CHAPTER 2

# Social media for digital humanities and community engagement

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## Introduction

Since their introduction, social media sites and applications have attracted millions of users and have had a profound effect on behaviour, with many users integrating these resources into their daily practices. Social participatory media, such as social networks, blogs and podcasts, are increasingly attracting the attention of academic researchers and educational institutions. Because of the ease of use, social media offers the opportunity for powerful information sharing, collaboration, participation and community engagement. Despite this, currently, there is limited knowledge within academia of who is accessing and utilizing social media and crowdsourcing applications and for what purpose.

The digital humanities community was an early adopter of social media, utilizing it for scholarly communication, collaboration and dissemination. For early adopters in the digital humanities community, social media applications have quickly become a part of everyday digital life and, as such, risk either remaining unexamined or, worse, dismissed as a mundane or damaging phenomenon of little significance (Warwick, 2011). Work being undertaken at the UCL Centre for Digital Humanities (UCLDH) seeks to establish the study of various social networking technologies, such as microblogging and crowdsourcing, as an important element of digital humanities discourse. In order to understand how these tools and services are transforming scholarly practices, UCLDH is harnessing a range of social media applications, in order to investigate the use of social media in digital humanities, including conference backchannels, crowdsourcing and co-curation between research communities and the public. UCLDH projects, such as Transcribe Bentham[1] and QRator,[2] demonstrate that such technologies may be used in an academic

context to change how scholars interact with each other and how they make their research available to those outside academia.

This chapter presents a range of social media activities for digital humanities research, highlights the development of social media projects at the heart of UCLDH and stresses the opportunities and challenges of utilizing social media and crowdsourcing in an academic context to enhance community engagement.

## Social media in academia

Social media refers to a collection of web based technologies and services, situated in the open and participatory culture of the internet, characterized by community participation, collaboration and sharing of information online: 'The key aspect of a social software tool is that it involves wider participation in the creation of information which is shared' (Minocha, 2009, 12). Wikipedia describes social media as:

> An umbrella term that defines the various activities that integrate technology, social interaction, and the construction of words, pictures, videos and audio. This interaction, and the manner in which information is presented, depends on the varied perspectives and 'building' of shared meaning, as people share their stories, and understandings.[3]

Social software and Web 2.0 are other terms used to describe tools and platforms that enable similar user interaction. The term 'Web 2.0' is attributed to Tim O'Reilly (2005) to describe the second phase of the web. This phase saw online communications shift from what had typically been one-way communication (e-mail, for example, is foremost a tool of one-to-one messaging) to a many-to-many style interaction. It has been variously described as the 'age of participation' (Schwartz, 2005), the 'age of engagement' (Cary and Jeffery, 2006) and an 'authorship society' (Rushkoff, 2005).

Many Web 2.0 services (blogging, microblogging, photo sharing, social bookmarking, social networking and wikis) are now referred to as social media. They have been used to facilitate research tasks and collaborative projects by a number of institutions. Social media encompasses a wide set of functional characteristics, within the context of computer-mediated communication and networked digital media. It uses audio, images, video and location-based services as channels to encourage, facilitate and provoke social interaction and user participation. Social media should not focus on the

technology, but the activity that is undertaken. Johnson et al. (2010, 13) agree, stating: 'Collectively, social media are above all the voice of the audience, endlessly expressive and creative'. While key technological features are fairly consistent, the customs that emerge from social media are varied.

The Online Computer Library Center (OCLC) states: 'while interaction occurs on social media sites, the primary purpose of the site is to publish and share content' (2007, 15). These characteristics point to increased possibilities for academic publication, as well as encouraging mechanisms for content production, communication and collaboration. Social media has been used to facilitate research tasks and collaborative projects by a number of institutions. In the last few years, much has been written about the ways these tools are changing scholarly practice (Johnson et al., 2010; BECTA/Crook et al. 2008; Davis and Good, 2009). Social tools have the potential to contribute something to the traditional research process; they also have the potential to challenge the ways in which research is done, as social media can confront and develop current ideas and practice (RIN, 2011). Indeed, scholarly communication and discourse in a digital environment are beginning to highlight the fact that traditional barriers between formal and informal scholarly communication are now permeable. It has been argued that engagement in social media environments provides more avenues for self-representation, expression or reflection and more organized forms of collaboration and knowledge building (Conole and Alevizou, 2010; BECTA/Crook et al., 2008). There has been a huge growth in interest from scholars, and social software is now being used at every stage of the research life-cycle (CIBER, 2010). Yet, while awareness of social media among members of the academic community is high, there is still a large gap between awareness and actual regular use of tools.

