants' repeated adoption and use of specific social media sites or 'brands,' and demonstrated a tendency to adopt the same platforms for further initiatives. This was particularly evident in Paula's repeated adoption of Facebook Groups and Posterous whilst developing and participating in multiple projects. The participants admitted they were not always aware of other options, and were typically unmotivated to explore or experiment with alternatives. Jack, arguably the most experienced blogger of the participants, expressed concern with the general proliferation of multiple social media that researchers are increasingly expected to cultivate, whilst admitting that at he had routinely joined new sites in anticipation of them 'taking off' and attracting a critical mass of users. He suggested the increased distribution of communication across different media may threaten the type of focussed discussion and 'sense of community' he had experienced through his participation in the Arts practitioners' blogging network. Michelle admitted she was yet to explore or assess the usefulness of several additional sites she had joined, suggesting the relative easiness and accessibility of most platforms and services had cultivated a "sign up and forget" pattern of social media adoption. The study also indicated that the participants were generally prepared to continue using some social media with minimal effort and participation, often through a sense of obligation to maintain a continued presence and preserve key links with other users.

## 6.2 A Taxonomy of Contradictions

This taxonomy collates the key contradictions that emerged from the activity systems-based analysis of each participant. Whilst these contradictions were specific to the contexts described within each activity system, an opportunity to classify them into the broad categories presented below (in no particular order) emerged during the cross-case analyses (as described in 4.5).

### 6.2.1 Openness and Sharing

The study has shown how social media provides PhD students with opportunities to create novel forms of academic discourse and dissemination with which to share and discuss ideas and work in progress. Discussions with the participants revealed they generally had an awareness of the discourses on openness as an ethos and a concerted movement within the academic movement, and they acknowledged the potential contribution of social media to facilitate such practices within their own research environments. Indeed, several of the participants referenced specific academics in their research fields (including other PhD students) who they saw as key exponents. All the participants were broadly supportive of developing an open and engaged approach to sharing academic research, and in the main enthusiastic about how it may shape future practice. Yet when reflecting on their own activities, they gave more measured responses, expressing reservations about adopting such methods themselves, and revealing more cautionary approaches to sharing aspects of their own research and studies on social media. Personal editorial decisions on a wide range of social media outputs were constantly reviewed, including ideas and conceptual work, research design and methodologies, and research findings. The following set of contradictions represent distinct influential factors describing participants' reluctance to share aspects of their own research practice.

First and foremost, the participants indicated a reluctance to share work in progress for fear of revealing original ideas, concepts, research designs or methodological components that may be open to claims or re-appropriation by other parties without accreditation. This unwillingness to 'show one's hand' revealed a lack of trust, not so much in the academic community at large, but

more in the perceived limitations of social media as legitimate sources of publication in comparison with established genres. Jack suggested a blog post can effectively 'date-stamp' an idea or concept to help establish intellectual property, though he acknowledged the validity of this may be disputable, particularly on personal blogs and websites. Amy's concerns over disclosure were primarily focussed on how they may compromise publishing opportunities. She posted a summary of her end-of-year report on her blog but only after it had been accepted, and stressed she would be happy to share similar summaries of her positional papers as they are formally published.

Decisions like these appeared to become increasingly crucial in the latter stages of the PhD, when research findings became more refined, and there were greater incentives and expectations to pursue formal dissemination and publishing opportunities. Towards the end of her period of participation, Amy was at the stage of implementing her methodology, and suggested it would be unlikely she would engage in any form of dissemination again for another year, both formally and informally. She acknowledged the potential of using social media to informally disseminate her work in the future, but would only do so on strict personal terms.

I would have to be more deliberate in my dissemination online before I feel comfortable. That would probably mean coming up with a new blog entirely, and making it purposely public facing and tailoring it so that it is appropriate to all those who I would want to look in on it. And that's a very different thing to what and how I've been using the blog for previously. But I would only see that happening probably the year before I will be looking at getting a job.

A doctoral education represents a significant process of academic maturation and with it, the responsibility to develop an individual and critical academic profile. This necessitates a professional trajectory prone to shifts in ideas, concepts, research foci and even fundamental epistemologies. Reflecting on this, a number of participants highlighted their concerns about how sharing ideas and work in progress on social media might reveal a lack of academic knowledge or maturity which over time they may come to regret exposing in the public arena.

Jack was the most demonstrative of the participants regarding developing an ethos of open scholarship, keenly supporting the idea of exposing his work in progress in a public arena. Yet he admitted to having some reservations about maintaining this stance. In particular, he became aware of how cultural norms



related to his previous role as an arts practitioner, in developing a purposely open dialogue and documentation of 'process,' might not transfer so easily into the more reserved practices of mainstream academia, and specifically with the expectations of his roles in the training centre and his industrial internship. He conceded:

There's far less of a culture here of demonstrating process, and making that process publicly available for potentially scrutiny and ridicule.

A final, though far less prevalent issue raised by some participants concerned revealing information about research activities that may compromise confidentiality, such as in Jack's case, the identification of participants, or, as Michelle highlighted, external industry partners and organisations in her research projects. Several participants were also cautious of directly referring to any conversations with their supervisors or colleagues that they felt were undertaken in confidence and that might compromise professional trust.

However, in some cases, concerns about sharing work directly linked to thesis development (for any of the reasons discussed above) were seen as positively influencing participants' decisions to limit their social media outputs to exploring peripheral topics in their doctoral practices. In particular, these were manifest firstly, in examining wider societal, cultural and political issues that underpin their research topics and (inter)disciplinary fields, secondly, in the shared practice of research and study skills, and thirdly, in presenting more personal perspectives on their doctoral progress and academic life generally. These and other genres contributed to the increased role of social media in developing and challenging the participants' professional and personal identities, and enabled new forms of doctoral agency.

### **6.2.2 Partiality**

The literature review indicated that widespread academic use of social media is in a minority within most academic fields, with the majority of disciplines and interdisciplines (including those to which this study's participants belong) remaining largely underrepresented. All the participants in this study related to some extent to the lack of a critical mass of social media users at both local and specific research environments, i.e. within departments, or at events and conferences. With a limited use of social media between peers, and within their

field of study, they acknowledged the 'coverage' afforded by social media may not be as reliable, comprehensive or as trustworthy as other sources and spaces for accessing information and key sources of communication. They look hopefully to their peer group and their successors to initiating the necessary cultural shift towards widespread use across all academic disciplines, yet acknowledged it may take time.

Several participants felt that a few disciplines and research communities maintain a dominant presence in the academic use of social media at doctoral level, most typically media, journalism and educational technologies, where the studying or the professional use of social media is an integrative element. Jack went further to suggest that important academic discourses within less represented research contingencies might be being marginalised by dominant discussions related to the social web itself. Indeed, both Jack and Michelle noted that their own blog posts and tweets related to using social media tended to get more traffic or retweets than those related to other topics, including much of their own research interests. Jack admitted this could easily influence content decisions, with the obvious temptation to develop further blog posts on social media. That said, several of the participants recognised, as doctoral students studying in these 'less represented' fields, that they may be afforded a greater opportunity to attain a relatively high profile within their research field, even if those engaged in social media constitute a smaller proportion of the total community.

It is interesting to contextualise this notion of partiality by examining how it might be socially and culturally constructed in other academic contexts. Arguably, there is little partiality within formal research publication, where the vast majority of academics are expected to contribute, and whilst access limitations and sourcing strategies will reduce audiences, it is generally assumed a well-executed literature review provides a comprehensive survey of existing and current research activities in any given field or research topic. The role of conferences and seminars, as selective and specialised social events, provide academics with the opportunity to disseminate research and engage with their peers through traditional formal and informal spaces and platforms, whilst typically restricting access to a small number of participants in the field. Attending and participating in such events provides high returns in direct, face-to-face social interaction and focused dissemination and discussion, yet is subject to inconsistencies and randomness. At any given conference it is possible an attendee will see only one presentation that is relevant to his or her own research, and meet only a handful

of attendees with shared research interests. In comparison, similar practices in social media provide the potential for engaging within much larger, diverse and geographically distributed peer groups, at the expense of ambiguous and inconsistent audience awareness, attentiveness and interaction.

The study also revealed how levels of partiality could vary significantly across different platforms and tools. The relative ubiquity of Facebook compared to dedicated academic or professional social media networking platforms was particularly apparent to a number of the participants. However, the most widely used media might not necessarily be the most appropriate for how they are being used. Paula's Facebook group was successful in developing from a small departmental clique to a significant international network because it was able to draw on a critical mass of academics already using the platform. However, it remained a largely inappropriate platform for providing professional or academic profiles and summaries of individual academics' work, requiring Paula and other members of the group to engage in further exploration of other social media:

You can make the effort to then go and look elsewhere and examine each person's work, which I did a lot initially when the group was quite small. But after a while, as it got more members, you kind of stop doing it. So something like this might have been better on something like academia.edu for example, or maybe LinkedIn. For the reason that you can have quick access to their professional profiles.

This emphasises engagement in multiple social media and the potential benefits and pitfalls of interrelatedness of multiple online communities, and goes some way to explaining the shift in focus towards these dedicated sites as Paula progressed in her PhD, and in particular when funding and career opportunities became priorities.

### **6.2.3 Legitimacy**

A doctoral programme affords a relative freedom of enquiry and experimentation compared with previous educational levels and, it can be argued, the likely constraints of subsequent postdoctoral work. This, combined with the instinctive curiosity that is to be expected of new researchers, would suggest PhD students should be at the forefront of the adoption and development of new research practices and technologies. However, any such impetus can be seen as potentially conflicting with the necessity (perceived or actual) to become familiarised with,

and conform to, the traditional and established research practices (and their related tools and technologies) with which to gain recognition and credibility in their field. This study has shown through a number of examples how the latter becomes the dominant force, confirming the risk aversion tendencies discussed in the Introduction. Whilst such conflict is not unique to social media practices, they represent an increasingly visible and pertinent challenge to the established academic norms. Participants perceived this conflict through a range of sources, discourses and perspectives, particularly from within their immediate (i.e. local) peer groups, and further mediated through interaction with supervisors and faculty members. Such perspectives often became manifest as unstated or understated cultural norms, as the participants became increasingly socialised into the academic environment.

This study has confirmed that a significant number in the academic community consider social media as inferior, trivial or distrusted research tools and practices, or as Jack suggested, a “generally lower form of media.” This lack of recognition perpetuates a culture of disincentive. Ben’s unsuccessful attempts to cultivate online networking and blogging within his department revealed that apathy, distrust and hostility towards social media is as likely to come from fellow research students as it is from faculty staff. It remains largely external to core academic practice and as such, to departmental and supervisory concerns. As a result, the adoption and use of social media is seen as a primarily individual endeavour and a largely peripheral activity that is additional to the core activities that underpin doctoral practice. Participants indicated their supervisors were typically unaware of their social media activities, or at least, were not considered important enough for discussion. This suggests ambivalence and ignorance rather than hostility or distrust prevails within academia. Jack for one, was not overly concerned with this:

Well they don’t know how long I might spend in the library, or watching videos on Youtube for my research. Why should how much I blog be any different?’

The peripheral nature of social media practice seems to have been all too readily adopted by the PhD students themselves. Despite the increasingly complex and important relationship that Ben was developing between his long-form blog writing and his chapter development, he revealed:

I haven't even told my supervisor I've got a blog... She'd probably say I was wasting my time and not concentrating on my writing.

Yet Ben recalled that when his supervisor had suggested checking out the work of a particular academic, she specifically recommended looking at his blog. "So in that case" he argued, "I think it's the scholar who has the credibility and not the medium." Referring further to several additional academic bloggers in his field who had "achieved some sort of credibility," Ben suggested:

The thing is their blogs seem to be accepted, it seems these are something you can refer to. It's OK. But if you do it yourself, I get the impression nobody really wants to bother with you.

We have seen how Amy's blog was further 'legitimised' when it became apparent one of her supervisors had become a regular reader of her posts, which came to supplement texts formally submitted for discussion during supervisions. The direct role of blogging in Amy's dialogue with her supervisor was atypical of the participants in this study and is, one can confidently assume, highly unusual in supervisor-student relations within doctoral education. Yet it indicated a willingness of Amy's supervisor to be flexible in accommodating an informal genre of writing by a PhD student, and acknowledging its role in contributing to her subsequent thesis development. However, tellingly, despite the role Amy's blog posts had played in helping formalise her proposal and research focus, Amy revealed in her second interview:

My supervisors are now telling me I'm doing too much blogging, so I don't need to impress them with all this activity any more.

These incidents seem to indicate that whilst supervisors are increasingly aware, and in many cases accepting, of the potential role of social media, the main reasons for raising concerns over their students' engagement (particularly blogging) tends to arise when it is seen as being disruptive to the progress of their study or at the expense of more recognised opportunities such as formal publication.

The study overwhelmingly confirmed that senior academics actively using social media can be highly influential. They were not necessarily seen as being the best practitioners by the participants – that role may be better served by peers who may be more familiar with using the technology (see 6.2.5 on shared practice) – but rather as contributing to the process of 'legitimising' social media within

academic and research contexts through their seniority, high profile and influence. Paula and Jack in particular also pointed to the increasing engagement of social media (most evident on Facebook and Twitter) by universities and other academic institutions - particularly university departments and funding bodies - as further legitimisation for using these sites.

#### **6.2.4 Local Research Cultures**

A wide range of cultural factors – evident in participants' pre-doctoral education as well as their institutional research environments – was shown to have significant influence on the participants' social media practices: firstly, in facilitating prior, existing and emergent peer networks, and secondly, on the opportunities (or lack of opportunities) for creating new ones.

In some cases, the nature of transition to PhD was seen as particularly crucial. Paula's direct route from Masters degree to PhD within the same university department corresponded with a significant number of her fellow students in her year doing the same, contributing to a sense of continuity within an established peer group. This cultivated a familiar and supportive academic environment in which Paula was confident in establishing herself as an active member of the student community in her department, which contributed to the effectiveness of her role in setting up the Facebook studies group. In contrast, Jenna's doctoral experience was far less smooth. Obligated to follow her supervisor to a different university, and then subsequently transferred across several departments, she was denied the opportunity to develop any sustainable relationships within a research community. Crucially, this experience reinforced her reliance on previous peer groups from her former university, motivating her to maintain and even strengthen ties through her established Dreamwidth blogging community. Jenna suggested this may have also influenced her readiness to engage in student activities at her university outside her department, particularly with activist communities through her participation in occupation protests and other events. Similarly, Ben's absence from academic study after a break of several years, his part-time mode, and the requirement to travel long-distance to his university contributed to a feeling of isolation from his student community, whilst departmental agendas and lack of identity with the research topics of many of his peer group further increased his sense of marginalisation.

With his background in practice-based Arts and experiences in teaching, Jack also expressed reservations about the nature of some of the business-orientated initiatives of his training centre. Whilst he welcomed aspects of the focus on the digital economy and the need to engage in social enterprise, he professed to have little in common with the business-orientated ethos of many of his peers. This tension was heightened as Jack became increasingly active in the protests against student fees and cuts in Higher Education. His participation in a number of alternative teaching and learning events (including those aligned with university occupations) established links with an emerging and interdisciplinary network of radical academics, both doctoral and post-doctoral, which overlapped with existing networks of arts practitioners. Jack saw social media as an important platform for enabling a dissenting voice in the higher education sector, and viewed the explicit connections revealed through his blogging and social networking activities as instrumental in establishing a broadly left-field online persona, aware that this potentially compromised his responsibility to develop an increasingly visible professional profile in his doctoral training centre.

In contrast, Michelle confessed a close affinity with the research culture and agenda of her training centre, in particular embracing its entrepreneurial spirit, and the opportunities it provided for establishing key connections with external design-based companies early in her PhD. In response to this supportive and motivational environment, Michelle was keen to engage in and promote departmental social media initiatives, helping establish the internal Google Group (which received a mixed response from her colleagues) and the externally facing student group blog. She also arranged a number of minor events in the centre, including a Twitter workshop that she helped facilitate.

Amy's prior experiences in postgraduate interdisciplinary programmes and research environments were useful preparation for her participation in her newly established training centre. However, the shift from the initial social arrangement and inclusivity of weekly meetings and modular components - which sought to engage all the PhD students in developing a coherent and negotiated research agenda - to that of a general dispersal of colleagues to individual study patterns and industrial placements was significant in influencing the social dynamics of the student group. Attempts at leveraging the student group blog to partly facilitate ongoing peer networking and interaction were largely unrealised as a departmental promotional agenda towards formal external-facing dissemination took over.

