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Online Social Networks and Networked Academic Identity

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Academic online social networking has received increasing focus in recent years with the development of a number of services aimed specifically at academics. There has, however, been little empirical work on the subject. This study seeks to understand the structure and role of academics' ego-networks on social networking sites in relation to developing an academic identity and becoming professional in their disciplines. To this end, a mixed-methods social network analysis approach will be used. Current outstanding issues relating to analysis and reporting, ethics, and the role of theory, will be outlined for discussion.

Context

This project is set within a broader research agenda known as Digital Scholarship (Weller, 2011), which is concerned with how the internet and digital technologies are transforming scholarly practice and encompasses a range of social and technological factors. Social networking sites (SNS) represent one of the platforms through which digital scholarly practices may be enacted. As online social networking has developed, generic tools have been appropriated by academia while services aimed specifically at academics entered the market from 2007 (Nentwich & Konig, 2012).

A review of the related literature revealed that there has been a greater emphasis in the literature to date upon the potential of such services to enhance scholarly practice, with few empirical studies of how their role is being realised in practice. Three themes emerged from the literature review; and these link to the empirical studies in each area as follows:

- **Collaboration:** Finding similar or different collaborators; supporting active research relationships. Public groups in Mendeley have been the focus of analysis of their characteristics and the extent of multi-disciplinary membership within groups (Jeng et al., 2012; Oh and Jeng, 2011).
- **Communication:** Discovery and dissemination of research findings; posing and answering questions. Although no studies have addressed this specifically in relation to academic SNS, Veletsianos (2011) analysed a sample of academics' activities on Twitter.
- **Identity:** Constructing an online academic profile. While online academic identity has been studied more extensively as mediated by other technologies (particularly blogs), a pair of studies have examined this in the context of academic SNS via analysis of profiles at Academia.edu (Almoussa, 2011; Menendez, de Angeli & Menestrina, 2012).

A limitation of existing studies of academic SNS is that the focus is typically upon content analysis of a single platform, which neglects one of the fundamental characteristics of SNS; the network of connections supported by the platform. To gain an insight into network structure, I undertook a pilot project to sample and analyse the network of Open University academics on three academic SNS. Subject area emerged as influential upon community structure, while the position of individuals is related to academic seniority (more senior academics having more

connections and occupying a more central position in the network) (Jordan, 2013). These differences in the pilot study would suggest a link between network structure and academic identity, so in this light the main study will focus upon the theme of identity. The whole network seemed less appropriate to explore specifically in relation to identity, so instead the work will concentrate upon individual academics' ego-networks (the network of their personal connections, and connections between them) across several platforms. Network analysis will be combined with co-interpretive interviews with the academics to gain insight into the structure as viewed by academics themselves.

Focus of the study

This study seeks to address the role of the network of connections fostered on SNS in relation to developing an online identity as an academic. The following research questions underpin the study:

- What are the structural characteristics of academics' ego-networks on SNS?
- How do academics construct and understand their ego-networks in relation to their online identity as an academic?
- Does the structure and/or role of the network differ in nature according to discipline or different stages of an academic career?

Methods

As the research questions are concerned with both network structure and how networks are constructed and interpreted by participants, a mixed-methods social network analysis methodological approach will be used (Edwards, 2010). This will combine social network analysis of a sample of academics' ego-networks with co-interpretive activities to understand the networks from the viewpoint of the academics themselves. Data collection will comprise three main phases:

1. Online survey, October to December 2014. This will address academics' use of online social networking sites in general, and demographic information. Respondents will be asked to indicate whether they would like to take part in the ego-network sampling and co-interpretive interviews. Additional contextual data will be gained via analysis of a recent survey dataset on academic social networking (Nature Publishing Group, 2014).
2. Sampling ego-networks, January to April 2015. The sample will be drawn from within the pool of survey respondents who were willing to participate further, and stratified so a range of disciplines and levels of academic seniority are represented. Ego-networks across up to four different platforms (likely Facebook, Twitter, LinkedIn and Academia.edu/Researchgate.net) will be sampled, visualised and analysed.
3. Online co-interpretive interviews, May to August 2015. Interactive versions of the ego-networks will be created using Gephi and the Sigma.js export plugin. These will be hosted on my website (with password protection) and shared with the participants. Via screen sharing in

Skype, co-interpretive interviews will be held with the participants to gain insight into the nature and significance of the network structure to them.

Once data collection is completed, a series of rich case studies of individual academics will be constructed, drawing together the variety of data sources involved. The research questions will ultimately be answered via cross-case analysis.

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