Surveys undertaken on the use of social media within universities can provide an indication of the level of uptake (JISC, 2008; Smith, Salaway and Caruso, 2009; Smith and Caruso, 2010; Lam and Ritzen, 2008). Collectively, they suggest that uptake is occurring, but that it is not yet extensive across all aspects of research and teaching provisions. Chapman and Russell's (2009) study on the current and active users of Web 2.0 – focusing on staff, students, tools and services in UK higher education (HE) institutions – found that active use appears to be still largely centred on early adopters, although students were more likely to be users. As the report states, an increasing proportion of new students to higher education (HE) are already using social media, but this does not apply to everyone; Web 2.0 digital literacy (and illiteracy) is still an issue that needs to be addressed (Chapman

and Russell, 2009). Even in teaching and learning, the impact of new technologies has not been as widespread or transformative as predicted (Pearce et al., 2010; Conole, 2004; Blin and Munro, 2008). Not all Web 2.0 tools and services are used to the same extent, and, some services, for example, blogs, microblogging and tagging, are more popular than others. It is important to caution against overgeneralizations from these surveys, in terms of extrapolating the uptake of both formal and informal Web 2.0 tools, as it is difficult to draw comparative conclusions systematically from surveys that use different research instruments.

Despite the potential applications of technologies in an academic context, their use raises some fundamental issues. There are some perceived barriers to uptake of social media applications in academia. One major barrier is lack of clarity, even among some frequent users, as to what the benefits might be. Other barriers evident from the literature include: concerns about expectations, experiences and competencies, with respect to using social media technologies (Conole and Alevizou, 2010); the perception that the use of these tools requires a large time investment; humanities scholars, in particular, feel they do not have the time to learn how to use them (Ross, Terras and Warwick, 2010); caution about trust issues, in terms of producing and sharing research in a medium which, as of yet, has no standardized way to formally attribute authorship; a lack of authority in an environment where anyone can comment, and it is difficult to determine whether contributions are valid or authoritative (RIN, 2011).

In the context of this last point, there is some fear that the quality of public and academic discussion and debate is being undermined. Keen (2007) and Carr (2010) have suggested that social media and the ubiquitous use of the internet are potentially damaging to our thinking, our culture and our society in general. There is also a perceived lack of confidence that appropriate instructional structures are in place to support these activities and an inherent scepticism as to whether these technologies will actually make a difference to academic practice. Identification and understanding of the barriers to broader uptake is essential, so that strategies can be devised to overcome them. While adoption of social media applications is growing in academia, there is a need to address these issues in a systematic way (Chapman and Russell, 2009; OECD, 2009).

Social media practices are beginning to have a direct impact upon scholarly dissemination. The ability to disseminate research widely, quickly and effectively is often cited as a key reason for academics to utilize social media (RIN, 2011). New practices are emerging in informal, online based

social communication spaces, outpacing development of practice within the formal modes of academic publishing. Many academics are using social media informally to facilitate opportunities for open exchange and presenting new ideas; SlideShare[4] and Scribd[5] are examples of how scholars are leveraging digital media to distribute informal scholarship. This enables other academics to access research as it happens and to participate in dialogue about research practice, which suggests that social media tools are creating a culture of openness in scholarship (Tatum and Jankowski, 2010).

In spite of some innovative features in online publishing, the structure of journal articles, books and monographs remains very much unchanged (Tatum and Jankowski, 2010). It has been suggested that traditional formats of scholarly publishing need to be re-addressed in light of the impact of social media applications, in particular, the way peer review is conducted (Fitzpatrick, 2009; 2010). Several innovative studies have been initiated to challenge traditional publishing formats, by creating an open form of peer review, in order to demonstrate how social media and open communication can transform formal academic publishing practice. *Nature* conducted an experimental trial with open peer review in 2006,[6] and *Shakespeare Quarterly* completed one in 2010, using a software program developed by MediaCommons[7] (Fitzpatrick, 2010). These projects are a step towards developing openness in scholarly communication; however, this is an issue that warrants further research. This chapter will now present an overview of three social media activities for digital humanities research, highlighting how, in an academic context, there are opportunities and challenges involved in utilizing social media and crowdsourcing, in order to enhance community engagement.