## 6.2.5 Social Media Training and Shared Practice

Opportunities for participants to access formal training in social media through departmental, institutional and external facilitators were limited and sporadic. When available, they tended to be technology- rather than practice-focussed, and often limited to specific platforms or 'brands' which participants typically adopted without exploring alternatives. There was also little evidence of social media being embedded in graduate training in established areas of practice covered by, such as conferencing or collaborative working. Attending social media workshops at his university proved timely for Ben as they provided general information about different tools and platforms and raised his awareness of their potential, at a time when he was adopting several social media for the first time. However for others, formal training opportunities were not necessarily available when they were most needed, or were 'pitched' inappropriately for individual needs. Jack attended a social media session as part of his training centre modules in the first year of his PhD, but found it far too general and rudimentary to be useful. Michelle attended a blogging workshop within her institution and a Twitter workshop in her training centre, both facilitated by external media consultants. Recalling the latter, she describes the attempts to encourage discussion around practice:

I mean, it only took a few minutes to go through, you know, how [Twitter] actually worked, what it did. The rest was how it can be used, and for what... what you can get out of it. But only about half the group had signed up, and most of them were not really using it. There was some good discussion about what it could be used for, and a lot of contribution from me as quite a prolific user, but a lot didn't have anything to add. Most of those not using it just sort of sat there.

Tendencies for training to focus on the functionality of the social media required participants to transfer generic social media skills to their own specific needs and uses, whereas many of the social and cultural aspects of social media practice highlighted in this study were not realised by the participants until specific tools and platforms were adopted and used over time within the participants' own academic contexts. As Michelle suggested: "we could sort of do with doing it again in another six months, or a year, when more are using it regularly."

Formal opportunities for shared practices between peers were rare, though some participants attended workshops that facilitated discussion, often across departments and disciplines. Paula described how attending social media



workshops gave her the opportunity to hear about and discuss wider critical and cultural perspectives of web 2.0 which had relevance to her own research interests. However, the participants generally reported limited access to local knowledge, information, resources or guidance at institutional and departmental level. For some, work placements and internships provided them with their first experiences of specific aspects of social media practice, particularly within institutional and organisational contexts.

More typically, specific tools or platforms were recommended to participants by colleagues in their peer group, or they became adopted through a process that Amy referred to as 'casual social induction,' in which specific social media platforms, tools or practices became prominent through a shared culture of use within the participants' academic environment. Such recommendations were shown to be highly significant, not only in the immediate adoption that may result, but with regards to long term use, given the habitual use of specific brands or types of particular forms of social media shown in this study (see 6.1.3). Paula used Posterous several times after for a project blog another PhD student had recommended it to her.

For several participants, the best opportunities for ongoing support and opportunities for shared practice seemed to be where there was a shared culture of use situated within a specific academic discipline or cultural group. In the years leading up to his PhD, Jack was involved in a number of largely informal workshops at various arts events. Whilst culturally situated in Arts practice, and leaning towards open-source ethics, a number of key elements have been transferred to his general academic use of social media. Such opportunities have been shown to be highly influential in participants adopting and using specific tools and platforms, which in turn can be influential in shaping practice. There is no question existing peer use is influential. The initial development of Paula's Facebook was influenced by a similar group in a neighbouring department, whilst Ben described how he was inspired by how other Tumblr users - not all academic - were using the platform for everyday posts, events, and capturing of ideas.

The limited use of social media and general lack of interest shown by colleagues severely constrained participants' opportunities for shared practice. For Ben, this initially meant a reliance on online resources and information, whilst Michelle found her online discussion groups a key source for sharing practices. Access to high-end users and early adopters was highly valued, and participants sought the

advice of key colleagues over choice of specific social media 'brands' and platforms.

Casual peer recommendations were seen as influential. Participants themselves gave examples of recommending specific social media to their colleagues, becoming recognised as key users and mentors within their department or across different communities and social groups. Both Jenna and Jack at various times took on mentorship roles within academic, social and activist peer groups and at related events.

## **6.2.6 Participatory vs. Broadcast Orientations**

Popular discourse and rhetoric associated with the social web typically challenge the 'one-to-many' broadcast metaphor of traditional media – and with it, the notion of 'audience' – in their emphasis on participation and interaction. Yet the generally low levels of interaction of the participants' social media practice evident in this study indicate that non-interactive broadcast and related viewing behaviours prevail.

Even with a small number of participants, this study indicates that engagement with multiple forms of social media, and the different ways they are appropriated, provide wide-ranging levels and orientations of interaction, discussion and feedback. By necessity, the participants' perceptions of audience were often based as much on 'imagined' social and cultural contexts as they were on any informed or experiential understanding (see the discussion on imagined audiences in 4.3.5).

Several participants – particularly Jack and Jenna – drew on blog analytics recording visitor numbers and 'clicks' on specific posts to report gradually increasing audiences, and these were highly valued as indicators of increased recognition within the academic community. However, whilst digital artefacts of direct asynchronous interaction and reciprocity such as blog comments and retweets provided participants with explicit and identifiable evidence of audience interaction, quantitative indicators such as analytics remained largely anonymous.

Even when a network was largely 'identifiable' (such as followers on Twitter), the

participants accepted they had little or no idea of their actual viewing behaviours. When asked about their own viewing tendencies, they reported widely different and frequently inconsistent patterns of viewing and interacting with social media artefacts, and how these related to online networking and community development. Jenna stressed how she purposely kept the number of her followees on Twitter to a manageable amount to be able to 'skim read' every tweet on her Twitter feed on a regular basis.

If they are interesting enough for me to follow then I don't want to miss anything they might be saying... It's not just something that is going on in the background that I can dip into when and if I feel like it. What's the point in bothering to follow someone interesting if I'm not going to bother actually reading what they write?

Other participants admitted to far less consistent use or attentiveness in their viewing behaviours, allowing followee numbers to rise without any self-imposed regulation. Some suggested the expectation of reciprocating followers was an influential factor in spiralling numbers. Jack admitted regulation of his Twitter network was "somewhat out of control," adding that the way he viewed his Twitter feed was consequently "very random and inconsistent." Michelle admitted to prioritising self-promotion over seeking quality contacts, adopted a "no-limit policy" to followees. She and Paula both employed the use of Tweetdeck (at the time, a third-party Twitter reader) to filter, categorise and prioritise their followees' tweets. Similar diversity between the participants was also evident in the viewing of blogs (in numbers and forms of aggregation), and in their interaction with various features of social network sites.

The study has shown how (perceived) audiences were readily transferred from one social media to another. Several participants for example, assumed that people from their identifiable networks such as Twitter followers made up most of their blogging audience. Jenna assumed most of her blog readers were other PhD students and early career researchers. She saw a natural cohesion between the interrelated figured worlds of her Twitter network and her blog audience, partly because one served as a key promotional platform for the other. Similar assumptions were also evident across other social media, and in corresponding relations between social media and interactions in the physical world.

The participants expressed particular concerns over the ambiguity of blogging audiences. By choosing to use social media in expansive ways, the participants demonstrated a commitment to engaging in communication and dissemination

processes that were more public, distributed, and potentially uncontrollable. They saw, for example, how audience numbers could be greatly affected through the participation or interaction of another party. Jenna for example, explained how a specific blog post had attracted significantly more viewings than any other primarily because a senior academic had tweeted about it.

Crucially, the participants' need to identify and engage with audiences (real or imagined) was seen as highly influential in the decisions they made about the content, style and tone of their social media activities and outputs. Whenever they blogged, tweeted or created other digital artefacts across interrelated platforms, their practice and identity agendas were further compromised whenever those audiences were ambiguous or unknown. In addition, one can assume that, through the persistence of web-based artefacts, their impact has potentially extended beyond the control, and the awareness, of their original authors, and therefore of this researcher.

### **6.2.7 Textual Relationships**

The holistic perspective adopted in this study has ensured that doctoral writing in and for social media are not viewed as isolated activities. The findings have repeatedly demonstrated that varied, and in many cases complex, relationships exist between the participants' social media writing (particularly blogging) and their written work oriented towards the development of thesis chapters and other texts submitted to supervisors, as well as other academic texts such as conference papers and journal articles. In discussions, the participants showed that they recognised the value of repurposing texts generally, not only as an efficient way of reusing existing content, but also as a key academic skill. Indeed, they saw this as something that would become increasingly important towards the end of, and immediately after their PhD, with the expectation to derive papers from their theses, and potentially develop proposals for funding opportunities and postdoctoral positions. Several participants also showed particular adeptness in making links (both conceptually and instrumentally) between social media texts and other established 'short-form' academic texts (such as abstracts, proposals and poster texts).

Weller's (2011) observation on the 'granularity' of dissemination through social media primarily focuses on the increased frequency of outputs over established

academic genres. However, I would suggest that similar aspects of granularity were also evident within the participants' text-based outputs in relation to content, format and length; combinations of which were shown to be developmental in creating distinct genres, formed within the social and cultural contexts in which they were enacted.

The study shows how participants took the opportunity to utilise blogs and other online platforms to improve writing proficiency, to explore different writing styles and formats, and to engage with multiple audiences. However, in doing so, they accepted the challenges associated with writing in a public arena, subjecting themselves to the cultural expectations associated with blogging such as relatively frequent posting and accessible writing, further compromised by the confused legitimacy of blogging as a publishing genre, and the ambiguity of audiences and audience contexts.

Ben's complex and reciprocal relationship between the development of his blog writing and his thesis writing (as described in 5.2.5) was imperative to the writing process but also involved the distillation of writing styles and formats. Both Jack and Michelle gave examples of blog posts that were repurposed from 'rejected' content that they had originally developed as part of drafts towards their theses. However, we have seen how Amy held back further blogging whilst she was working towards getting formally published (see 6.2.1). Michelle expressed similar concerns, though admitted to being confused about the legitimacy of blogging as formal output:

Publishers stress the need to submit previously unpublished content. I'm just confused about whether blog posts constitute published content. So sometimes I'm cautious about putting anything up.

Whilst the participants reported that blogging had generally added to, and in some cases directly facilitated, thesis writing, the study demonstrated the potential for digitally mediated models for writing discipline and scheduling to disrupt formally negotiated writing plans and deadlines.

## 6.3 Cultural Tool Development

### 6.3.1 Cultural Forms

It became evident how emerging hierarchies of cultural tools within the study broadly related to Wartofsky's (1979) three-levels of artefacts (see 4.3.3). These can be summarised as follows:

- Level 1. Primary Artefacts – specific social media (tools / platforms / brands), digital artefacts etc.
- Level 2. Secondary Artefacts – online communities and networks, online profiles / portfolios, genres etc.
- Level 3. Tertiary Artefacts – models, concepts and strategies, online identities, 'genre knowledge' etc.

The operationalising of these levels in this study and the inferred dynamic relationship between them also has resonance with some of the key principles underlying Activity Theory (as described in 4.1); most notably in the hierarchical structure of activities proposed by Leont'ev (1978) – where the adoption or development of cultural tools may occur at action and operational levels – and the related processes of internalisation and externalisation. Arguably, within an Activity Theory-based analysis any concept, genre or technological platform can only be considered as a cultural tool when it becomes an instrumental component in an object orientated activity system, i.e. when it is seen as being 'used' towards the object. As such, cultural tools may only become apparent when, for example, they become realised within a specific activity, a specific technological platform (i.e. as a form of reification), or within a specific social or cultural environment. Think about the role of the developing genre of Ben's blog posts (see 5.2.5) when they became repurposed as 'journalistic' content within an online film industry magazine.

The study identified several examples of the reification of particular tools, platforms and genres as they become representative of a specific form of activity or practice. Paula's repeated use of the project blog (as described in 5.3.6) is worth noting here, partly because it was also seen as reinforcing, challenging or merging into existing cultural tools. Paula emphasised the cultural significance of

projects and events within the Arts and Humanities disciplines, and the role they play in cultivating student engagement and socialisation in the academic community. The reification of these activities within the project blog resulted in it mediating a set of recurrent genres across a series of internships and student projects, where their flexibility and transferability was particularly evident in their role as forms of documentation of the projects. These became particularly useful for funding requirements, both at the end of projects – as part of formal assessment criteria – and also as exemplars for further projects. They went on to serve another purpose as contributing a 'loosely connected' online portfolio for Paula as she sought to establish her post-doctoral career.

Similar cultural tool development was observed around key concepts. As mediating artefacts, these can play an important role in the externalisation process, functioning as "forms of expression of cognitive norms, standards, and object-hypotheses existing outside the given individual" (Lektorsky, 1984; 137, cited in Engeström, 1999a: 23). The process of externalisation is particularly evident in Wartofsky's secondary or representational artefacts, by which ideas or models might be and communicated and shared (Guy, 2005). Examples included Jack's interpretation of Joe Kincheloe's bricolage as a reflexive research method (described in 5.2.3), and Jenna's adoption of Douglas Beieber's linguistic model for interpreting texts across different media and formats (see 5.2.4). The participants' adoption of these cultural tools was not necessarily exclusive to their social media practices. Jenna for example, explained how she had used Beieber's model to conceptualise the role of presentations when she was preparing them for conferences. Indeed, it could be argued that the ability and readiness to 'transfer' cultural tools across these different academic and doctoral activities served an additional role in helping the participants to contextualise their use of social media with more established forms of academic practice.

### **6.3.2 Cultural Sources**

In conducting this study, it became apparent how the participants' perceptions of key sociocultural, technical and academic aspects of their social media practice were shaped and influenced by interrelated dominant, recurring and contested discourses, concepts and cultural norms from both within and outside of their academic environments. In some cases, these were taken up as – or were seen to influence the development of – cultural tools.

In my analyses, through developing the multiple and interrelated activity systems for each participant, these were seen to be instrumental in driving activities oriented towards key academic practices and contextualised within the social and cultural parameters established by the various components of the systems. There was clear evidence of how cultural tool development was influenced by the academic and professional contexts established in the process of socialisation into new academic and doctoral training environments, with participants typically drawing on concepts, ideas, and models from their own (in some cases, pre-doctoral) academic studies, research or vocational activities.

Though the sources of cultural tools identified in this study are seen as forming multiple interrelated rather than distinct groups, an attempt is made here to broadly classify them under the two principal contexts that underpin this study:

### **Academic**

A doctoral education encompasses multiple and interrelated cultural dimensions (as described in 2.1) in which scholarly practice and academic rigour retain an historical coherence. Regulatory influences were manifest in institutional, departmental and supervisory regulations, models and support systems within the structural components of doctoral programmes and negotiated study, and the student community. Yet increasingly managerial and professional contexts describe a doctoral enterprise exemplified by centralised and external training cultures, embracing entrepreneurial concepts such as social capital and impact. Both Jenna and Michelle drew on academic impact and outreach agendas to address potential engagement with wider academic and non-academic audiences, though from different perspectives, influences and motives. The most notable examples of disciplinary sources of cultural tool development were those derived from the participants' pre-doctoral studies, which included Jack's bricolage and Jenna's linguistic model described above. Similarly, Ben drew on key postmodernist concepts from his previous postgraduate studies to discuss different styles of writing. In some cases, cultural tool development was influenced by the participants' own enquiry into aspects of social media as part of their own research activities (either current or pre-doctoral). Whilst these were peripheral to their core research topics, their influence on the participants' individual social media practices was noteworthy. These tended to be constituted in specific cultural and critical contexts that were partly defined by discipline (as



described above) but were also influenced by ongoing personal experiences with using social media as part of their research methods or ethnographic work. Amy's critical perspective of web 2.0 culture, which pervaded her own social media practice, was cultivated in part through her own experiences, but legitimised through previous postgraduate research and elements of her early doctoral studies.

