Unravelling the social network: theory and research

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Despite the widespread popularity of social networking sites (SNSs) amongst children and young people in compulsory education, relatively little scholarly work has explored the fundamental issues at stake. This paper makes an original contribution to the field by locating the study of this online activity within the broader terrain of social network theory in order to inform future educational debate and further research. The first section offers a way of classifying different kinds of online social networking and then places this within the context of the study of social networks. It is argued that relational networks create a sense of belonging and that online networks just as easily trace the contours of existing social divisions as they transcend or transform them. This analysis informs the second section which specifically addresses educational issues, including both the attractions and the limitations of such work. The paper concludes with an exploration of three possible approaches to using in SNSs in educational contexts.

Keywords: social networking; digital literacy; new media; *Web 2.0*; education

Introduction

Those with an interest in how popular engagement with digital technologies generates new socio-cultural practices cannot fail to ignore the rapid absorption of online social networking into the daily lives of friends, families and fellow professionals. Despite the presence of significant numbers who do not engage with *Facebook* and the like, even the 'refuseniks' (Willet 2009) are aware, at least in general terms, of what they are opting out of and why. In the affluent West, social networking sites (SNSs) are the source of media debate, moral panic and day-to-day conversation. Furthermore, they are attracting the attention of educators who are beginning to ask about their relevance to different kinds of learning (Davies and Merchant 2009a; Greenhow and Robelia 2009). It is perhaps surprising then that such a widespread phenomenon has received relatively little theoretical and empirical attention from social scientists

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and that quite basic definitional frameworks are under-developed in the literature on new technologies (Boyd and Ellison 2008 notwithstanding). In this paper, I explore some fundamental conceptual issues that relate to online social networking and its relationship to wider social networks in an attempt to lay the foundations for future empirical work and to outline some key areas of concern for educators.

What follows falls into two sections: in the first, and longer section, I interrogate the social network concept in order to expose some of its complexities and to caution against some naïve assumptions about the power of online social networking and youth engagement with it. On the basis of this critical re-appraisal, the second section addresses key issues for educators, suggesting how they might respond to the widespread adoption of online social networking. This second section concludes by identifying a number of areas in which further empirical research is needed. I begin though by providing an examination of online social networking by focusing attention on the definitional challenges that are raised in current work on the topic. This is developed by suggesting that it may now be helpful to make a distinction between SNSs as online spaces explicitly designed for interpersonal exchange, and the more general ways in which social networks may transfer to, develop or be complemented by online activity. I then address the more fundamental question of what we mean by a social network, how social networks have become a focus of study in recent years and to what extent the various online activities described fit with these conceptions. This leads into a discussion of the idea of 'belonging' and how it comes to be realised through our networks of connection. The first section concludes with a critique of the popular notion of the 'social graph'.

The social network

The social network is a way of conceptualising social groupings and interaction; give it capital letters – 'The Social Network' and it refers to David Fincher's film biopic of Mark Zuckerberg and the rise of *Facebook*. In an era of technologised sociability, this conflation of everyday human experience with mediated communication is significant in itself as social interaction becomes almost synonymous with, and in some cases indistinguishable from, the technology that enables it. What was said on *Facebook*, who texted who, and the latest celebrity tweets are seamlessly interwoven in face-to-face conversation – yet at the heart of this sort of conversation we see the intersection of two distinct notions of social networking, and it is worthwhile to tease them apart, at least for the purposes of the current analytical work, in the acknowledgement that in everyday life they may blend together in the same sort of way that the fortunes of X Factor contestants, and who has 'added' who to their *Facebook* page, are incorporated into our social world.

Online social networking or social networks online?

Social networking could, in general terms, be seen as a way of describing the patterning of everyday practices of social interaction, including those that take place within family structures, between friends, and in neighbourhoods and communities. In this way, we could talk about the social networks of former school friends, co-workers or those that form within the social institutions of a whole variety of groups, organisations and clubs that serve our varied needs, interests and affiliations. Indeed, social institutions and the informal or casual encounters that occur in and between people provide important contexts for the maintenance and development of relationships including both friendship and casual acquaintance. Wellman (2002) suggests that social networks in traditional societies are characterised by a predominance of face-to-face encounters contained within relatively small geographical areas – and certainly for most of the twentieth century this was true for the majority of the population. The extent to which this is changed by increases in population mobility and developing communications technology is a fertile area for investigation not least because of the likely variation between communities and social groups.