## Social media for harnessing the wisdom of the crowd

The compound word 'crowdsourcing' combines 'crowd', in the sense of 'the wisdom of crowds' (Surowiecki, 2004), and 'outsourcing'. The latter was defined by Jeff Howe, in 2006, as 'the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call' (Howe, 2006). Wikipedia – itself heavily dependent on crowd-sourced content – defines crowdsourcing as: 'Taking tasks traditionally performed by an employee or contractor, and outsourcing them to a group of people or community, through an "open call" to a large group of people (a crowd) asking for contributions' (http://en.wikipedia.org/wiki/Crowdsourcing).

It is argued that the capability of a complex system, such as a crowd, is much better than a single system or individual, as it can produce a kind of shared or group intelligence, based on collaboration or competition of the many individuals in this group (Kapetanios, 2008). However, in order to attain the 'wisdom of the crowds', Surowiecki (2004) argues that four requirements must be fulfilled:

1. Diversity: the crowd includes people with different backgrounds and perspectives.
2. Independence: each participant makes their decision, independent of the others.
3. Decentralization: the decisions are based on local and specific knowledge of the individuals, rather than of a central planner.
4. Aggregation: a function that turns individual judgements into a collective decision.

Crowdsourcing is an increasingly popular way of gathering content within an academic environment. Several authors have been working on a classification of crowdsourcing projects. For instance, Dawson's 'Crowdsourcing landscape' (2010) organizes crowdsourcing sites into 15 categories, which illustrate the breadth of crowdsourcing initiatives. Rose Holley (2010) provides a valuable overview of the definition and purpose of crowdsourcing and its relevance to libraries and examines several recent large-scale participatory projects to identify common characteristics for success. Numerous academics, however, assert that crowdsourcing, and the use of Wikipedia, in particular, is not appropriate for scholarly settings, due to its amateur and community-based nature (Black, 2007; Achterman, 2005; McArthur, 2006). These viewpoints do not take into consideration Wikipedia's ability to mediate a dialogue between differing perspectives held by contributors on any given subject. The ability to transform information and promote dialogue between disparate users provides Wikipedia with a definite advantage over traditional printed and static online content (Black, 2007; Deuze, 2006; Bryant, Forte and Bruckman, 2005; Lih, 2004). Recent research also indicates that Wikipedia is equal to, or even outperforms, comparable conventionally edited encyclopedias, in terms of accuracy (Giles, 2005; Besiki et al., 2008; Rajagopalan et al., 2010). The Australian Newspapers Digitisation Program,[8] Galaxy Zoo[9] and other Zooniverse[10] projects are often highlighted as key examples of academic crowdsourcing (Hannay, 2010; Holley, 2010).

Within UCLDH, we have been investigating the use of crowdsourcing as

a tool for aiding academic transcription and for stimulating public engagement with UCL's archive collections. Transcribe Bentham is a participatory project to test the feasibility of outsourcing the work of manuscript transcription to the general public, as the case study below sets out.

## **CASE STUDY** Transcribe Bentham: crowdsourcing in practice

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The Bentham Project at University College London has harnessed the power of crowdsourcing to facilitate the transcription of the manuscript papers of Jeremy Bentham (1748–1832), the great philosopher and reformer. UCL Library houses 60,000 of Bentham's manuscripts, the majority of which have never been properly studied. The purpose of the Bentham Project is to produce a new authoritative edition of Bentham's works – the *Collected Works of Jeremy Bentham* – based partly on transcripts of these papers. The Project has been active since 1959, and, since then, around 20,000 of Bentham's papers have been transcribed and 28 volumes of his works have been published. The Project aims to produce around 70 volumes in total, and around 40,000 papers remain untranscribed.