### **Technological (web 2.0)**

The literature review identified the emergence of often overtly optimistic and consensual core values of web 2.0, extolling themes of openness, sharing, participation and collaboration. These were seen as permeating the participants' broadly held assumptions, which in some cases were adopted and adapted as personal agenda and ethical standards of behaviour. Similarly, rhetorical accounts of web 2.0 were restructured into commonly held beliefs that have entered everyday dialogue. The study showed for example, how the term 'digital natives' (used by several participants in a largely passive and uncritical way) persists within the academic community at large, despite being routinely challenged within more specialised educational and learning technology fields. It became clear that for the majority of participants, these forms of rhetorical artefacts were internalised in their experiences of early adoption of social media, and typically within non-academic social and recreational contexts. Therefore, whilst the participants' subsequent interpretations of their appropriation of these media within the educational context were subject to new discourses (i.e. within the interrelated departmental, training and disciplinary research cultures discussed above), it is important to recognise the potential persistence of web 2.0 cultures, and how these dominant core themes can be challenged or reinforced by academic use. Some of these values became attributed to specific platforms, when they became culturally representative of specific types of social media or dominant within the participant's community.

It should be emphasised that these influences on cultural tool development were seen as dynamic rather than static processes, integral to the participants' ongoing patterns of adoption and use of social media (as summarised in 6.1). It can be argued that the participants' increased engagement in online digital environments exposed them to the type of 'messy realities' of social media use that I have purposely attempted to reveal and examine in this study. These were realised by the participants within their own research fields and emergent individual

practices, often with the result of either challenging or reinforcing assumptions based on the type of discourses discussed above. Further, as participants' social media engagement became increasingly situated in their (inter)disciplinary research cultures, emergent networks and communities were shown to be influential in establishing and transforming practice. Key users or groups (including the participants themselves) were instrumental in demonstrating the benefits to their peers, in some cases providing examples of good practice. Conversely, they also revealed some of the limitations, disruptions and failings of social media in comparison with assumed or expected benefits.

Crucially however, one should recognise that this process is also subject to the participants' own reflective and critical thinking, which were partly demonstrated in their interviews. Indeed, it should be noted that their participation in the study most likely represented a rare and possibly first opportunity to conceptualise, refine and articulate such thinking through the supportive and receptive medium of this research study. I think it is reasonable to assume that those who demonstrated higher competences in their reflective and critical thinking around their social media practices would most likely also do so in relation to other aspects of their doctoral education. However, one can also assume that those who had the ability to draw on elements of their research work related to social media – such as Paula and Amy – or, in the case of Jenna particularly, a greater historical experience with online digital environments, would be better positioned to have attained such credentials.

## 6.4 Summary

In this chapter, I have to some extent addressed the 'what,' 'why' and 'how' of the study. I began by summarising *what* were the primary patterns and trends that emerged from the 'messy realities' of the participants' social media practices. The contradictions in the activity systems were key in identifying *why* many of these patterns and trends occurred, and in the subsequent section I described *how* the participants negotiated (and in some cases, influenced the emergence of) these contradictions through the adoption and development of cultural tools. Therefore, a reciprocal – though not necessarily causal – relationship is established between contradictions and cultural tools. However, whilst specific examples can be sought at the operational level of the participants' individual practices (as described by the findings text and activity systems in the previous chapter), one should be cautious in assuming these represent generalised cases, as the sets of contradictions and cultural tools presented in this chapter were aggregated from multiple activity systems and from all six participants. However, they do constitute a useful extended analysis of social media use within the doctoral context, with key implications for research and practice.

## **Chapter 7. Conclusion**

In this final chapter, I review the study and summarise the key findings in relation to the research questions. I then offer my thoughts on the implications of the study to research and practice, and its contribution to the fields of doctoral education and learning technology. I present an evaluation of my research methods and the analytical framework, and conclude by identifying how the study might inform further research.

## 7.1 Review of Findings

From the outset of this thesis, I sought to contextualise the study into PhD students' use of social media by developing authentic representations of what 'doing a PhD' means. I therefore adopted a holistic approach to doctoral education as a transformative process and framed within lifelong and life-wide learning perspectives, incorporating a range of doctoral experiences and enterprises enacted across multiple practice contexts. The concept of figured worlds was employed to help describe how participants' conceptualised their identities and positions within these multiple and interrelated social and cultural environments. As the new generation of researchers, we might expect PhD students to be instinctively drawn towards exploring the latest technologies and related practices. Yet the literature – substantiated by my experience of conducting social media workshops – indicates limited and tentative use of social media by the majority of PhD students (British Library / JISC, 2009; Weller, 2011), whilst established tools and methods retain their dominance as legitimate forms of practice and socialisation in the academic community. This risk aversion, and the tensions that underpin it, became a key focus as the study evolved, and is manifest in a number of the contradictions that are presented in the taxonomy in the previous chapter. The construction of multiple and interrelated activity systems enabled fine-grained analyses situated at the operational level of the participants' social media practices oriented towards key doctoral activities. I drew on the Vygotskian concept of cultural tools to examine how participants employed a range of concepts and methods (partly in relationship to the aforementioned contradictions) to interpret and describe the nuanced and complex ways they engaged with multiple social media sites and artefacts. I also adopted a sociocultural approach to genre theory to show how the emergence of specific forms and groups of participant-generated digital artefacts and sites give shape to the meditational processes.

In this study I have addressed the following research questions:

- How do PhD students use social media in their studies?
- How are doctoral identities constructed through using social media?
- How can social media contribute to forms of doctoral agency?

The study has shown how PhD students can use multiple social media to interact with academic communities and networks and engage in a range of interrelated doctoral activities, such as dissemination, networking and information sourcing. This can provide a 'privileged insight' over peers not using social media, in revealing informal academic cliques and signposting key academic discourses and protagonists. And we should not underestimate how important the regularity, informality and collegiality of everyday interaction plays in providing PhD students with access to key information about contacts, resources and 'academic hacks' that can significantly influence academic progression. The study has revealed how social media supports a fundamental shift towards anticipatory and speculative information sourcing strategies. The participants valued their online networks as sustainable sources of expertise and academic support systems, recognising their potential contribution to continued post-doctoral professional relations and opportunities. The study highlighted the reciprocal relationship between online networking and conferencing, and the participants also used social media to establish informal links across departments and institutions. And yet social media can also play an important role in supporting formal departmental cohorts, enabling PhD students to maintain communication and peer support systems.

The study has also revealed how participation in emergent online research networks and communities is enabling new forms of academic and professional identity development. Findings indicate the complex role social media can play in mediating, contributing to, and revealing, the negotiation of multiple and interrelated doctoral practice contexts. Patterns of convergence and divergence in online identity management were revealed, depending on contexts, audience perceptions and the stage of PhD. As such, social media became platforms and potential catalysts for context collapse. Participants were adept at shifting between the development of singular and unified and multiple and fragmented online identities, though those nearing the conclusion of their PhD commonly oriented towards forms of digital aggregation and portfolio development. Yet audiences were shown to be ambiguous, and perceptions were often dependent on uneven and unreliable forms of interaction and reciprocity, resulting in participants consciously transferring online audiences from platforms where they were identifiable to ones where they were not. Through the analytical lens of figured worlds, participants adopted shifting criteria and conceptual scales when heuristically assessing digitally mediated social groups and audiences, locating

and positioning themselves, their studies, and their doctoral activities in interrelated and multiple practice contexts.

The study has also highlighted complex relationships between blogging and thesis development, in honing writing practices and disciplines, whilst offering the opportunity to engage in the production and dissemination of parallel texts. For several participants, social media provided them with the agency to promote activities and research skills outside their doctoral programme and demonstrate peripheral expertise beyond their thesis topic. Yet the study revealed how social media practices can be hugely compromised by established and dominant forms of academic genres and practice, and be dependent on local institutional contexts, which even within my small sample, affected significant variations in affiliation with departmental cultures and peer groups. Formal doctoral rules, conventions and norms – institutionally and within the academic community at large – persist, and formal publishing, annual reviews, events and project deadlines can establish short-term focal points that were shown to be hugely influential and potentially disruptive to ongoing social media practice. The study also highlighted the influence that transitions both to and from the doctoral programme have on social media practice within that timeframe, particularly in its relationship with established pre-doctoral peer support networks and postdoctoral career aspirations and concerns.

## 7.2 Implications for Research and Practice

Reviewing the literature revealed a significant gap in relation to the thesis topic, with very few empirical studies into PhD students' use of social media (examples include: Francis, 2007; Barnacle & Mewburn, 2010). This however, does not reflect the significant amount of online content and discussion dedicated to the subject, much of it serving as examples of shared practice led by the students themselves. However, beyond these personal accounts, reportage tends to be based on subjectivities, assumptions and anecdotal evidence prone to generalisation and hyperbole. Therefore, this thesis represents an important and timely contribution. The study provides empirical evidence on the subject through an in-depth enquiry based on the accounts of PhD students in authentic educational settings, enabling a qualitative understanding of social media practices contextualised and situated within current research and doctoral training cultures.

### 7.2.1 Claims of Generalisability

The doctoral context of this study has underpinned the cultural and academic environments that have been explored in this thesis, and for this reason, claims of generalisability of the research findings outside this domain need to be circumspect. Whilst having little relevance to undergraduate and even taught postgraduate education, recognising the cultural influence of these (alongside any non-academic, professional backgrounds) emphasised the advantages of understanding student trajectories and transition to doctoral study, and the value of studying social media use inclusive of these timeframes.

Many of the components of scholarship explored in this study are however highly relevant to post-doctoral academic and research practice, and I am mindful that the participants in this study are members of the next generation of potential academics. Many of their digitally mediated activities described in this thesis have contributed towards them establishing and maintaining online profiles and networking and blogging practices and developing sustainable online communities and networks that may be beneficial and influential in their post-doctoral activities, including those potentially outside the academic sector. Clearly, the



unique practices associated with the work of post-doctoral researchers, and more so that of senior academics, introduce significant additional factors that are outside the scope of this study. However, many of the challenges, concerns and rewards associated with the adoption and use of social media that have been revealed in this study will remain pertinent as my participants and their peers pursue their careers. At present, the value and legitimacy of social media engagement and output and their potential contribution to the requirements of formal research quality accreditation (such as the Research Assessment Exercise (RAE) and its forthcoming replacement, the Research Excellence Framework (REF) in the UK) remain ambiguous. Several of the participants demonstrated a critical understanding of the potential role of social media within impact and outreach agendas, and with one eye on their potential post-doctoral careers, they recognised how aspects of social media practices may become formally validated and potentially requisite to their academic activities and progression.

The (inter)disciplinary profile of my sample should also be emphasised. All participants were studying, or had backgrounds in, the social sciences, humanities or art and design. The few studies into academic use of social media that explore disciplinary distinctions (such as, British Library / JISC (2009); Proctor et al., 2010) indicate it can be a factor, and the lack of representation from other disciplines in this study, most notably the sciences, should be duly noted. However, whilst 'core' research activities (as discussed in 2.1.2) may differ widely, many of the 'peripheral' or 'secondary' activities – such as dissemination and networking – for which social media were seen to be mostly used in this study constitute academic practices in which such disciplinary distinctions are likely to be minimised. Generally, the participants' social media activities supported the extension of the 'individualist' doctoral training traditions of their programmes (see 2.1.2), And whilst those based in the Doctoral Training Centres were initiated towards more integrated modular programming and formal industrial placements, they too – as programmes became fragmented and the student community socially dispersed – became characterised by the 'lone scholar' profile. And whilst these might be more likely to engage in reflective blogging and social networking activities than their peers in the sciences, given the sample of this study, I am not in a position to compare. But it was noticeable that none of my participants used social media extensively to support the type of collaborative work (see 5.2.6) routinely associated with the 'teamwork' training tradition of the sciences (Chiang, 2003).

## 7.2.2 Doctoral Education

According to Davies and Mangan's (2006) perspective on situated learning (see 3.2.3), students attain a unique set of 'reference points' with which to regulate their academic progression. In the negotiated study model of a PhD programme, the student is largely compelled to regulate herself, albeit in a process supported and legitimised through the supervisory partnership and departmental administration, and socially mediated and contextualised within the local doctoral student community and the wider academic field. For PhD students actively engaged in social media, the potential to establish such reference points is manifestly increased through opportunities for earlier and less formal forms of dissemination and socialisation across a more geographically and potentially disciplinary dispersed academic community. In considering how these reference points are socially constructed within the digital landscape, and how they are internalised by the PhD student, Amy's perception of how a publically exposed 'book review' elevated her status beyond her relatively inexperienced position (as described in 5.2.4) is particularly potent. To me, her confession that she was "not ready for that yet" points to an instinctive, reflexive and self-regulatory understanding of the doctoral training cultures of socialisation and formal recognition, and the sudden awareness of the potential of social media practices to disrupt these.

Without the necessary guidance and reassurance of the well-established entry points and structures of academic socialisation, the digitally mediated academic landscape in contrast, resembles a less-regulated, even feral landscape. In this sense, social media practice 'in the wild' presents a double bind, providing opportunities for accessing new forms of networking, information sourcing and academic discourse, whilst risking potential marginalisation and exposure in comparison with formal academic activities. This study has clearly shown that there is a tendency within the academic community at large (not least the students themselves) to view these digitally mediated activities as marginal and trivial in comparison to the widespread and well-respected methods of formal academic networking and dissemination (see 6.2.3). But research such as this is also necessary in challenging the digital binary. My participants' repeatedly demonstrated a willingness to establish a range of digitally mediated relationships and support structures with departmental colleagues and intra-institutional communities whilst seeking reciprocal relationships with the conference circuit and wider academic networks. In sum, doctoral education is informally regulated

by norms of opportunity and expectation that can be seen as broadly defining a graduated 'internal to external' trajectory. This, for some students at least, represents a reliable and trusted form of socialisation and enculturation in the academic domain. Yet PhD students often negotiate between the internal and external domains of their department and institution concurrently, and with varying degrees of agency in both. This reinforces the relevance of the study to institutional support systems, to supervisors, doctoral departments and Graduate Schools.

The doctoral writing process (particularly the literature review) has been identified as a key site of identity production (Kamler & Thomson, 2006; 2007). This study builds on the work of Francis (2007), Barnacle and Mewburn (2010) and others in recognising social media as legitimate sites for doctoral identity development. This is not only manifest in the production of texts and other content, but in the performative roles of social interaction and discourse within online communities and networks. Rather than constricting online identity development to formal and informal digitally reified forms – epitomised by the 'online profile' and increasingly neoliberal forms of 'self-branding' – I have emphasised the principle of doctoral identity as a transformational and developmental process, in which positions and roles are social constructed within the practice contexts in which the student interacts. Therefore, it is worth repeating that the study has revealed the realities of contemporary doctoral practice, in which student identity is increasingly subject to fragmentation and correlation across several practice contexts.

The present study shows that variations in social media engagement and output may not necessarily be proportionally representative of an individual's actual activities and status. Whilst this might be partly accountable by the (potentially significant) disparity in social media activity within the social groups in question, the potential for student agency should not be overlooked. In enacting their ability to negotiate and determine how they are perceived online, PhD students can promote themselves and their emerging research in novel and innovative ways. The study has shown that PhD students can use social media to attain independence and autonomy within their institutional role whilst adhering to necessary forms of socialisation that support their professional development as independent researchers.

### **7.2.3 Social Media Practice and Training**

I am mindful of the potential transiency of the technology that underpins this study, though the majority of the participants' key social media that represented the sites of data collection comprised of types (e.g. blogs, social networks) and specific sites and brands (e.g. Twitter, Facebook) that are firmly established in both recreational and emergent academic and professional spheres. One can only speculate at the evolution of established social media practices such as blogging and social networking in the near and long-term future, or at the sustainability of specific, largely commercial platforms. Furthermore, as social media are increasingly adopted, adapted and developed within Higher Education institutions, a 'contested space' is emerging, manifest in the potential fault lines between informal academic communities and the increased institutionalisation of social media practice. I address this further in the next section.

I believe the purposeful focus on social media practice rather than technology lends itself to claims for the durability of the study. I have been careful to recognise the cultural significance of specific sites and brands and noted their influence on my participants' practices where applicable. Through individual and collective practice, specific tools and platforms can become culturally embedded and synonymous with specific activities, or can become appropriated with specific communities and networks. However, in directly addressing the multipurpose nature of social media I have shown how specific genres of social media practice – socially constructed and culturally situated in the doctoral context – evolve within and across platforms and through different modes and media. Hence, whilst the holistic perspective of this study established minimal platform-specificity, the durability of the digitally mediated academic genres will ensure its relevance for the longer term.