If Wellman's description captures the essence of what we might call 'traditional' face-to-face social networks, then it seems that advances in the technologies of communication have tended to act as accompaniments and sometimes supplements to these patterns of interaction. So, for example, postal systems and telephone networks have, for most of their history, allowed us to sustain and thicken existing social network ties. Literacy scholars will quickly point out the long history of writing in *maintaining* social ties in dispersed networks (Vincent 2000; Gillen and Hall 2010); however, it may be worth noting that although accounts of the use of these communication technologies in *initiating* social relationships do exist, they are by comparison quite rare. Technology may make new connections possible, but there is little evidence that it actually determines them. From this point of view, online social networking could be seen as a newer way of enhancing or modifying pre-existing relations – with the term probably best used as a way of capturing, in a rather general way, the use of web-based communication to build or maintain such things as friendship or interest groups, extended family ties, and professional, political or religious affiliations.

Since its inception, the internet has worked as a channel for communication in connected social networks. In countering some of the more extravagant claims of *Web 2.0* enthusiasts who have written about a paradigm shift that has resulted in the 'social web', Tim Berners-Lee is frequently quoted as saying that 'the internet was always social' (Davies and Merchant 2009a, 3). Yet, it is also argued that the most noteworthy development of recent years is the scale of adoption of technologies and the popular spread of the read/write web. Whichever viewpoint is the more appealing is perhaps less relevant

than the general observation that the online textual universe is now extremely large and varied, and encompasses well-established practices such as email groups, listservs and bulletin boards, as well as more recent developments such as music- and photo-sharing sites, massively multiplayer online games (MMOGs) and 3D virtual worlds. These and related practices could be seen as the basis of online social networking as a popular and broad-based activity.

An important subset of online social networking is constituted by those environments that are specifically designed to support and develop friendship and whose overt purpose is to provide a context and appropriate tools for doing so. The term SNSs is used to describe these environments and to distinguish them from other forms of techno-sociability – *Facebook*, *Bebo*, *MySpace* and *Twitter* being the most popular examples at this moment in time (see Figure 1 for more). In their intelligent commentary on SNSs, Boyd and Ellison (2008, 211) make a distinction between 'networking', which they argue implies active relationship *initiation*, and 'network', which for them suggests relationship *maintenance*. The distinction is helpful as a way of categorising different kinds of online social activity but glosses over the fact that relationship maintenance and development can be just as active and arguably equally as significant as relationship initiation. Boyd and Ellison (2008) tie their definition of SNSs to three core characteristics. These are that:

- Individual users or members construct a public or semi-public profile on the site
- Users/members create and list connections with others (friends, followers or buddies)
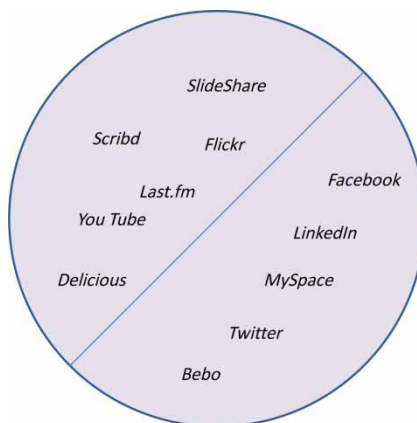- Users/members traverse the site through their own and others' friendlists

Figure 1.   A map of social software showing some popular sites that promote online social networking and on the right some specific SNSs.

Although it could be argued that these characteristics are shared with other environments that may not focus explicitly on friendship (*Blogger*, *YouTube* and similar applications come to mind), the emphasis on presence, connection and community are certainly germane to understanding of social media. There is clearly a fuzzy boundary between the characteristics of wider online social networking and the smaller area of specific SNSs as defined above. This is most evident in web-based services that have supported the growth of a community, or communities of interest – or what Gee (2004) refers to as an affinity space. Examples of these are the *Flickr* photo-sharing community, music recommending sites like Blip.fm and those other online spaces that benefit substantially from having their own 'in house' communication tools.

It has been argued that it is useful to distinguish between those environments specifically designed to promote social interaction and friendship and those that support social networking around a specific activity, usefully described by Engestrom (2007) as a 'social object' (Ito et al. 2008; Merchant 2010a). In Figure 1, this distinction is represented by the diagonal division of the social software set – this distinction needs, of course, to be conceived of as a weak boundary but helps in characterising the patterning of online interaction.