The Bentham Papers Transcription Initiative, or Transcribe Bentham for short, was established in 2010 to quicken the pace of transcription, speed up publication, widen access to Bentham's papers, raise awareness of Bentham's ideas and contribute to the long-term preservation of this priceless collection in UCL Library's digital repository. Transcribe Bentham outsources manuscript transcription – a task originally performed by skilled researchers – to members of the public, who require no special training or background knowledge to log on and participate. Transcribe Bentham was funded by the Arts and Humanities Research Council for one year.

In order to begin the process of crowdsourcing the transcription of Bentham's manuscripts, two components were vital: high-resolution digital images of the manuscripts, which were photographed by UCL Learning and Media Services, and a tool to allow users to transcribe the text. The transcription tool was developed with simplicity in mind. Users type their submissions into a plain-text box, with the option of adding some basic formatting to their transcriptions. By highlighting a piece of text or a position in the text, and by clicking a button on

the transcription toolbar, users are able to identify particular characteristics of the manuscripts. These include spatial and organizational features, such as line breaks, page breaks, headings and paragraphs; linguistic features, like notes, unusual spellings and foreign-language text; compositional features, such as additions and deletions; and interpretive decisions about questionable readings and illegible text. This TEI (Text Encoding Initiative) XML encoding adds a further layer of depth and complexity to the transcripts, helping to render them searchable in a thorough and categorical fashion.

When a user completes a transcription and submits it for moderation, it is checked for textual accuracy and encoding consistency by a member of the project staff. If the transcript is deemed to be completed to a satisfactory degree, the transcript is locked to prevent further editing (though the formatted transcript remains available to view). If the moderator decides that the submitted transcript is incomplete, and could be improved with further editing from users, it remains available for editing on the Transcription Desk. Completed transcripts are uploaded to the digital collection of Bentham's papers maintained by UCL Library and are viewable alongside the respective manuscript images; they will also, eventually, form the basis of printed volumes of Bentham's collected works.

As manuscript transcription, particularly the transcription of Bentham's difficult handwriting, is a complex task, the project team aimed to create a cohesive and dedicated community of mutually supportive and loyal transcribers, rather than a crowd of one-time users. The strategy to build a dedicated user community was twofold. First, the team devised a far-reaching publicity campaign to raise awareness of the project and to recruit transcribers; second, the team designed a user-friendly, easily navigable interface, in order to retain users, while facilitating communication between users and staff. The interface which hosts the manuscript images and transcription tool is a customized Mediawiki. It not only provides the means of integrating the essential components of the Transcription Desk, but also allows for the inclusion of guidelines for users, project documentation, a discussion forum and social media that enables interaction and discussion. A reward system and progress bars help to sustain user motivation.

During its six-month testing period, Transcribe Bentham attracted 1207 registered users (excluding administration and project staff and seven blocked spam accounts), who cumulatively transcribed 1009 manuscripts, of which 569 – or 56% – were deemed to be complete and, thus, locked to prevent further editing. Progress has continued since the end of the testing period, and, as of 3 June 2011, 1273 volunteers have registered with the project. One thousand four

hundred and seventeen manuscripts have been transcribed, of which 1179 – or 83% – are complete; the proportion of completed transcripts has risen, partly due to the growing experience of volunteers and partly due to project staff working through and signing off on previously incomplete transcripts.

During the six-month testing period, the Transcription Desk received a total of 15,354 visits from 7441 unique visitors or an average of 84 visits from 41 unique visitors per day. The publication of a feature article in the *New York Times* (*NYT*) on 27 December 2010 had a vital and enduring impact upon Transcribe Bentham. It is helpful, therefore, to consider the project's testing period as having two distinct parts: period one, or the pre-*NYT* period, covering 8 September 2010 to 26 December 2010 (110 days); and period two, or the post-*NYT* period, covering 27 December 2010 to 8 March 2011 (72 days). Remarkably, 30% of all visits to the transcription desk during the six-month testing period came between 27 December 2010 and 4 January 2011.