That said, any thesis is rooted in the timeframe in which the study is undertaken. In the early stages of my PhD, conceptual approaches to Personal Learning Environments (PLEs) constituted a prominent discourse in the educational technology field. In addition to its origins within the personal learning paradigm and as an alternative to centralised institutional platforms, it was readily adopted by researchers and educational technologists as a conceptual model for academic use of multiple and interconnected social media. Problematising the PLE concept (see 1.4.2) helped me to lay the foundation for a critique of instrumental perspectives of social media adoption and use, and highlighted the need for more

qualitative empirical studies. Whilst discourse around PLEs has subsequently matured and become assimilated into wider e-learning contexts – in some cases, dispensing with the term altogether – key aspects of the concept persist and retain cogency within the field. To me, this only underlines the need for adopting ecological approaches to examining the use of multiple and interrelated social media.

In this respect, this study provides a rich, nuanced and empirically evidenced portrayal of authentic practice around how individuals construct an ecology of tools, incorporating the 'messy realities' of trial and error and discontinuation manifest in the patterns and trends of adoption and use described in the previous chapter. This positions social media practice as developmental and polycontextual, emphasising the value of examining it, and providing training in it, within holistic and inclusive frameworks and approaches which view social media practice in context with other activities. The emergent cultural norms and perceived technological affordances of social media cannot be studied in abstract. And whilst the pervasive influence of the doctoral context of this study overwhelmingly limits its generalisability to the wider field of educational technology studies, the findings emphasise the necessity to establish a contextual understanding and recognise the situatedness of technological use generally.

My early experiences as a social media trainer helped shape some of the early motivations for undertaking this study, whilst subsequent workshops established a reciprocal relationship with my ongoing research process. Therefore, I believe I am well positioned to operationalise key findings with which to identify key implications for the (not exclusively doctoral) research training field. These are summarised as follows:

- Whilst there may be a need for platform-specific training, exclusively focussing on the technology disregards the situatedness of social media practices, in particular how they evolve within the contexts of disciplinary and peer cultures. Training should therefore be supported by holistic and practice-based approaches.
- The identification of key concerns, problems and potential solutions should emerge from experiencing the everyday use of social media in real case situations. Here, unlike training scenarios where, as the focus of attention, they comprise of abstract and prioritised tasks, social media practices are

authentic and often peripheral to ongoing academic activities. Practice based models and frameworks such as digital literacies and visitors and residents (as discussed in 2.2.3) can be utilised to support this approach.

- Critical approaches to considering what constitute 'best practices' will tend to incorporate multiple subjectivities and perspectives, focusing instead on 'shared' practices that may draw on negative as well as positive experiences, and present authentic representations of practice.
- We should promote training cultures that are participatory and culturally inclusive of different research fields. Identify emergent cultural norms in social media practices within specific academic disciplines, whilst recognising the advantages of interdisciplinary and multi-disciplinary training environments.
- Whilst we can utilise sources of expertise, such as learning technologists and educational researchers, we should encourage opportunities for participation from across the academic sector, championing in particular, early adopters in under-represented disciplines.
- The study identified the need for timely and sustainable support in developing social media practices, with opportunities for cyclical, ongoing training schedules as social media are adopted and used. Mentorship programmes may be particularly useful here.
- Integrating social media into existing, generic training programmes, models and skill sets places their use within the contexts of established academic practices. This will raise awareness to wider audiences and can help to 'normalise' social media practice.
- We can also identify the many existing channels of knowledge sharing within online academic communities and networks and integrate social media themselves to develop further opportunities for shared practice.

## 7.3 Further Research

### 7.3.1 Methodological Development

Several key limitations to the research design were identified during the course of the research. It is therefore worthwhile to highlight appropriate methodological solutions that can be seen as contributing to developing the original study. These observations are not necessarily intended as a critique of the research design, as these solutions may constitute a reappraisal of underlying aims and objectives, or require increased resources beyond the limitations of the original study, but they do indicate potential methodological approaches for further research.

#### **Including 'passive' engagement with social media**

Data collected from the participants' sites were limited to actions resulting in a new or modified digital artefact (e.g. a blog post, a 'tweet' or a bookmark). One can assume that this excluded a significant amount of participants' activities not resulting in digital artefacts, within these sites and other social media (such as reading blogs and browsing social network sites). Methods such as participant diaries and audio logs could be considered as an option with which participants could record these 'passive' activities (not necessarily throughout the entire duration of their participation, but over shorter periods). Admittedly, these would have enriched the data corpus, and provided additional and a more holistic perspective of individual practices. However, it should be recognised that the proactive and interactive roles of the participants constructing and sharing digital artefacts constituted many of the key doctoral activities examined in this study (related for example, to dissemination, networking and discussion). Further, the inclusion of further participant-recorded data will increase the potential for the Hawthorne effect, as participants may distort unobserved activities in response to the perceived needs of the researcher.

#### **Minimising cultural contexts**

The participants in this study constitute individual case studies, to the extent that they are largely unconnected in their everyday doctoral activities (across both physical and online environments). The requirement of examining and understanding the doctoral research cultures of six individuals across three universities, five departments and six (inter)disciplinary fields was a challenging

and time-consuming element of the study. There are arguments for and against minimising the cultural contexts. Clearly, whilst enlisting the same number of participants from the same department researching similar topics will enable the researcher to develop a richer understanding of a single physical research environment, it will be at the expense of a more diverse sample.

### **Secondary participants**

Within the broadly interpretivist and descriptive analysis of this study, there is inevitably a dependency on the subjective and potentially biased interpretations of the participants' views on their activities, but also on the actions and perspectives of key associated actors (such as other PhD students in their departments and their supervisors). Therefore, one might consider conducting formal interviews with these as 'secondary' participants; soliciting views related to the primary participants and the research environments (both physical and online) they may share. This would help triangulate the data collected from the primary participants to provide a richer understanding and diversify the contextual evidence.

### **Including 'non-academic' and peripheral sites**

In accordance with ethical procedure, several of the participants opted not to include some of their social media (particularly Facebook) in their consented list of sites for data collection, primarily as these were seen as being predominantly recreational (i.e. non-academic). However, there was some admittance that elements of academic and professional communication and information sharing took place on these sites. Therefore, however occasional and insignificant these instances may have been, the inclusion of peripheral 'non-academic' sites should be valued. However, even in the most holistic approaches to studying social media ecologies, parameters have to be drawn. The 'fuzzy' distinctions between recreational and professional activities and the limitations to participants' consent need to be carefully considered.

### **Web analytics**

As part of the process of establishing the participants' awareness of users and audiences related to their social media, I enquired about their use of web analytical tools. This was limited to several participants reviewing statistical data on page views on personal and group blogs and content sharing sites. The use of web analytics in recent years by web social media researchers highlights the potential benefits of greater quantitative and – to a lesser extent – qualitative



analysis of the social web connectivity. This has been augmented by increasingly sophisticated visual representations of interaction between members of online networks and communities, and coincided with the emergence of the altmetrics movement in tracking formal publication access. Clearly, the statistical and demographic data I collected on the participants' online communities and networks (see 4.4.4) was used exclusively to inform me in interview discussions. Whilst this data was not directly shared with the participants, in a participatory research process, the use of these advanced analytical tools would enable access to richer data resources can contribute to a 'mixed methods' study.

### **7.3.2 Conceptual Development**

As I briefly discussed in the previous section, increased institutional adoption and development of social media by universities has coincided with a leveraging of resulting practices towards impact and outreach agendas, creating an area of contestation between these top-down interventions and the self-directed, informal and largely independent activities of academic practitioners. This has established a potential fractious relationship between research and academic outputs that are 'marketed' and those that are authentically legitimised through the informal discourse of the academic community. Further, the rise of multiple-author blogs and increasingly journalistic online publishing platforms has reconfigured the academic social web beyond the individual blogging and nascent online communities of early adopters towards another contested space that looks to support academic impact and promote participating academics as public intellectuals.

In conducting this study, I drew on existing literature to establish conceptual links between Activity Theory and sociocultural interpretations of genre studies and Holland et al's work to incorporate both genres and figured worlds within my activity systems analyses. Whilst this partly informed my continued understanding of activity systems development, it constituted a significant extension of the theoretical and conceptual links, to their use within an analytical framework employed for empirical research. I believe both are pertinent to the discussion above. This study points to the increasingly diverse practice contexts oriented through digitally mediated academic practice. If we are to understand both their emergence and their prevalence to collapse, then we need to examine how contexts are personally and socially constructed, through the use of

heuristics such as figured worlds. Genre studies provide an understanding of how artefacts, platforms and activities interrelate to account for the dynamism, interconnectedness and unpredictability of social media practice. Yet to understand how those practices are congruent in social, cultural and political systems that underpin the areas of contestation described above requires a more holistic perspective such as the Activity Theory framework used in this study. In their work on genre ecologies, Spinuzzi and Zachry (2000) contrast the flexible and decentralised characteristics with the tendency to accommodate formal and institutionalised norms. For me, this resonates with the notion of social media as ambivalent technology, as discussed in 2.2.1, and Feenburg's (2002) argument for more participatory and inclusive forms of technological development. This raises fundamental questions over the nature of the relationship between educational technologists, institutional management and invested communities of academics.

That many of the observations outlined above are located in the post-doctoral environment is perhaps reflective of my own self-interests at this stage of the thesis, but redirecting these ideas back to the doctoral context of this study, I am reminded that several of my participants contributed to departmental blogs and online magazines which characterise the emerging academic digital landscape described above. There are, it seems, increasing opportunities for PhD students to participate in such, potentially engaging with global academic audiences even before they take their first tentative steps into presenting their work within the supportive environment of their department. As I established in Chapter 2, the doctoral training environment is also in a contested and transformative state of 'competing rationalities.' Given the increasing numbers and competitiveness of doctoral education, and the increasing precarity of academic careers, the focus on developing new researchers that are independent, flexible, self-sufficient and entrepreneurial is seen as increasingly important. As an ambivalent technology, social media can, and will continue to be utilised to facilitate scholarly discourse and collaboration within a supportive faculty, whilst supporting self-efficacy and the capacity and resilience to engage in the increasingly unreliable academic environments of the future.

## 7.4 Final Thoughts

From the outset of this thesis, a relationship was established between the risk averse and tentative use of social media by the majority of PhD students and the perceived dominance of established academic practices and processes of socialisation within doctoral education. Both my experiences in running the social media workshops and the limited literature on the subject pointed to it, and it became a key focal point as the study evolved. This relationship can be seen as a double bind underpinning many of the contradictions that are presented in the taxonomy in the previous chapter, confirming that social media practices can both challenge and augment the well established and important support structures of supervisors and peers within doctoral departments and the wider academic community.

Doctoral education represents an increasingly complex landscape upon which many new PhD students will have the opportunity to traverse, and increasing numbers will engage in developing their own social media practices. Whilst I hope this research can contribute to a greater understanding of the topic, and may influence and guide doctoral training and further research in the field, we should all ensure it is a landscape in which the next generation of researchers have agency in developing and shaping.

It is a landscape that is becoming increasingly well trodden, and I finish adding my footprints here.

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# Appendix 1: Participant Sites of Data Collection

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The following tables provide a summary of all sites of data collection for each participant, as agreed with each participant in accordance with ethical procedure and documented in each participant's Sites Agreement Form (P3).

## Key to Headings

### **Name**

The generic name or social media brand used in the thesis text to describe the site. Actual names of personal/group sites (e.g. blogs, Facebook groups) are not disclosed in accordance with ethical procedure.

### **Type of Site**

Refers to categories of social media platforms as used by Wikipedia.

### **Period of Active Use**

The beginning and end of the participant's active use of site, as defined by digital output. The site may have been online and used by others before or after the participant's activity. 'Present' indicates the participant continued using the site after his/her participation in the research.

### **Summary**

Brief overview of the site and the nature of the participant's activities.

### **Participant Role(s)**

Participant's key role or the type of account or registration to the site.

### **Community**

Brief summary of participant's relationship with other site users and/or audiences. Quantities related to membership of sites or participants' networks (friends, followers etc.) are applicable to the beginning of the data collection period. Information relating to web traffic ('page views') of sites is discerned from participants' own analytical knowledge.

### **Data Source(s)**

The type(s) of data collected (i.e. digital artefacts). Quantities related to digital artefacts (blog posts, tweets, bookmarks etc.) are shown in parentheses and are applicable to the end of the data collection period.

### **Researcher Position**

The mode of access (type of account/registration) used by the researcher, and the relationship with the participant within the context of the site (see Ethical Procedures).

# Amy

Name	Type of Site	Period of Active Use	Description	Participant Role(s)	Community	Data Source(s)	Researcher Position
Masters Blog	Blog (Blogger.com - site-hosted).	Sep 2008 - May 2010	Personal academic blog. Originally set up as course requirement of MA Design Ethnography course requirement. Used periodically after course and subsequently kept online.	Founder and single author.	Linked to formal blogging network with MA colleagues and tutors. Several comments from colleagues.	Posts (24), pages, profile, MA blog network profiles and links.	Viewer. Content publically available.
Scribd	Document sharing site.	Sep 2008 - present	Periodically used to share academic papers.	Personal account.	No social interaction. Not publically promoted - only occasional views.	Documents (5).	Viewer. Content publically available.
Twitter	Microblog.	May 2009 - present	Used initially as an ethnographic research tool and subsequently as a search engine. Adopted limited strategic networking activities to source key resources.	Personal account.	Following 28, followed by 32. Primarily design practitioners initially. Several research students subsequently added including DTC colleagues.	Tweets (112), profile, followers/followees' profiles.	Personal account. Follower of participant.
PhD Blog	Blog (Blogger.com - site-hosted).	Jul 2010 - present	Personal academic blog. Set up following Amy's enrollment to DTC. Frequent book 'review' posts during preparation for annual assessment constituted early content.	Founder and single author.	Several comments, mostly from father. No tracking of page views by Amy. Not publically promoted - assumed very low audience.	Posts (31), pages, profile.	Viewer. Content publically available.
DTC Students Group Blog	Blog (Wordpress self-hosted)	Sep 2010 - July 2011	Created by fellow DTC student, to showcase all PhD students in DTC. Varied contribution from students. Amy became key contributor, primarily redrafting posts from PhD blog.	Contributor (co-author).	Contributions from four other DTC students. Very little commenting on each others blogs. Use of web analytics - believed by Amy to have gained up to several thousand views a month.	Posts (Amy: 7 / Total 16), pages, profiles, links to University, student and external sites.	Viewer. Content publically available.
Mendeley	Social referencing and citation site.	Oct 2010 - present	Experimental and very limited use as a personal bibliography.	Personal account.	No social activity.	References (5), profile.	Personal account. Content publically available.

# Amy

DTC Students Website	Website (self-hosted)	Mar 2011 - present	Developed collaboratively by DTC students through informal group project. Primarily a promotional website showcasing students and their research projects in DTC. Amy contributed research profile. No blogging.	Co-founder, contributor and co-author..	Less blogging than Group Blog, and less opportunities for interaction and comments between students and visitors. Amy unaware of any traffic statistics.	Profiles, project reports, blog posts. Links to University and external sites.	Viewer. Content publically available.
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## Ben

Name	Type of Site	Period of Active Use	Description	Participant Role(s)	Community	Data Source(s)	Researcher Position
Twitter	Microblog.	Jun 2010 - present	Infrequent and inconsistent use. Mix of academic and recreational tweets. Main online site for promoting tumblr and blog posts.	Personal account.	Following 36, followed by 29. Primarily non-academic - collectors and industry related.	Tweets (54), profile, followers/followees' profiles.	Personal account. Follower and followee of participant.
Tumblr	Tumblr (Tumblr).	Jun 2010 - present	Personal academic tumblr. Experimental mix of short text posts, with links, images and videos from the web.	Founder and single author.	Limited interaction (comments, likes) with other Tumblr users initially, primarily collectors.	Posts (26), profile.	Viewer. Content publically available.
Delicious	Social bookmarking site.	Jun 2010 - present	Links to web content predominantly related to collectors-based contexts. Some academic blogs and websites.	Personal account.	No social activity (followers, followees).	Bookmarks (43), profile.	Viewer. Content publically available.
Blog	Blog (Blogger.com - site-hosted).	Nov 2010 - present	Personal academic blog. Longer and more academic posts than Tumblr, some related to thesis chapter developemnt. Continued to incorporate multimedia elements explored in Tumblr.	Founder and single author.	No comments. Ben unaware of traffic - no use of web analytics.	Posts (17), pages, profile.	Viewer. Content publically available.



# Jack

Name	Type of Site	Period of Active Use	Description	Participant Role(s)	Community	Data Source(s)	Researcher Position
Art Blog	Blog (Blogger.com - site-hosted).	c.2008 - present	Personal blog. Two regular guest bloggers. Reduced contribution since starting PhD studies.	Founder and principal author.	Well established Blogger community group - links to other arts practitioners. Also established good frequency of comments (average two per post)	Posts (29), pages, profile.	Viewer. Content publically available.
Google Reader	Online RSS Reader.	c.2008/9 - present	Subscriptions of primarily arts practitioners and organisations blogs / websites. Several academic blogs including other PhD students.	Personal account. Single contributor.	No social activity.	Site subscriptions.	Viewer. Content publically available.
Academic Blog	Blog (Blogger.com - site-hosted).	c.2009 - present		Founder and single author.	Limited comments.	Posts (19), pages, profile.	Viewer. Content publically available.
Arts Practitioners Facebook Group	Facebook group.	Feb 2009 - present	Specific arts practitioners group based on	Assigned administrator and member.	113 members.	Posts, resources, members profiles.	Non-participatory Member.
Teaching Facebook Group	Facebook group.	Apr 2009 - present	Focus on arts practitioners teaching in Further and Higher Education	Member and contributor.	508 members.	Posts, resources, members profiles.	Non-participatory Member.
Twitter	Microblog.	Apr 2009 - present	Network consisting predominantly of contacts from doctoral-related activities. Many individuals are members from other sites / communities listed here	Personal account. Single contributor.	Following 158, followed by 179. Wide range of academic and thesis-related individuals, groups and organisations	Tweets (2060), profile, followers/followees' profiles.	Personal account. Follower and followee of participant.
Community Project Blog	Blog (Blogger.com - site-hosted).	Jun 2009 - present	Two blog posts contributed by Jack.	Contributing author.	No comments. No known web analytics.	Posts, pages, documents, profile.	Viewer. Content publically available.
Delicious	Social bookmarking site.	Aug 2009 - Feb 2011	Very productive user - over 1,000 bookmarks. Links predominantly consisting of art, teaching and subsequently, thesis-related contexts.	Personal account. Single contributor.	Small network - Following 3, followed by 8.	Bookmarks (1035), profile, network profiles.	Viewer. Content publically available.



# Jack

Tumblr	Tumblr (Posttrous).	May 2010 - present	Visual 'scrapbook style' blogging site, curating images and multimedia. To document researcher reflexive process.	Founder and single author.	Several comments, primarily from colleague in DTC. Participant has no knowledge of page views.	Posts (41), profile.	Viewer. Content publically available.
Pinboard	Social bookmarking site.	Feb 2011 - present	Links to web content predominantly related to general academic and thesis-related contexts. Bookmarks transferred from Delicious.	Personal account. Single contributor.	No social activity.	Bookmarks (1156).	Viewer. Content publically available.
About Me	Personal web service / profile site.	Mar 2011 - present	To develop academic online profile. Provided links to other sites: academic blog, Twitter, Google Reader, Delicious and university profile page.	Personal account. Single contributor.	No social activity.	Profile, links.	Viewer. Content publically available.
Pinterest	Visual bookmarking site.	Aug 2011 - present	Very limited and experimental initial use. Exploring similar themes developed through Tumblr.	Personal account. Single contributor.	No social activity.	Content, profile, links	Viewer. Content publically available.

# Jenna

Name	Type of Site	Period of Active Use	Description	Participant Role(s)	Community	Data Source(s)	Researcher Position
Facebook	Social networking site.	c.2006 - present	Primarily recreational / casual network. Useful for updates on academic, activist and LGBT society activities. Very rarely contributed.	Personal account.	147 friends. Includes colleagues from academic, activist and LGBT society activities.	Posts, friends profile.	Personal account. Friend.
Delicious	Social bookmarking site.	July 2007 - present	Regular and consistent use. Wide range of academic and activist-related web content.	Personal account.	Limited social activity. Followed by 6 other users.	Bookmarks, profile, network profiles.	Viewer. Content publicly available.
Dreamwidth (formally LiveJournal)	Online journal and networking site.	c.2009 - present	Online journal site and forum. Well established community development initially founded in LiveJournal. Regular posting and discussion.	Personal account.	Multiple levels of access and privilege. High levels of control over access.	Posts, comments, links.	Non-member. Limited content available.
Mendeley	Social referencing and citation site.	c.2009 - present	Experimental use. Profile only. No papers added.	Personal account.	1 group. 1 follower.	Bookmarks, profile.	Member. All content is available.
Academia.edu	Academic social networking site.	c.2009 - present	Academic social network - Institutional / Faculty based Doctoral level upwards.	Personal account.	Following 18, followed by 14. Primarily other PhD students and external to institution.	Profile, resources, network.	Personal account. Follower and followee of participant.
Twitter	Microblog.	Feb 2009 - present	Prefers to limit followees to manageable number.	Personal account.	Following xx, followed by xx. Network consisting predominantly of contacts from academic, activist and LGBT society activities.	Tweets, profile, followers/followees' profiles.	Personal account. Follower and followee of participant.
Student Protest Group Blog	Blog (WordPress self-hosted).	Nov 2010 - present	Blog publicising activities of campus-based protest group against UK Higher Education fees and cuts.	Technical and editorial contributor.	University students and supporters. Links to other protest groups. Several key authors and contributors to site.	Posts, pages, links, resources.	Viewer. Content publicly available.
Blog	Blog (WordPress self-hosted).	Dec 2010 - present	Blog posts related to thesis and other academic activities.	Founder and single author.	Several comments from other academics. Links to other PhD students and academics. Uses blog analytics to check page views. Reported steady rise in traffic.	Posts, pages, links, profile.	Viewer. Content publicly available.



# Michelle

Name	Type of Site	Period of Active Use	Description	Participant Role(s)	Community	Data Source(s)	Researcher Position
Website	Content Management System / portfolio website (self-hosted)	c.2008 - present	Personal website initially set up to promote professional design work. Integrates different functions including blog posting and portfolio.	Founder and single author.	Several comments on 3 of the blog posts.	Portfolio, blog posts (27), profile.	Viewer. Content publically available.
LinkedIn	Professional networking site.	Nov 2008 - present	Highly developed use for professional profiling and networking.	Personal account.	167 connections. Primarily design practitioners. Member of several special interest groups.	Profile, groups and connections' profiles.	Personal account. Connected with participant.
Slideshare	Presentation sharing site.	Sep 2009 - present	Used to share presentation slides from events.	Personal account.	Following 32, followed by 19. Comments, likes and embeds. Presentations averaged several thousand views.	Presentations (5), profile, network profiles.	Viewer. Content publically available.
Twitter	Microblog (2 accounts).	Dec 2009 - present	Network activities and postings predominantly related to PhD design / enterprise activities. Keeps recreational output to a minimum.	2 x personal accounts - initial primary account and second one for events.	Account One: following 578, followed by 314. Account Two: following 31, followed by 2. Predominantly PhD students and design practitioners, groups and organisations.	Tweets Account One: 891. Account Two: 131), profiles, followers/followees' profiles.	Personal account. Follower of participant.
DTC Google Group	Community network site (Google Group).	Jan 2010 - present	Private internal community staff and students of DTC primarily to keep in touch with latest news. Became one of the most prolific users and advocates of site, initiating discussion topics and threads.	Member.	Internal and private. Used by 2 staff and 12 students of DTC. Active participation by a minority of cohort.	Forum posts, resources.	Non-participatory member. Access granted by DTC Programme Leader.
Flickr	Image sharing site.	Mar 2010 - present	Used to collate and share photos, primarily from events and conferences. Incorporated event / conference hashtags.	Personal account.	Several supportive and largely trivial comments on events.	5 sets of photos, comments.	Viewer. Content publically available.
Design Online Community	Community network site (Ning).	Apr 2010 - present	Small scale site for sustainability and design. Partly sponsored by UK University. Large academic focus.	Member.	41 members. Mix of academic and social enterprise.	Profile, blog posts (4), forums, resources, network and group profiles.	Non-participatory member.

## Michelle

Placement Project Blog	Blog component of CMS / website.	Apr 2010 - Sep 2010	To promote work at industrial placement. Contributed to project documentation. Developed diary style blog writing to document placement.	Contributor.	Other company and project members.	Blog posts, project reports, profile.	Viewer. Content publically available.
Events Blog	Tumblog (Posterous Spaces - site-hosted).	Nov 2010 - present	Created specifically for events / conferences. Used to develop live blogging.	Personal account.	Several blog comments from event attendees. Includes one guest post by event convener.	Posts, comments, profile.	Viewer. Content publically available.
750 Words	Online writing site.	Apr 2011 - present	Adopted to develop writing practice. Frequent (usually daily) use.	Personal account.	None. Private site.	Posts (14).	Invited access to private account.
Research Methods Online Community	Community network site (Ning).	May 2011 - present	Large interdisciplinary community of academic researchers. Wide-ranging focus on research methods.	Member.	Member of several special interest groups within site - primarily related to ethnography, focus groups and online methods.	Profile, blog posts, forums, resources, network and group profiles.	Non-participating member.
Design Project Blog	Blog (Wordpress - self-hosted).	Jun 2011 - present	Blog documenting and promoting collaborative project with colleague from DTC and two others.	Co-founder and co-author.	Project team of four.	Posts, pages, profiles.	Viewer. Content publically available.
Design Project Wiki	Wiki (Wikispaces - site-hosted)	Jun 2011 - present	Collaborative text editing and shared documentation with additional visual resources.	Co-founder and contributor	Private. Shared between four members of project, each with full editing privileges.	Documentation.	Non-participating member. Access granted by participant.
Academia.edu	Academic social networking site.	Sep 2010 - present	Academic social network - Institutional / Faculty based Doctoral level upwards.	Personal account.	Following 10, followed by 6. Other PhD students.	Profile, resources, network.	Personal account. Content publically available.



# Paula

Name	Type of Site	Period of Active Use	Description	Participant Role(s)	Community	Data Source(s)	Researcher Position
Literature Facebook Group	Facebook group.	c. 2008 - present	Canadian Studies literature group to encourage and support the study of Canadian literature and culture in the UK.	Member.	52 members. Mainly UK based Canadian Studies postgraduate students.	Posts, resources, members profiles.	Non-participatory Member.
Canadian Studies Facebook Group	Facebook group.	Mar 2008 - present	Academic network with a strong focus on sharing event and conference information.	Co-founder and member.	84 members.	Posts, resources, members profiles.	Non-participatory Member.
Cities Studies Facebook Group	Facebook group.	Mar 2009 - present	Postgraduate researchers interested in city space and spatial theory.	Co-founder and member.	23 members.	Posts, resources, members profiles.	Non-participatory Member.
Community Arts Network	Community network site (Ning).	Mar 2009 - present	Social network site for a largely volunteer-based community arts and creative technology group in North American city district.	Member and contributor.	Members (total unknown) connected with arts community.	Profile, blog posts, forums, network profiles.	Non-member. Content applicable to participant publically available.
Twitter	Microblog.	Apr 2009 - present	Network consisting predominantly of contacts from doctoral-related activities, many members of other sites / communities listed here.	Personal account.	Following 539, followed by 380. Wide range of academic groups and organisations.	Tweets (732), profile, followers/followees' profiles.	Personal account. Follower and followee of participant.
Academia.edu	Academic social networking site.	Nov 2009 - present	Institutional / Faculty based networking site from postgraduate level upwards. Uses site to disseminate conference papers.	Personal account.	Following 33, followed by 27. Primarily other PhD students and most within same discipline.	Profile, resources, network.	Member. Follower and followee of participant.
Delicious	Social bookmarking site.	Jan 2010 - present	Links to web content predominantly consisting of thesis-related contexts	Personal account.	No social activity.	Bookmarks.	Viewer. Content publically available.
Internship Blog	Tumblog (Posteros).	May 2010 - Aug 2010	Blog supporting student internship. Documenting arts event and pamphlet at local contemporary arts institution. Most posts by Paula.	Founder, co-coordinator and principal author.	8 Subscribers.	Posts, resources.	Viewer. Content publically available.
Psycho-geography Blog	Tumblog (Posteros).	May 2010 - present	Blog supporting activities to Psycho-geography activities related to University Cities Group	Founder and single author.	No other contributors.	Posts.	Viewer. Content publically available.

## Paula

PhD Students Project Wiki	Wiki (Google Sites - site-hosted).	Jun 2010 - present	Collaborative site for co-creators (core team) of initiative. Used mainly during the funding proposal and early development stage	Co-founder and co-contributor.	Editing limited to three core team members. Content openly accessible to everyone to demonstrate collaborative work in progress.	Collaborative texts.	Viewer. Content publicly available.
PhD Students Project Blog	Blog (WordPress - self-hosted).	Aug 2010 - present	To promote and document AHRC-funded student initiative for Arts & Humanities PhD students in the East Midlands. Paula contributed to core team blog posts.	Co-founder and co-contributor.	Aimed at project participants and wider audience.	Posts, pages, links, resources, profile.	Viewer. Content publicly available.
PhD Students Project Twitter	Microblog.	Aug 2010 - present	Core team account. Small amount of activity focussed around key events.	Group account. Co-contributor.	Following & followers. Project participants and other Arts and academic groups and organisations.	Tweets, profile, network profiles.	Personal account. Follower and followee.
PhD Students Project Flickr Group	Image sharing site (Flickr).	Sep 2010 - present	Account for sharing photos of project events. Use of project tag to link with participants' accounts.	Co-founder and contributor.	4 sets of photos. Administered by core team members.	Photos.	Viewer. Content publicly available.
PhD Students Project Tumblr	Tumblr (Tumblr) (embedded into project blog).	Sep 2010 - present	Blog for participants. Embedded into main project blog.	Contributor.	Open to all project participants - Arts & Humanities postgraduate researchers in the East Midlands.	Posts.	Viewer. Content publicly available.
PhD Students Project Delicious	Social bookmarking site.	Sep 2010 - present	Social bookmarking site, set up for all participants to collate and tag web references	Co-founder and contributor.	Participants.	Bookmarks.	Viewer. Content publicly available.
PhD Students Project Facebook Group	Facebook group.	Sep 2010 - present	Core team account	Co-founder, member and contributor.	Participants. 10 members.	Posts.	Non-participating member.
LinkedIn	Professional networking site.	Sep 2010 - present		Personal account.	23 connections. Primarily early career academics.	Profile, group and network profiles.	Personal account. Connected with participant.

## Appendix 2: Participant Interview Guide

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The following is the standard guide used for the first round of interviews, which was annotated with participant-specific notes for each interview where applicable.

### Additional References

- List of social media sites / pages to be referenced during interview (shared with participants prior to Skype interviews only)
  - Participant social media timeline
  - Community / network profiles
- 

### 1. Proceedings

- 1.1 Recap of my research
  - 1.2 Summary of interview process
  - 1.3 Recording, transcription and access to transcription
  - 1.4 Any questions before proceeding?
- 

### 2. Academic History

Review previous academic studies (first degree up to current PhD)  
With specific focus on:

- Academic Discipline(s)
- Location (institutional / departmental cultures)
- Key foci of study
- Aims / motivations and experiences
- Other activities (gaps in studying, employment, volunteering etc.)

Explore the relevance of each to current PhD study

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### 3. Previous Social Media (not indicated as current use)

Including academic and non-academic use, with particular focus on:

- Experiences in using social media
  - Relationship with / transition to current social media use
  - Relationship with / transition to current academic communities / networks
- 

### 4. Thesis Development

Review development of doctoral study from beginning and establish current status. With specific focus on:

- General field of study
- Research topic (aims / questions)
- Methodology and methods
- Stages of development (proposal, formal requirements, chapter development)

## 5. Other Academic Activities

5.1 Additional academic activities not directly related to doctoral programme

5.2 Other academic activities not directly related to doctoral programme requirements

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## 6. Summary of Social Media Use

6.1 Verify any social media / timeframes if necessary (with reference to Social Media Timeline)

6.2 Identify additional social media use (not on Timeline)

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## 7. Current Activity (for each selected social media)

7.1 Origins of using

7.2 Motivations for adopting

7.3 Community / network development (with reference to network / community profiles)

7.4 Experiences of using

7.5 Schedules / routines

7.6 Future development

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## 8. Academic Use of Social Media

8.1 Within core discipline(s)

8.2 Within department / DTC

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## 9. Training and Shared Practice

9.1 Opportunities for formal and informal training related to social media use

9.2 Opportunities for shared practice and peer knowledge

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## 10. Future Activity

10.1 Academic activities. (chapter development, literature review, fieldwork, data collection & analysis etc.)

10.2 Key events / deadlines (Annual report / confirmation of status, conferences etc.)

10.3 Social media (Plans for adoption / development of social media etc.)

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## 11. Wrapping Up

11.1 Miscellaneous. Add further topics (not included above) here that arise during the interview...

11.2 Any questions? Opportunity for participant to raise any issues that have not been discussed

11.3 Next interview



## Appendix 3: Participant Interview Transcript

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Jenna Interview 2  
27/05/2011

[0.01.22]

**Ok, So I wanted to focus a bit more on the background to establishing the blog.**

Yeah, I think that, in a sense, if you're in this generation of young researchers, your web presence is kind of part accident, and part by design.