Over the six-month testing period as a whole, volunteers transcribed an average of 35 manuscripts each week. It is estimated that if this rate were maintained, around 1800 transcripts could be produced by Transcribe Bentham volunteers in 12 months. These figures might seem unremarkable when compared to the results of other crowdsourcing initiatives, such as Galaxy Zoo, which has successfully built up a community of 250,000 users, who have classified over 100 million galaxies. However, transcribing Bentham's papers is complex and time-consuming. Volunteers are asked to transcribe and encode manuscripts which are usually several hundred – and, occasionally, several thousand – words in length, in which text is frequently at various angles and which can be complicated further by deletions, marginalia, interlinear additions and so on. During the six-month testing period, Transcribe Bentham's volunteers have produced around 5% of the 20,000 manuscripts transcribed by Bentham Project staff during 50 years; assuming that the average length of a manuscript is 250 words, volunteers have transcribed an estimated 250,000 words. As of 3 June 2011, volunteers have – on the same estimation – transcribed about 355,000 words.

Transcribe Bentham's long-term future is secure, and the Transcription Desk will remain available for the foreseeable future. The project will continue, therefore, to have a significant impact in several fields. It has raised awareness of Bentham's life and thought and produced transcripts which will contribute to the editorial work of the Bentham Project, including publication of printed editions of important Bentham texts and the creation of an invaluable, fully searchable digital collection, freely available on the web. The transcription tool behind the project will be released as a package on an Open Source basis for other projects to customize. Transcribe Bentham has also publicized

collaborative manuscript transcription widely, garnering a great deal of attention from the media and blogs, and has recently been honoured with an Award of Distinction in the prestigious Prix Ars Electronica.

## Social media for enhancing a community of practice

A community of practice is formed by people of a shared domain, who engage in a process of collective learning by interacting on an ongoing basis (Wenger, 1998; Wenger, McDermott and Synder, 2002). The concept of 'communities of practice', developed by Lave and Wenger (1991), can be distinguished by five key features: their purpose, personnel, the nature of their boundaries, cohesive factors and longevity (Wenger, McDermott and Synder, 2002, 42). Social networks, work and research practice can have a significant impact on any community's engagement with new technology systems (Dunker, 2002; Kling, 1999; Theng, 2002; Cunningham, 2002) and academic communities of practice are no exception. Digital humanities can be regarded as a community of practice, as Terras (2006) demonstrated. There is an identifiable community operating in the fields of computing and the humanities (Terras, 2006, 242), because the discipline is made up of individuals who self-select, on the basis of a unified sense of purpose and 'expertise or passion for a topic' (Wenger, McDermott and Synder, 2002, 42), which become cohesive factors. Utilizing social media to support communities of practice can assist the effective sharing of knowledge across departmental, institutional and discipline boundaries, thus promoting collaboration and co-ordination, while also increasing productivity and organizational performance (Millen, Fontaine and Muller, 2002; Mojta, 2002).

The 'community of practice' approach highlights how technologies that support information use can produce richer knowledge, which can be empowering (Wenger, 1998). One such technology is that of blogging. There has been a lot of discussion about academic blogging practice (Walker, 2006; Davies and Merchant, 2007); over the past few years, there has been a sharp rise in the number of academics who use blogging for scholarly communication. Microblogging, a variant of blogging, which allows users to quickly post short updates to websites, such as twitter.com, has recently emerged as a dominant form of information interchange and interaction for academic communities. The simplicity of publishing short updates, in various situations and in a fluid social network based on subscriptions and response, makes microblogging a groundbreaking communication method that can be seen as a hybrid of blogging, instant messaging, social

networking and status notifications.

Within UCLDH, we have been investigating the use of microblogging for enhancing an academic community of practice. This project highlights the implications of utilizing Twitter as an international academic conference backchannel, using the International Digital Humanities community as a case study, taking, as its focus, postings to Twitter during three different international conferences in 2009.

## CASE STUDY Babble or backchannel: conference tweeting in practice

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Microblogging, with special emphasis on Twitter.com[11] – the best known microblogging service – is increasingly used as a means of extending commentary and discussion during academic conferences. This digital 'backchannel' communication (non-verbal, real-time communication, which does not interrupt a presenter or event: Ynge, 1970) is becoming more prevalent at academic conferences, in educational use and in organizational settings, as it allows for the 'spontaneous co-construction of digital artefacts' (Costa et al., 2008, 1). Such communication usually involves notetaking, sharing resources and individuals' real-time reactions to events. The study of digital humanities conference tweets provides an insight into the digital humanities community of practice and into precisely how academics use Twitter in a conference based setting.