[0.01.57]

**Ok, that's interesting.**

You know, if you've just generally kind of been on the internet since you were kind of fifteen or sixteen, which I've done, then you do get an online presence but when you're fifteen or sixteen you might not be quite concerned with the things that you are ten years later.

So when I kind of started my own online journal it was, you know, kind of sixteen emo-kid type stuff, and I went back and made a lot of those things private or filtered to a certain group of people and things, whereas the blog is now kind of this quite conscious, deliberate 'this is how I want to portray myself to this academic community' rather than 'yeah, I know, it would be a brilliant idea to get an online journal and kind of whack anything up there.'

[0.03.06]

**Yeah, I was going to go back to that a bit later, but we can flesh that out a bit now really... because one of the things I was interested in was... since you started the academic blog, and this quite purposeful, strategic way of using blogging in this way, I'm interested in whether that changed your activity in the Dreamwidth site...**

Well that's kind of interesting because there hasn't really been that much overlap. 'Cos one of the things I was kind of struggling with before I started the blog was, I want to talk about my research... and kind of go off into the interesting tangents that you can't go into on a thesis, but at the same time, if I'm doing that I also want to kind of get this blog put out and make it kind of... at a conference for example, 'oh, if you want to look at this I'm going to write about it on my blog.'

[0.03.55]

**So why couldn't you do that using the Dreamwidth site?**

I didn't feel comfortable putting the URL of my more personal stuff out there, basically.

[0.04.28]

**Why?**

Because the Dreamwidth site is a lot more personal and also it's a lot more interconnected. So you can mark up things like interests for example in your profile, and these can be kind of quite revealing and it's not necessarily something that you want to have out there for the entire academic community to see.

So to start with, I was actually kind of hesitant about writing about my research online, but now I've found a way of being able to shunt them off into different places, really.

I don't have so much of a problem because I don't write say, fan fiction like a lot of others do. And there are actually a lot of academics on the site who are kind of saying 'I am an

academic, but at the same time I engage in these kind of activities.' So there are perhaps things that I don't want my supervisor or the person who might want to hire me for a job or something to know about.

**[Yes...]**

That's something I'm trying to develop really. How can you frame criticism of the higher education system when you actually want a job in it?

**[0.06.49]**

**What elements are there from this site that you would say have transferred to the academic blog?**

One of the things that kind of spurred me on was that, was about direct action and protest movements today, and there's a journalist called \_\_\_\_\_ who I've kind of known since she was on LiveJournal, when she was a university student, and we kind of swapped comments and followed each other's journals and I was talking to her about suffragist militant action, and she actually wrote an article that used one of the quotes that I supplied and referred to some of the things we'd been talking about... the argument of the... [inaudible] And then I thought, actually I kind of want to... if I'm going to do this with other people I want to be acknowledged for it. But then I don't want this acknowledgement to come in the form of my personal space. I want a more kind of official online presence.

**[0.07.52]**

**So this particular incident, were there other similar examples?**

Yeah, kind of, I just remember this 'cos... I remember I was showing friends a few days later, and actually this particular friend, I don't want him to know about my personal site.

**[0.08.35]**

**I've obviously looked at the Dreamwidth content going way back, and I can see elements of academic-related discussion going on and it's kind of...**

It's more informal...

**[0.08.57]**

**Well it is, but it's also quite spontaneous perhaps.**

Yeah obviously you don't have access to all of the content. Some of it is locked to subscribers and people I've given access to. And some of it is filtered to a sub-section of those people, so...

**[No, I appreciate that...]**

So there probably is some other stuff but you're just not getting access to that.

**[0.09.40]**

**Could you describe this a bit more?**

Em. It's mainly through making connections with other academics who are on the site, but it's often in a kind of informal, 'oh my God, this chapter's not coming together' and then other people are responding with 'yeah, I know how you feel, have you tried this?' or 'I know, let's form a kind of anti-chapter organisation and burn our chapters' or something.

**[0.10.21]**

**Yeah, that's similar to what I've seen. See what I find interesting about this, and I made a note of this as a question... is that sense of community within Dreamwidth, and that type of informal discussion and spontaneity. This is not so evident on your blog, which has a limited number of more formal comments. I mean, we can discuss that later...**

Yeah, I guess that's taken a bit of getting used to. On the Dreamwidth site, it's very easy to access other people's entries and it's very easy to leave comments... and a lot of the relationships which I have on there are several years old, and some of the people who are now PhD students, we've known each other since we were undergraduates. So we've kind of built up that relationship.

**[0.12.54]**

**Whereas the blog...?**

Well you have the formal blogrolls of academics and so on, and you read what they write but I think commenting is less... it's not as big a part of the culture as it is on Dreamwidth. Where it's about exchange and forming that community, and it's multi-directional really in having these exchanges...

**[0.13.40]**

**So what do you mean by multi-directional?**

You know, your not kind of putting an entry out there and expecting people to just read it. You're expecting people to engage with it, whereas the more formal blogging thing seems to be 'this is something I'm putting out there. You probably won't comment on it.'

**[0.14.57]**

**I wanted to discuss how generic or specific some of this academic discussion is...**

It is pretty cross-disciplinary. I mean off the top of my head, I know people working in early medieval history, maths, anthropology and a few linguistics as well.

**[0.16.30]**

**I mean, I know we discussed in the previous interview your perceptions of your own core discipline, and inter-disciplines, and the kind of peripheral areas around that.**

**How do you see the role of Dreamwidth in establishing these?**

It does foster an awareness of other disciplines, and what they do and how they fit with my research. And what's normal for other disciplines.

**[0.17.41]**

**And I guess related to that is the specificity of these discussions - how specific or generic are these discussions in relation to disciplinary practice.**

Some of it about the experience of being a PhD student, and I suppose the commonality of experience, like you're always going to have similar problems with the library and overdue books for example, or I'm being bombarded with e-mails, kind of those things.

**[0.18.22]**

**Yeah I see there's plenty of that. But here for example, where you discuss  
That's more specific...**

Yeah, it might be a discussion like, 'oh, I'm using this theory, within my social science community, it's more relevant. It's more supportive, and sharing experiences.

One of the things which is quite a big thing is I've got a student who is plagiarising material, or they are handing in assignments late. So asking others how would you deal with this situation. So, do you talk to the student about it, do you get support from the course convenor? You know, what do you do about it? Would you be confrontational? Would you be kind of quite gentle about it? So kind of working through these things together. I've had an interview for teaching. What sort of things might they ask? That sort of thing.

So there are people responding to those things who have already done it, and there are these people who are maybe a couple of years behind.

**[0.20.44]**

**It's interesting you used that as an example. If you find yourself in a situation like that, do you...**

[Yeah, there's the tagging systems...]

**...I mean, you might look at formal things online, forums etc. or even other social media, but how does Dreamwidth fit with this?**

Yeah, you'd be in a situation where, 'hang on, I remember this person had an issue related to this six months ago,' so I would go back and have a look at that. Or I would go to a more specific community, and you'd search the tags and the archives and see anything there.

And also because you can lock entries you are able to have these discussions. Because you don't want one of your students to come across this kind of thing where you're going 'my class is so difficult, I don't know what to do.'

**[0.22.49]**

**How... I mean I've tried to analyse this to an extent, but how often does this type of content get moderated or updated collectively by the community, informally... if you know what I mean?**

Well one of the things that Dreamwidth offered over Livejournal is separating the access and subscribers list...

**[0.23.30]**

**Yeah, I remember...**

So if that person writes really cool stuff I want to subscribe to them, and that means you aren't giving them access to anything you have got locked. So subscriptions are quite common, and if they think you look quite interesting they'll subscribe back, and you exchange comments and you read some more their stuff and you get to the point where it's ok for this person to have access to the locked entries. I mean people use it in different ways. It's been interesting to see that culture emerge. Some people... you know, if they subscribe to you, they also give you access.

**[So...]**

So, there's less invested in the subscriber relationship, in a way, so more people will do it.

**[0.25.06]**

**Would you say the way you use LiveJournal has changed since you started the academic blog?**

Not really. It's gone down a bit 'cos I've been really busy, but I wouldn't say it's really changed that much. Mainly the more formal and specific academic stuff that I wouldn't have discussed at necessarily on LiveJournal.

**[0.25.54]**

**So how do you see these two working together? Because you are currently very active on both of them.**

I don't really have a strategy as such. At the moment I'm using the Dreamwidth account for more personal stuff which you don't have access to, and almost as a kind of sketchpad type thing. So it's almost like a developers sandpit, somewhere where you can sort of poke ideas around and it doesn't have to be pretty and neat and organised and anything like that, and you can explore a bit and if it doesn't work it doesn't work, and there's no pressure.

**[0.27.48]**

**Ok, last time we discussed a bit about how these relate to Twitter and Facebook. I know you don't really don't like Facebook so I'm happy to leave that...**

Yeah, I rarely check it. [Inaudible] I keep it around because it's how the LGBT committee I'm on organises everything on there, so I have to keep a presence.

'Cos Twitter fulfils the short updates from friends thing. Dreamwidth offers better privacy control and community development and things. And Facebook is just this awkward... Is it a personal thing? Is it a professional thing?

If I add something all these academics can see it, but so can my friends from secondary school. I think Facebook tries to be all of these things, but without giving you much control over privacy and access.

I really dislike it actually.

There is quite a lot of overlap with Twitter and Dreamwidth. Facebook... kind of less so really. I've heard it described as Facebook as the people you went to school with, and Twitter as the people you wish you'd been to school with. So people who are kind of... I don't know... less likely to have these kind of experimental forms of social media.

**[0.30.30]  
So more non-academics?**

It's hard to say 'cos I really go don't use it much. I go on and check messages that are activist and community type stuff, but I don't really check people's updates anymore.

**[0.32.17]  
Ok. I'd quite like to look at... I'm interested in your motivations and habits in terms of making and keeping contacts across these platforms. Thinking about academics only.**

Facebook... if I've met that person then generally yes, I'm pretty indiscriminate with that. Twitter is kind of the noise to signal ratio. Like if a person is tweeting a lot of stuff about something I don't care about then I don't follow them back. I mean after I went to the NUS LGBT conference, I kind of acquired a lot of followers...

**[0.33.00]  
Yeah I was going to discuss the conferences later.**

actually follows my Twitter account and I don't follow him. I mean, what the hell. Look at that. Because he actually just tweets a lot of stuff that isn't that interesting.

**[0.33.43]  
In what way?**

It's kind of like do I want to see this person's tweets in my timeline... Am I going to resent this person for tweeting crap all the time.

**[0.34.10]  
I would say you are much more strategic in Twitter, but what's the criteria for making these type of decisions, would you say?**

I spend more time Twitter...

And I already follow quite a lot of people, and if I spend a day away from it am I going to have hundreds of things that I would want to catch up on. People use it in different ways. Some people I know use it a kind of low volume but personal way, whereas others use it as a kind of newsfeed. And if I find something interesting I retweet it. How many conversations do you have... If I wanted to see this kind of exchange I would go and join [inaudible] or something.

**[0.36.51]**

**It's interesting thinking about your followers/followees profile and I looked at the overlaps and it's not necessarily that reciprocal. Which kind of indicates you are quite strategic.**

If they are interesting enough for me to follow then I don't want to miss anything they might be saying...

**[0.37.31]**

**Ok**

It's not just something that is going on in the background that I can dip into when and if I feel like it.

If it is that it's kind of... what's the point in following people if you are not going to keep track of what they are saying?

**[0.38.17]**

**But thinking about volume, I know you try to read your timeline. And you've added a few since last time but not unfollowed anyone. So it's going up but at a fairly manageable pace. I'm wondering if you have an idea of what a manageable amount is.**

Yeah, I don't want to end up with thousands 'cos that's just ridiculous you know.

I think I've become more comfortable at not following people. Like when they follow me, I'm kind of like, that's ok for you, but...

**[0.39.40]**

**You said in the last interview you're a bit more mercenary...**

Yeah.

I think I was following people I already knew, or from another site, from Livejournal. There was a bit more invested in that. Whereas if someone randomly follows me, it's like, 'ok, that's nice of you.'

**[0.41.18]**

**Would you say you use the same strategies in Dreamwidth?**

Again there are some people who subscribe to me in Dreamwidth who I don't subscribe back to. Or give me access who I don't give access to.

It was Dreamwidth who kind of started this, whereas Livejournal was more bounded and reciprocal. So it became more fragmented. And to me, the way I use Twitter, that's even more fragmented.

**[0.43.11]**

**Ok, I did want to focus on Twitter now. Whereas you describe similar strategies in Dreamwidth, with Twitter... with it being a more open and public platform, I wonder how more conscious you are of the networking strategy, in terms of your profile on there. In terms of who you follow, or don't.**

Twitter's a difficult one, 'cos on the one hand it's a good one for communicating with other people in your field, and you want to give the impression that I'm great at what I do... on the other hand there's some research that says that academics who use Twitter, and whose students know about their Twitter account, they do more personal stuff on it, then they actually get better rankings, you know the students think better of them for it.

And there's that balance between do you want to be seen as an academic, and quite full on, specialised type of thing, or do you want to kind of make it more personal and give an insight into what your life is like as a person, without it going too far the other way...

**[0.44.47]**

**Yeah, of course.**

So one thing that I do like about is that academics I follow also have travel stress and things go wrong for them and they also eat and stuff. And they discuss interests outside the academic life.

**[0.45.30]**

**So are you mainly referring to other doctoral students or professors...?**

Well it's good to like hear from other PhD students or early career researchers who, for example, might still doing work at ten in the evening and rather not be doing it. Just that admission is quite helpful when it kind of challenges that all PhD students are incredibly efficient robots that churn out brilliant stuff all the time and maybe sleep for about four hours every night.

**[0.46.10]**

**Some of the more recent tweets about writing up. Could you explain the motivation for them?**

Again, it's the kind of shared practice within the community of other late-stage PhD people you follow... You might not get a lot of response, but because you're all tweeting the same things and all engaging in that... It kind of feels, not like a competitive type thing, but it's kind of the same thing as sitting around a table with people and you're all working on your separate things but every so often you can nudge each other and say 'hey look, I've done another hundred words.'

**[0.47.02]**

**Just to put this in some sort of context with your own decisions about tweeting or blogging, there's a difference between those types of everyday experiences and say, tweeting about some of the activist stuff or your participation in the LGBT group for example.**

I mean, the thing is people follow me for different reasons. I have people follow me because I have people follow who I know through the anti-cuts protests. And there are people who follow because of the LGBT stuff. So it's having that awareness that actually I have an audience of different people and who are following me for different reasons and want different kinds of information or news or so on.

**[0.48.35]**

**One thing I'm very interested in is the role of some of these blog posts in how you relate some of your current activities and experiences in the anti-cuts protests, and I know we also touched on this last time... but how these play a role in relating these things to your thesis.**

Yeah, that was something I was very interested in right from the outset. Bringing that contemporary awareness into my academic research because I explicitly set out to look at a protest movement in the hopes that it would offer a framework for people looking at other protest movements. But that's not really something I can really write about in my thesis because I don't have the data for it. And collecting the data on something that's happening right now... you know, it's difficult. You'd have to have... I'd be adding to the corpus every day. And then how do you organise it. It's difficult to establish the parameters of what should be there.

So this is not something I can realistically do in the thesis itself but I do have an outlook for discussing it, and making these links but not in a way I'm doing the thesis, if that makes sense.

**[0.51.06]**

**Yes, it does. I guess one of the things I'm trying to get at is whether, and if so how, your subject area legitimises bringing these elements in. I mean if you were, say, a mechanical engineering student for example, and you were equally active and dedicated to these fees and cuts protests and... You know, the decisions about whether you would include that sort of content would be very different...**

Yeah, I am quite lucky in that the activist stuff is kind of more coherent as a topic. And I've expressively thought about this in terms of the activist-linguistics thing. You know, how do you research working in the area but also engage with your activist communities.

**[0.52.52]**

**Is that coherence the motivation, I wonder.**

I think it's given me a different set of topics and it's been a really useful in that the people who follow one thing will be interested in the other. There's not such a break as there might be if I was a mechanical engineer who was also an activist.

It's still a tricky thing to balance but in a way it helps give a focus to my activities, but I guess the blog might be a very different beast if I was in a different subject. I'd have to choose topics more carefully, just because it's the academic community. I think being an activist in the social sciences or arts and humanities is probably easier than other disciplines.

**[0.54.21]**

**And on Twitter..?**

It would be dependent on who was following me and for what reasons. Twitter's about establishing credentials really. You know, like I'm here, I'm engaging with this community or that activity. Twitter shows I have the means to do this, but also the expertise and the kind of inside knowledge to do this.

**[0.55.06]**

**I'm interested in the way you map out, if you like, these types of overlapping communities... oh hello.**

By the way, for the transcript record, there's a dog outside [laughs].

**[0.57.38]**

**So these different academic communities, those involved in the protest groups, the LGBT student group, and how you see the role of these various social media and the discussions you have through them in helping you with this mapping process.**

Again, it's quite hard. For example, the people I follow who are linguists tend to be people who are into discourse analysis, and there are people who are writing about gender and sexuality and linguistics. So the type of discussions I have there are not necessarily directed at one particular group because the people themselves cross the boundaries of these particular groups. And again, with it being a student LGBT group, people are aware of recognised academic discourses around LGBT and sexuality studies and things, queer issues for example.

**[0.59.26]**

**Yeah, sure.**

So I don't see these as being distinct groups. They're fuzzy. If I'm having a discussion LGBT related, there will be linguists who will say have you considered it from this perspective, or social sciences from this perspective.



**[1.00.14]**

**Could you give me any examples that spring to mind?**

There was one... sometime ago, when one of my friends who's a German academic who's and said 'ok, I'm looking for stuff and who's got some references for me about gender variant and kind of gender queer issues?' And I was able to suggest some things to her.

**[1.01.03]**

**Ok, I think it would be good to move onto your blog specifically now. I know you're accessing info on number of hits and things, and you've had a few more comments since last time, which we'll look at, but I'm interested in your thoughts on your audience, or intended audience for the blog and how you see that might develop.**

Yeah, I mean, at the moment it's... I think that most people who look at it are probably other early career researchers. So probably more PhD students. But I've noticed if I do a more activisty kind of post, then that seems to get quite a lot of hits. So it's kind of balancing those things really, and again, this awareness that I probably have quite a diverse audience, who are going to be interested in a lot of different aspect of it.

**[1.02.37]**

**I see that you promote your posts on Twitter. Would you say that that a lot of your audience comes form Twitter, and that network?**

Yeah, if I put something on Twitter you can see the incoming hits.

**[1.02.52]**

**You don't seem to promote it in Dreamwidth at all, from what I can see.**

I've kind of mentioned it before, when I was just starting it, and there is a very indirect link, in that I think I linked to my Twitter account and that would take you through to this site.

But that's one of the things I'm kind of hesitant about, because it's... I'd probably get quite a lot of hits from there, but it's connecting those identities that I'm wary of.

**[1.03.46]**

**In what way?**

If I'm already having academic discussions on Dreamwidth and I feel I'm more able to have them because of privacy control and not being as connected to my... I hate the term, real life, you know, my offline identity I suppose, erm... You know, do I want to kind of make that connection really? Do I want to make it explicit that my Dreamwidth identity is me and... I mean, I know people who've had problem with their department and things if they've allowed a very personal blog to be connected.

**[1.04.50]**

**So has there been any noticeable increase in audience, since last time?**

Yeah, it's been kind of quite slow.

[References blog statistics]

I mean it's not like incredible, but there's generally a nice steady increase. There's this massive thing 'cos it got linked to the Thesis Whisperer...

**[1.06.39]**

**Yeah, I was going to mention that.**

It got linked there, so it was oh wow, lots of people.

**[1.06.58]**

**I wrote a thing for her that was published yesterday.**

Yeah, I saw it

**[1.07.10]**

**I actually wrote it last week but I didn't know when it was going out. And I got a load extra on my usual average.**

Yeah, you know there's 372 hits. You know, 200 odd probably came from there.

**[1.07.49]**

**That's great.**

But what I really like are the search terms people use.

**[1.08.05]**

**Yeah I saw the tweets about that.**

But there's some absolutely amazing ones. There was one about pretty much an essay question like 'what is the imagery in... Like, you can't just stick your essay question into Google [laughs].

**[1.08.42]**

**Yeah, I get some great ones. I've been collected them... I might do a blog post on it sometime.**

That would be good.

## Appendix 4: Participant Interview Coding

Jenna Interview 2  
27/05/2011

139	<b>So how do you see this developing in terms of audience?</b>	
140	I don't have a long-term strategy with this...	
141	<b>[That's ok]</b>	
142	There is this concern about how you manage public presence. You know, is this really boring to anyone who isn't me. One of my friends has a blog called [REDACTED] but it is a bit like, 'do you really want to have all that information out there? Are you worried that this might affect someone's decisions to hire you?' At a really conservative university, for example. So there is this concern about do I want to put all my politics out there.	online identity postdoctoral career activism peer influence
143	As an activist, there is a pressure to be opinionated, albeit within disciplinary and social contexts.	
144	<b>So how do you see the [REDACTED] post within what you are trying to do with the blog?</b>	
145	I felt I ought to have an opinion on this. Everyone is writing about this issue. It would be weird if I didn't. I think a lot of blogs and tweets are like that. You know, kind of signalling an inclusion within a group or community through writing about something that everyone else is connecting with.	dissemination legitimacy currency
146	I'd like to think that because of my particular background and my research, that I have something original to say, and that I can offer a different kind of context or perspective or a different analysis.	dissemination
147	<b>Is there not scope within the thesis to relate to these?</b>	
148	I have increasingly thought about that, yes. It could probably go in my introduction as a 'this is interesting because...' type of thing. I've always been conscious of it, in the sense of I explicitly wanted to study an historical movement because it's harder to see in contemporary movements.	
149	<b>Ok</b>	
150	<u>It also references that I can do this type of work. It provides evidence of research expertise or interest that might otherwise go unnoticed. I mean, if you look at my thesis topic, then I'm one kind of linguist and one kind of researcher whereas my research interests are a lot more varied. So having that blog is saying 'look I've got more than one idea than just my thesis.'</u>	blogging dissemination claims for expertise thesis
151	<b>So you don't think there is much scope for that generally?</b>	
152	If it's institutionalised then it has to be very focused and at the moment, as a PhD student, it will be your thesis. There isn't a lot of opportunity for exploration. That is you want to say, 'hey look, I've had this great idea for a research proposal,' you know your supervisor will probably say; 'that's very good, but where's this chapter?' Or, I want to go to this workshop, is it to do with your thesis? Then why are you spending two days not writing your thesis?	thesis supervisor
153	When you get immersed in the thesis, sometimes you feel like, 'ok, this is my only good research idea. This is the only thing that I can contribute to the knowledge in my field. What am I going to do next?'	thesis
154	<b>So you see the blog as a way to promote these other interests?</b>	
155	<u>My blog is there to say actually I don't think about my thesis all the time, and I want to have somewhere where I can put these other ideas. It provides evidence of other ideas that I want to research and other ideas that I have.</u>	blogging claims for expertise thesis
156	<b>We mentioned the [REDACTED] post earlier...</b>	
157	I thought it related really well with stuff that I'd already been working on. The fact that I'd be working on something that had a different context meant that it was actually relevant and new to share. I hadn't noticed this type of analysis in other blog posts, or in other news sources. So I thought, I've got something original here.	Ref: blogging claims for expertise currency

158	There wasn't really the opportunity to write about it, and I probably won't have blogged about it otherwise. But because this came up... And this post is unusual in that I didn't really think about it that much because a lot of my posts kind of loiter in the draft section for some weeks.	blogging currency blogging drafts
159	<b>Yeah, I know you said you tend to draft posts over a period of time.</b>	
160	Yeah, still do that.	
161	A lot of the time I have a lot of ideas in my head and I really want to write them down somewhere, but I don't necessarily develop them well enough into fully formed blog pots immediately.	<b>writing practice</b> blogging drafts
162	And this one stayed in my drafts folder for about 10 days really.	Ref:
163	<b>Why was that?</b>	
164	It's usually because I want to think about it a bit more, or it's the weekend and I'd rather not post at the weekend or late at night.	
165	<b>Ok</b>	
166	But I thought it related really well with stuff that I'd already been working on. The fact that I'd be working on something that had a different context meant that it was actually relevant and new to share. I hadn't noticed this type of analysis in other blog posts, or in other news sources. So I thought, I've got something original here.	claims for expertise disciplinary
167	<b>Ok... You've mentioned [REDACTED] in your posts, and I noticed she's commented as well. Looking through the academics in your blogroll, I'd be interested in how you might want to create further interaction.</b>	peer interaction
168	I probably should be better at commenting on other blogs.	blogs commenting peer interaction
169	Some of these I actually know through Dreamwidth, and LiveJournal before that.	dreamwidth livejournal
170	And this post with [REDACTED] actually came from a post of hers on LiveJournal where she's... There's actually this thing called the five questions meme on Dreamwidth and LiveJournal where you ask the questions and people answer them and give them a set of questions. So she's like, 'I want to do an academic version of this, who's up for this?' So I said I am and she gave me some question and I gave her a set of questions and... I think she's hoping that can be a kind of ongoing thing with various people but it seems to have fizzled out.	Ref: dreamwidth livejournal peer interaction
171	<b>Yeah, I've been watching it. It seemed like a nice idea.</b>	
172	Yeah, getting people to talk about stuff they wouldn't normally blog about.	blogging
173	<b>So would you like to engage more in commenting on other blogs?</b>	
174	It's time consuming, but it's more what to say, sort of thing. You know, if it's an academic blog, you really need to be saying something <u>pretty intelligent</u> . And it's about managing my distractions. I could happily spend all day on blogs and stuff, but I really can't.	blogs commenting time management peer interaction
175	The person who does [REDACTED] is actually someone I went to school with. We were actually in secondary school together, then reconnected at Sixth Form College. Then we were friends on LiveHJournal and she kind of stopped using it but was on Twitter and has just recently started this. [REDACTED] who does the [REDACTED] blog I know through Twitter.	predoctoral social livejournal blog twitter overlapping communities
176	<b>[REDACTED]. She's a professor?</b>	
177	I actually know her through LiveJournal and Dreamwidth as well. So I got to know her there. And we comment on each other's entries quite often actually.	dreamwidth livejournal
178	<b>Ok.</b>	

179	That was actually one her things. She wanted a more formal and public blogging platform. She has a site, but wanted a more up-to-date thing for 'I'm speaking at this event. I'm doing this workshop. I'm going to be on TV' type of thing. She wanted a more formal online presence that wasn't connected to her other online persona.	peer influence online identity
180	<b>So that was an influence? Were there other sites that influenced you when you first set this up?</b>	
181	It didn't feel like I was modelling this on anything on particular.	
182	<b>I don't mean that you necessarily modelled this on anything, but that inspired you or influenced you in some way in developing this new space, or this new voice.</b>	
183	Not really, having read lots of blogs, and generally been an active part of that community, so starting a blog didn't feel like a massive leap.	
184	<b>Ok.</b>	
185	Since starting, I have played around with it a bit. Some of the posts I've done are probably a bit too formal for the medium, but on the other hand it's kind of experimenting within the parameters I know about from other blogs.	<b>writing practice</b> writing style
186	<b>Which ones in particular?</b>	
187	This one... it got a lot of links, but I'm not sure I got the right kind of voice for it. And the post on [REDACTED].	Ref: Ref:
188	<b>I was going to ask you about that one in terms of its relationship with your thesis. You reference the chapter in there. I'm interested in that relationship as you are writing up.</b>	thesis
189	The blogs a good place to experiment... to try out, even articulate ideas, You know, 'is it possible for me to communicate this?' There's a bit less pressure of it going in my thesis.	blog thesis
190	<b>How do you mean?</b>	
191	I think it can be a type of sandbox for playing around with ideas and sort of testing them out.	writing practice blogging drafts
192	<b>Ok.</b>	
193	Also, it was trying to establish myself more as a researcher. I was aware that a lot of the things I was writing about were more responses to things, and I wanted to some of my own original work up there, but not so much of it that someone could plagiarise it.	
194	<b>But you don't really tend to reference the thesis directly in your blog.</b>	
195	I'm conscious of what I can't put on there. I'm working with data that I don't have permission to share. I'm wary of putting stuff up that kind of either relates directly to it or requires extensive quotation.	thesis <i>restrictions on thesis content</i>
196	<b>You do seem to have a variety of posts in here. You are exploring different voices and styles here, it seems. Is that because you want to engage in that type of mix, or are you trying to work towards a more coherent style?</b>	
197	I don't want to have one single incredibly coherent voice, I think it's quite useful to try and write in slightly different styles, and to different audiences.	<b>writing practice</b> writing style
198	<b>Ok.</b>	
199	In a way, the thesis is an extended argument in a fairly... you know, your voice has to be there and be fairly consistent. So the blog is somewhere I can play around a bit more.	phd blog thesis writing style experimentation
200	I expect as I am writing up continues it will possibly splinter into either, extracts from my thesis which I want to kind of publicise, or more incredibly daft posts about my rats. So it's getting this balance between me as an academic and me as a person who has this life outside academia and outside my thesis.	<b>identity</b>
201	<b>So it's promotional to an extent?</b>	

202	It is slightly promotional. <u>When I was presenting at this postgraduate symposium, one of the questions someone said was 'do you see any connections between what's happening in the protest movement's now and what's happen then?'</u> and I said actually, if you check my blog. So I wanted to anticipate that by directing someone to it. I was able to say 'oh, if you want to look at this, I've written about it on my blog.' And you can say, 'I can give you an answer now, but I do write about this here.'	blogging phd blog conference claims for expertise <i>link between research and activism</i>
203	<b>Ok. That's great.</b>	
204	And because I do get linked to wider political circles, at least there's more of a chance ideas get attributed to me.	
205	It also contributes towards establishing myself as an expert in this research area. So if you want to know about history of protest movements, go to [REDACTED].	blog claims for expertise self-promotion
206	It also makes me think about what I can get, and what I need to try and get from my thesis. You know, how I could reformulate it, or repackage it, into something slightly different.	thesis <i>repurposing thesis texts</i>
207	<b>So why specifically would you want to do that?</b>	
208	Well, given the state of academia at the moment, you can't be just a specialist in one tiny little area. So I'm hoping that with the blog, it will kind of at least show that I can write about and explore different things... that I'm not just about early 20th century political history and corpus linguistics... that I can talk about my research in a wider context and using different political contexts.	<b>figured world</b>
209	<b>So this wider dissemination of you work has traditionally been done through conferences and such. Do you see what you are doing with the blog as complimentary?</b>	
210	I see this as core to basic dissemination and outreach. [REDACTED] is very involved in podcasting that she does with colleagues. And she started the blog, and one of the things she's been quite influential in is just how you communicate your research to the public. How do you make it interesting? How do you make it accessible?	<b>dissemination</b>
211	Part of my belief with Arts and Humanities... if we are going to get public support and public funding we have to make it interesting and accessible and relevant. So, in a way, I think my blog is a way to make these links, really.	disciplinary postdoctoral blogging
212	<b>Is it the blog as a platform, or is it the blog type of writing?</b>	
213	Both of them. It's good to have a website saying I write about stuff here. But it's also good to develop that voice, and that... Because, you know, thesis writing, the actual writing itself, is this kind of arcane skill you learn through long years of academic apprenticeship. But that doesn't really help explain what you do for those people who aren't really familiar with those kind of conventions.	<b>writing practice</b> writing style
214	<b>And do you see these writing skills you are developing on your blog, is applicable to other spaces, to presentations and such?</b>	
215	Yes in the fact that a blogging voice is... I mean, if you go into this guy called Douglas Beieber's and his distinctions between variations in speech and writing. And he has this set of parameters, and he basically, writing is one extreme and speech is at another. And in my undergraduate dissertation I looked at where online journaling falls in this type of variation. There are aspects of speech and aspects of writing. You know, it's not... it's kind of this in between which can incorporate features from both. And it's useful to think of the blog writing as writing for speech, if that makes sense. Like, when you're preparing a presentation the style you write your notes in is very different from your kind of academic, 'this is going in my thesis' style.	<b>cultural tool conceptual</b> <b>writing practice</b> academic practice predoctoral blog thesis <b>genre</b>
216	<b>Ok,. That's really interesting.</b>	