Formal conference presentations still mainly occur in a traditional setting; a divided space with a 'front' area for the speaker and a larger 'back' area for the audience, implying a single focus of attention. There is a growing body of literature describing problems with a traditional conference setting: lack of feedback, nervousness about asking questions and a single speaker paradigm (Anderson et al., 2003; Reinhardt et al., 2009). The use of a digital backchannel, such as Twitter, positioned in contrast with the formal or official conference programme, can address this, providing an irregular or unofficial means of communication (McCarthy and Boyd, 2005), which changes the dynamics of the room from a one-to-many transmission to a many-to-many interaction, without disrupting the main channel communication.

Digital humanists have, historically, been quick to adopt emergent media to aid their own tasks. This study analysed the use of Twitter as a backchannel for digital humanities' conferences, focusing on three different physical conference settings held from June to September 2009 (Digital Humanities, 2009; That Camp,

2009; and Digital Resources in the Arts and Humanities, 2009). During the conferences, unofficial Twitter backchannels were established, using conference specific hashtags (#dh09, #thatcamp and #drha09, #drha2009)[12] to enable visible commentary and discussion. The resulting corpus of individual 'tweets' provides a rich dataset, allowing analysis of the use of Twitter in an academic setting. It is possible to gain an insight into the user intentions of the digital humanities Twitter community through open-coded content analysis. To understand the interactions and user intentions of Twitter backchannel users, it was necessary to categorize the tweets. Tweets were manually labelled into seven categories: asking organizational questions; comments on presentations; discussions and conversations; establishing an online presence; jotting down notes; sharing resources; and unknown. The majority of tweets in the corpus fell into the category of jotting down notes, triggered predominately by the front channel presentation, suggesting that participants are sharing experiences and, to a degree, co-constructing knowledge. What is surprising is the lack of direct commentary on presentations. Although Reinhardt et al. (2009) argue that Twitter enables thematic debates and offers a digital backchannel for further discussion and commentary, the tweet data suggests that this does not appear to have happened to a significant extent at the digital humanities' conferences. This raises the question of whether a Twitter-enabled backchannel promotes more of an opportunity for users to establish an online presence and enhance their digital identity, rather than encouraging a participatory conference culture. Nevertheless, jotting down notes can be considered an active contribution to the community, enabling the expansion of communication and participation in the event.

Participation inequality has been observed in other collaborative online environments for more than a decade (Nielsen, 2006; Anderson, 2008) and would seem to apply to Twitter. A high amount of users produced only one Tweet during the three conferences, which lends support to the notion of a 90:9:1 rule (Nielsen, 2006) for new social media, where 90% of users are lurkers, 9% of users contribute from time to time and 1% participate a lot and account for the majority of contributions. The fact that this is demonstrated in the corpus suggests that despite the close-knit nature of the fairly small digital humanities researcher community, it may also be somewhat intimidating for those new to the field, conference or Twitter itself.

When looking at the corpus of Tweets, one striking characteristic of the content is that conference hashtagged Twitter activity does not constitute a single distributed conversation, but, rather, multiple monologues and a few intermittent, discontinuous, loosely joined dialogues, which users enter and exit

at will. It is possible to suggest that beyond being a tool for writing and communicating, microblogging platforms may serve as foundations for building or enhancing a community of practice. Digital technology is often suggested as a tool to support communities of practice (see Wenger, White and Smith, 2009; Yardi, 2008; Adams, Blandford and Lunt, 2005). Microblogging as a digital backchannel can be suggested as being such a tool, by facilitating a forum for community related discussion, resulting in great levels of reflections, discourse, deep content knowledge (Yardi, 2006) and distributed expertise throughout the community. Such collective interaction and learning results in the improvement of the knowledge of each individual in the community and contributes to the development of the knowledge within the domain. For this reason, this method can be regarded as promising for academic environments, in facilitating informal communication, learning and the co-construction of knowledge.