217	And also the blog is very good at helping you work out where some areas need more explanation, for example. Like, if I'm writing something, and I'm thinking about a slightly different audience, you know, it's kind of like 'are my parents going to understand this?' for example, as oppose to my supervisor will get it. And that's useful in the presentations that I've given to non-specialist audiences.	blogging <b>writing practice</b> audience
218	<b>Ok, I'm aware of the time, so I was going to move on to the conferences, and the post you did. I was interested why you combined all three in one post.</b>	
219	Because they all happened in a month, basically [laughs].	
220	<b>Ok.</b>	
221	No, it was interesting to compare because they were so different, and it's probably quite a rare experience to have these three very very different events in such a short space of time.	twitter conference disciplinary
222	<b>Obviously you did the blog post, but what was your experience and perspective of the social media use at each of them, before, during and after?</b>	
223	The NUS LGBT one was the most socially media aware one. We had the hashtag...	
224	<b>Yeah, I saw that.</b>	
225	Yeah, before the conference, we were using the hastag. And kind of getting retweeted from within the conference and following online. Omen of my friends brought his laptop into the room, and so we had the hashtag up and we were responding to people.	
226	The US one was partly not using the internet on my phone, and also just being incredibly busy.	technology
227	<b>Did you use social media to make any prior connections?</b>	
228	Not really. It's weird that for quite a geeky field there doesn't seem to be much uptake of Twitter. They might have accounts, but they don't seem to use them in that way.	
229	I did tweet the tornado though. 'This is exciting, oh shit!'	
230	At [REDACTED] conferences, they tend to have hasthags, and organise tweet-ups and I'm jealous of that level of engagement.	
231	<b>So you see it as a disciplinary thing?</b>	
232	Not sure really. Those tend to have younger researchers in them, and the [REDACTED] conference didn't have so many.	
233	<b>You see for me, going to ed-tech events, the use of these media is normal. But it's interesting talking to my participants from different disciplines.</b>	
234	I'm not sure corpus linguistics has quite got the hang of it yet.	
235	[REDACTED] is a corpus linguist. And she also uses copura.	peer interaction
236	In fact [REDACTED] and I met at a symposium through Twitter. Because we were both tweeting from that conference, and then I kind of tweeted to her, 'this is slightly weird, but I think we are in the same room.'	
237	<b>Where's she at?</b>	
238	She's at [REDACTED]. And the conference was at [REDACTED]. And she said 'really? That's awesome. What are you wearing?'	
239	<b>So there are incidents but you would say they are quite rare?</b>	
240	They need to get a social media strategy, and I'd be very happy to help them. The use of hashtags... just kind of publicising that. And how you can make these connections.	
241	I was actually really disappointed there wasn't more happening at [REDACTED].	
242	And then the postgraduate symposium, because it's English Studies. I guess these type of people just aren't as involved in social media. Some of them seem confused by a projector... [inaudible]	disciplinary <b>local culture</b>
243	<b>Ok, that's fine. I wanted to look at your short-term future plans with regards to the PhD, and how you a relooking at developing any of these media or platforms.</b>	
244	Ok, I'm just bringing up...	

245	Ok, so this is one of the sites that I think is quite well established. It's a personal site but there's lots of information about different aspects... So here, it has stuff about events and talks she's delivered but also things like...	Ref: peer influence blog
246	<b>So this is one person?</b>	
247	Yeah, it's one person, but this is kind of the professional stuff as well.	
248	And she works with open source technology. So it's kind of... I think it's quite long running. But it's just the way it incorporates the different elements and it's not just a purely professional face type blog.	
249	<b>So do you see yourself developing something like this?</b>	
250	Definitely.	
251	<b>And would that be from scratch, or developing the Wordpress blog?</b>	
252	On the Wordpress blog. I'm starting to develop it through the tags I use. Tagging is a bit of an obsession. I mean, I've got these categories but... [inaudible]	Ref:
253	So it's possible that that might be a direction.	
254	<b>But there's a difference between tagging posts and developing quite distinct menu headings like on there.</b>	
255	It depends on how you are programming the menu because in this theme for example, there is an option to develop a menu that is based around your categories. So if I wanted I could have a second menu under the banner with Academia, Life Stuff, Thesis etc.	
256	So it's also a design decision.	
257	<b>I'm interested why you picked that blog. It's a nice looking site but I don't want to get too bogged down with the technical and design elements. I'm more interested in the different elements you were discussing. This idea of 'multi-voiceness' if you like.</b>	
258	It's just that I think this person is interesting really.	
259	It would depend on what type of career I went into. If I stayed in academia then yes, I would maintain this blog because there would be a point to it. And If I was in a job where some kind of outreach and public communication was really important then yes. But one of the things... sometimes, you just don't really need to communicate your work to others.	
260	<b>Ok.</b>	
261	There are some issues in academia that I feel it is important to talk about in an interesting and accessible way.	
262	And also I think I've got the personal stuff pretty well covered through using Dreamwidth, and the things that I blog about there which I wouldn't necessarily want to share with the wider public.	dreamwidth
263	<b>Ok.</b>	
264	I'm definitely going to keep writing something on the internet, but its dependent on the changes in technology. <u>I quite like having my own sites as there's something a bit more stable about that.</u>	<b>writing practice genre agency technology</b>
265	<b>Are there any other blogs or websites you read, that's maybe influencing how you might develop your own sites?</b>	
266	One of the things that I have noticed is that I tend to write quite long posts and they tend to be quite well thought out whereas as say [redacted] here...	blogging writing style
267	It kind of uses it more as a sort of scrapbook type thing. So she has pictures and then these two quotes... things like that.	Ref: blogging peer influence
268	<b>Ok.</b>	
269	That's something that maybe I should do, but then again, does it really relate to my work?	
270	<b>I guesst that relates to the format and the content and the context of what you want to do.</b>	
271	I mean I have tried to put in a couple of pictures now.	



290	In terms of the methodology, because what I've done is... something entirely unexpected that I wasn't expecting to find or anything like that. I don't know if I'd come up with the same things if I'd been in a culture that as a bit more accepting of my corpus methodologies. I questioned them and kind of... I made an argument about not relying on them.	disciplinary <b>local culture</b>
291	Would I have made the same discoveries if I'd been somewhere that accepted the status quo?	
292	<b>Yes. That's interesting.</b>	
293	If there was a department culture that I had been assimilated into would I be as willing to kind of say no I don't think it actually quite worked like that.	<b>local culture</b>
294	<b>But assimilation works in different contexts, and I probably tend to use the terms socialisation and enculturation... but I mean it's not just necessarily through a physical environment, like a departmental culture. Might it happen through reading text books say, or through social media communities, for example?</b>	
295	[Part of doing a PhD is that process, basically.]	
296	<b>But I appreciate you may not have had the access to that stable, supportive departmental environment...</b>	
297	[Where there is lots of exchange of ideas]	
298	<b>And of course some PhD students can have access to that type of support and be marginalised by it. Or choose to not to engage in it.</b>	
299	<b>But I guess it's a question of how much have your social media activities been influential in supplementing that lack of institutional support. And I guess only you can answer that.</b>	
300	Yeah. I think it would have been very hard to have done a PhD without social media taking some of its place. You know, like it would have been quite hard to realise that actually some of the problems that I have is a problem with PhD students rather than a problem with me.	peer support phd
301	<b>As you know, I'm using Activity Theory in my analysis, which is very socio-cultural but it also helps frame aspects of agency in this, which I think is quite relevant here.</b>	
302	Isn't part of this about doing this as an independent researcher, and that sort of validates that rather than something your supervisor told you to do, or it's come from something your department's organised.	
303	<b>But that independence within the doctoral context is emergent, to an extent. Perhaps with your specific journey, meant that you were thrown into the deep end a bit, which might actually make you a more capable academic.</b>	
304	Or has made me feral [laughs].	
305	I think in a way, my PhD topic has been amazing because it does incorporate so many of my interests. It's kind of like...	phd
306	<b>But you've shaped that.</b>	
307	Another thing is, I wonder how much experiencing social media as a researcher is itself a form of socialisation. I mean the format of a blog for example. They might be set up independently, and there might not be an obvious influence but I think they are all recognisably something. You know, <u>if you stumble across a PhD researcher's blog you know it's a PhD researcher's blog.</u>	blogging <b>genre</b>
308	<b>Well I guess there are certain formalities.</b>	
309	<u>It's almost like the blog is developing cultural norms of its own.</u>	
310	<b>Well yeah, I'm not a technology determinist but I think these tools and media have their own specific cultural norms.</b>	

311	<b>Which is what I need to incorporate in the Activity Theory. I mean, one of the key components is 'Rules' which is basically the cultures of the environments under examination, which does include the acknowledging the cultural norms of these different media, and how they are shaped by different communities in different contexts and activities.</b>	
312	It's like the norms in some Twitter groups are not norms in others. Like in some Twitter groups it's like polite to use the full sup and the 'at' to call the attention to others, which is not the norm in others. So there was like this massive argument on my Twitter stream where different people in my networks were like... 'I don't care if you usually put this dot before, I don't want it appearing in my stream.'	twitter disciplinary <b>genre</b> <b>figured world</b>
313	<b>And that's from your unique position within these different communities, which within Twitter I can only have a basic appreciation of through looking at your network's profiles. Which is why what you retweet is useful.</b>	
314	I think in a way it's also expressed in what you don't blog or tweet about. But that's bringing in more critical discourse analysis...	

# Appendix 5: Evernote Setup Guide for Participants

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## Evernote Guide

### Overview

Evernote is a free online annotation tool that enables you to 'grab' specific content (such as a paragraph of text or an image) from web pages, and collect them on your own personal site as 'notes' you keep in folders called notebooks.

### Set up

Go to <http://www.evernote.com/>

Click the **sign up** button, complete the **Register for Evernote** panel and follow instructions.

In the **Notebooks** panel (side menu), select **Edit** and choose **New Notebook**

Create a new notebook for all the content you want to contribute to the research study (you can set up other notebooks for other purposes if you wish).

### To save files

The easiest way to save content to Evernote is using the Web Clipper tool. This is a simple 'bookmarklet' that adds a button to the toolbar of your browser (Evernote supports Internet Explorer, Firefox, Safari and Chrome). To set this up, go to:

[http://www.evernote.com/about/download/web\\_clipper.php](http://www.evernote.com/about/download/web_clipper.php)

Once this is set up, you simply highlight any content on a web page and click the Evernote button. You do not need to have your Evernote site open at the time, but the next time you view it, you will see the content has been added as a note.

### To share your Evernote notes

This is the setup procedure to allow me to confidentially access notes you create for the research study. You only need to do this once.

1. In the **Sharing** panel (side menu), click on **Sharing setup**
2. In the **My notebooks** panel, click the **Start Sharing** button next to the notebook you are using for the research study
3. In the **Share with individuals** panel, select **Invite individuals to access this notebook**
4. In the Email invitations to box, type in my e-mail:
5. Under the heading **Recipients may:**, select **View this notebook**
6. Click the **Send invitations** button

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## Appendix 7: Ethical Procedure Forms

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### **PARTICIPANT INFORMATION (P1)**

**Research Study:** The use of social media in doctoral practice: A student perspective

**Researcher:** Andy Coverdale

**Supervisor:** Dr Gordon Joyes

### **Research Study Overview**

This research study is examining how PhD students are using social media for academic purposes. Social media describes a range of web-based tools - such as blogs, wikis and social network sites - that support social, participatory and collaborative practices and content sharing. I am interested in how you, and other participants, are using social media as part of your academic activities, and how that affects your doctoral practice.

### **Your Participation**

Your participation in this research study is entirely voluntary. You have the right to withdraw your participation at any time without prejudice or negative consequences.

Your participation will be treated in the strictest confidence. Your identity, and any information and data that may reveal your identity, will be made anonymous.

All research data related to your participation will be stored in a secure manner.

You can request access to all research data related to your participation at any time during your participation.

You will receive the sum of £50 in Amazon.co.uk Gift Certificates as a payment of inconvenience for your participation. This payment will not be affected by any decision to withdraw your participation or changes in your consent.

### **Requirements of Your Participation**

The maximum requirements of your participation will be as follows:

- Giving your consent to the observation of your social media activities (on sites agreed to on the **Participant Research Sites Agreement (P3)** form)
- Making a record of additional social media activities
- Participating in three interviews of minimum duration of 60 minutes each (face-to-face or online)

Your participation will commence from the signing of the **Participant Consent (P2)** form and finish within a time period of no longer than six months.

## **Contacts**

Should you require further information on this research study, or the requirements of your participation, you may contact me or my supervisor.

The Research Ethics Coordinator at the School of Education, University of Nottingham has given ethical approval for this research study. You may contact him should you wish to make a complaint regarding ethical procedures.

### **Researcher**

Andy Coverdale  
School of Education, University of Nottingham  
ttxac20@nottingham.ac.uk

### **Supervisor**

Dr Gordon Joyes  
School of Education, University of Nottingham  
gordon.joyes@nottingham.ac.uk

### **School of Education Research Ethics Coordinator**

Prof Roger Murphy  
School of Education, University of Nottingham  
roger.murphy@nottingham.ac.uk

## **PARTICIPANT CONSENT (P2)**

**Research Study:** The use of social media in doctoral practice: A student perspective

**Researcher:** Andy Coverdale

**Supervisor:** Dr Gordon Joyes

I have read the **Participant Information (P1)** sheet for the above research study and I agree to be a participant.

The nature and purpose of the research study has been explained to me, and I understand the role of my participation.

I understand that my participation is entirely voluntary, and that I may withdraw my participation at any time.

I understand my participation in the research study will remain confidential.

I understand that information related to my participation may be published, but any information that may reveal my identity will be made anonymous.

I understand that all data related to my participation will be stored in a secure manner, and that I have access to them at any time during my participation in the research study.

I understand that I may contact the researcher or his supervisor if I require further information about the research study.

I understand that I may contact the Research Ethics Coordinator, if I wish to make any complaint relating to my participation in the research study.

Signed .....

Print Name ..... Date .....

### **Contacts**

#### **Researcher**

Andy Coverdale  
School of Education, University of Nottingham  
ttxac20@nottingham.ac.uk

#### **Supervisor**

Dr Gordon Joyes  
School of Education, University of Nottingham  
gordon.joyes@nottingham.ac.uk

#### **School of Education Research Ethics Coordinator**

Prof Roger Murphy  
School of Education, University of Nottingham  
roger.murphy@nottingham.ac.uk

## PARTICIPANT RESEARCH SITES AGREEMENT (P3)

### **Research Study:** The use of social media in doctoral practice: A student perspective

**Researcher:** Andy Coverdale

**Supervisor:** Dr Gordon Joyes

I agree to give my consent to the following sites being observed as part of my participation in the above research study.

I understand I can withdraw any or all sites from this agreement at any time by contacting the researcher.

[illegible]

Signed ..... Print Name .....

..... Date .....

**Contact:** Andy Coverdale, School of Education, University of Nottingham, [ttxac20@nottingham.ac.uk](mailto:ttxac20@nottingham.ac.uk)



## **PARTICIPANT RECIEPT OF PAYMENT (P4)**

**Research Study:** The use of social media in doctoral practice: A student perspective

**Researcher:** Andy Coverdale

**Supervisor:** Dr. Gordon Joyes

I confirm I have received the sum of **£50 in Amazon.co.uk Gift Certificates** as a payment of inconvenience for my participation in the above research study.

Signed .....

Print Name ..... Date .....

### **Contact**

Andy Coverdale  
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