The use of Twitter as a platform for conference backchannels enables the community to expand communication and participation of events amongst its members. This enhanced participation allows the digital humanities community to co-create knowledge, ensuring that the 'collaborative knowledge of the community is greater than any individual knowledge' (Johnson et al., 2010, 31). The Twitter enabled backchannel constitutes a complex multidirectional discursive space, in which the conference participants make notes, share resources, hold discussions and ask questions, as well as establishing a clear, individual online presence. The predominance of notetaking suggests that the digital humanities community could be classed as social reporters, commenting on the conference presentations for outsiders, rather than collaborating during the conference. There was also a tendency for a small group of users to produce the majority of tweets, interacting with each other about other matters. This suggests the small, friendly nature of the digital humanities researcher community, but may also be somewhat intimidating for those new to the field or conference.

With the increasing prevalence of Twitter in academic conference environments, it is possible to present digital backchannel communication as a viable tool for the co-construction of knowledge within a community of practice. However, this argument is by no means complete or definitive. Those who participate in digital backchannel communication at conferences, whether organizers, speakers or attendees, must understand and confront their visibility, issues of user awareness and potential negative factors, in order to influence the use of the Twitter enabled backchannel as an effective conference tool which fully encourages a participatory conference culture. The Twitter enabled backchannel thus raises some interesting questions about the nature of

conference participation and whether or not it is helped or hindered by a digital backchannel. Rather than pointless babble, the Twitter record produced at each conference provides important evidence regarding how digital humanities – as a community of practice – function and interact.

## Social media for co-construction of knowledge

As more academic institutions begin to utilize social media in both research and teaching practice, the emphasis on social media research is changing from whether academia should participate in the social web, to how to best use it effectively to engage academic and non-academic audiences in an online dialogue. There has been an increasing focus on the role that universities can play in contributing to engaging the public in academic research (see NCCPE, 2011). Public engagement in academia is often described as a 'cluster' of activities, including, but not restricted to, learning, programmes and research, which address specific social, economic and political needs (Hall, 2010). In recent years, an increasingly wide range of public-facing activities have become prominent, particularly in science communication. However, the objectives, meanings and practices covered by the umbrella term 'public engagement' are becoming more fluid and are now characterized by a considerable degree of under-definition and overlap. The Department for Innovation, Universities and Skills (DIUS) define public engagement as:

> an umbrella term that encompasses many kinds of activity including science festivals, centres, museums, and cafes, media, consultations, feedback techniques, and public dialogue. Any good engagement activity should involve aspects of listening and interaction. (DIUS, 2008, 20)

whereas the National Co-ordinating Centre for Public Engagement (NCCPE) offers a more general definition of public engagement, which is applied across academia or higher education:

> Public engagement brings research and higher education institutions together with the public. It generates mutual benefit – with all parties learning from each other through sharing knowledge, expertise and skills. Done well, it builds trust, understanding and collaboration, and increases the institution's relevance to, and impact on, civil society. (NCCPE, 2009)

Interestingly the majority of public engagement initiatives within UK

universities focus on face-to-face engagement, rather than using social media as an outlet.

UCL Centre for Digital Humanities, alongside the Centre for Advanced Spatial Analysis (CASA),[13] UCL Museums and Collections[14] and the UCL Public Engagement Unit,[15] have set out to develop the area of social media research for public engagement. Social media technologies are being used to integrate digital humanities research within and beyond academia; involve the general public in digital resource creation and design; and apply digital technologies to cultural heritage. The QRator project, in particular, demonstrates that such technologies may be used in an academic context to change the way that scholars interact with each other and make their research available to those outside academia. The QRator project aims to stress the necessity of engaging visitors actively in the creation of their own interpretations of museum collections, alongside academic researchers.

## CASE STUDY QRator Project: enhancing co-creation of content in practice

*Claire Ross, UCL Department of Information Studies, and Steven Gray, UCL Centre for Advanced Spatial Analysis*

Emergent mobile technologies and the proliferation of social media tools offer museum professionals new ways of engaging visitors with their collections. Museum audiences are no longer 'passive recipients of wisdom from on high, but want to participate, to question, to take part as equals, and to receive as high a standard of service as would be offered at any other type of leisure site'.[16] UCL's QRator project is exploring how handheld mobile devices, social media software and interactive digital labels can create new models for public engagement, personal meaning-making and the construction of narrative opportunities inside museum spaces.

The QRator project is located within the emerging technical and cultural phenomenon known as 'The Internet of Things': the technical and cultural shift that is anticipated as society moves to a ubiquitous form of computing, in which every device is 'on' and connected, in some way, to the internet. The project is based around technology developed at the Centre for Advanced Spatial Analysis, UCL, and is an extension of the 'Tales of Things' project (www.talesofthings.com), which has developed a 'method for cataloguing physical objects online which could make museums and galleries a more interactive experience' (Giles, 2010), via means of QR tags.

QRator provides the opportunity to move the discussion of objects from the museum label onto users' mobile phones, allowing the creation of a sustainable, world-leading model for two-way public interaction in museum spaces. UCL's Grant Museum of Zoology houses one of the country's oldest and most important natural history collections. The Grant Museum has a strong history as a teaching collection, but also functions as a key gateway for the public to engage with academic issues in innovative ways. The project aims to genuinely empower members of the public within the Grant Museum, by allowing them to become the 'curators'. QRator is an iPad based system that allows visitors and academic researchers to share their views on an exhibition and discuss provocative questions about the ways museums operate and the role of science in society. The iPads are linked to an online database, allowing the public to view 'curated' information and, most notably, to send back their own interpretation and views, via an iPad application. Unique to the UCL technology is the ability to 'write' back to the QR codes. This allows members of the public to type in their thoughts and interpretations of the object and click 'send'. Similar in nature to sending a text message or a tweet, the system will enable the Grant Museum to become a true forum for academic-public debate, using low cost, readily available technology, enabling the public to collaborate and discuss object interpretation with museum curators and academic researchers. QRator encourages visitors to tackle big questions in the life sciences and engage with the way museums work. Questions include: 'Should human and animal remains be treated any differently?' And 'every medicinal drug you have ever taken was tested on animals. Is this a necessary evil?' Visitors can examine museum specimens, before leaving their interpretation on an iPad to create a digital 'living' label that other visitors can read and respond to. Visitor narratives subsequently become part of the museum objects' history and, ultimately, the display itself, via the interactive label system, allowing the display of comments and information directly next to the museum objects.

Many visitors expect, or want, to engage with a subject physically, as well as personally (Adams, Luke and Moussouri, 2004; Falk and Dierking, 2000). Visitors see interactive technology as an important stimulus for learning and engagement (Falk et al., 2002; Black, 2005), empowering users to construct their own narratives, in response to museum exhibits. Beyond expected content synthesis, these immersive activities can stimulate learning. Engaged within this immersive environment, museum objects become rich sources of innovation and personal growth (Fisher and Twiss-Garrity, 2007). When visitors experience a museum which actively encourages individual narrative construction, their activity is directed not towards the acquisition or receipt of the information

being communicated by the museum, but rather towards the construction of a very personal interpretation of museum objects and collections. The unpredictability of multiple narrative forms, created by the use of mobile devices and interactive labels, introduces new considerations to the process by which museums convey object and collection interpretation and opens up museums to become a more engaging experience.

The participation in collaborative narrative creation, centred on museum objects, can provoke creative, independent analysis, promoting a personal connection with museum exhibition subject matter that is unparalleled in more traditional and passive approaches (Silverman, 1995; Roberts, 1997; Hooper-Greenhill, 2000; Fisher and Twiss-Garrity, 2007).

## Conclusion

This chapter has aimed to introduce the concept of social media in academia and to demonstrate its current use in the research process, whilst providing an overview of key social media projects within the UCL Centre for Digital Humanities. Social media tools and services hold real potential across all facets of scholarship. Social media use within academia is currently focused on early adopters, but there is much to be learnt about the impact these technologies are having on research and teaching. The widespread viability and sustainability of social media as tools for research practice, scholarly communication and public engagement in academic research remains to be determined. Successful projects and social media research practice are beginning to emerge. Nevertheless, it is not until social media implementation is fully incorporated into universities' strategic approaches to research communication that addresses changing scholarly communication models and engages communities in scholarly debate and knowledge sharing that a strong research base can been developed, in order to fully understand the impact on social media in the academy.

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