One of the unifying features of SNSs is the way that they support public displays of friendship and connection. In blogs, this is often shown as a blog-roll, in other sites it is a friendlist, whereas in the micro-blogging site *Twitter* this function is fulfilled by the lists of who 'follows' you as well as who you 'follow'. In this way, according to Greenhow and Robelia (2009), users 'make visible their social networks' or, to be more precise, they give an online performance of those connections that they *think are significant* to their imagined audience. The concepts of performance and audience (which have their origins in the work of Goffman 1959) suggest that where individuals use multiple SNSs we might expect to see differences in their friendlists – differences that would reflect their engagement in different communities and different activities. I am not aware of any research that has looked at patterns of affiliation across SNSs, but such work would be very useful if only to begin to explore the real complexity of social networks.

In order to complete this developing picture of SNSs, they must now be placed in what I referred to above as the 'wider textual universe' of online communication in which all the email exchanges, i-m chats, bulletin boards and so on feature. This is important, first in order to be more specific about the difference between SNS activity and social networking online, and secondly to open to a more expansive view of social networks in which activity and interaction across a range of platforms can be conceptualised. This then begs the broader question of how, and in what ways, the social networks enacted online fit into the bigger picture of social networking. In order to approach this topic, we now need a more refined understanding of what it means to talk about a network, and what the strengths and limitations of this perspective might be.

What is a social network?

As a way of describing social interaction, the metaphor of a network is appealing in a number of ways – after all, it suggests connection between points, as well as a sense of fluidity; but it also invites a certain kind of abstraction of the social which is perhaps best captured in the diagrams that are a common characteristic of network analysis (see http://www.neuroproductions.be/twitter_friends_network_browser/). It is also a peculiarly twentieth-century metaphor – one that readily associates with *the network*, itself synonymous with the online world of digital connection. The concept of a social network reduces the human social actor to a point – not even a point of view – but a point that connects in various ways to other points. In essence, it speaks to the patterning and flow of communication and interaction by drawing attention to relationships, social groupings, friendship, intra- and inter-group behaviours as they are enacted in and across different geographical locations and over time.

The work of Wellman and his associates, based on their in-depth studies of a community in metropolitan Toronto, has made a major contribution to our current understanding of social networks – and particularly to the way these may be changing in a time of rapid global communication and increased population mobility. In their body of work, computer-supported networks sometimes receive a lot of attention, even to the extent of generating what seems like quite a narrow definition. Here is one example:

> When a computer network connects people or organisations, it is a social network. (Garton, Haythornthwaite, and Wellman 1997, 1)

In a similar vein, Wellman's theory of how the patterning of relationships may evolve from 'close-knit' groups, to 'glocalised communities' and on to 'networked individualism' (Wellman 2002) has received a lot of attention from those interested in new technology not only because of the way it fits with the rise of mobile computing but also because of the way in which it suggests high levels of agency. So, for example, Benkler argues that networked individuals are able to 'reorganise their social relations in ways that fit them better' and 'loosen bonds that are too hierarchical and stifling' or fill in the gaps where 'their real-world relations seem lacking' (Benkler 2006, 367). Whilst the networked individual *may* be able to do all these things, this idealistic vision tends to over-simplify the complexities of social relations and the ways in which they play out in everyday contexts.

Elsewhere, Wellman's work documents how social networks support the routine life of households, their capacity to cope with adversity, with emotional upheaval, economic hardship, and the everyday challenges of life including everything from child care to house maintenance (e.g., Wellman and Wortley 1990). The theoretical strength of the network metaphor has enabled these researchers to map the extent of social ties, to examine both individual and collective dimensions and to begin to re-theorise the concept of community. In

these accounts, communication is fore-grounded as attention is placed on the 'flow of information (and other resources)' within and between groups (Garton, Haythornthwaite, and Wellman 1997, 1). In other words, how social beings are linked and how they participate by creating allegiances and friend-ships in both formal and informal contexts become important considerations in this tradition. Social network analysis helps us to map the relationship between the individual and the larger social systems in which he or she participates. As a result, the relationships themselves have become the unit of analysis.

As Emirbayer and Goodwin (1994) point out, the concept of the social network emerges at various points in the history of the social sciences but its distinctiveness in terms of theory and analysis first becomes apparent in the sociological literature of the mid-twentieth century (see also Schuller, Baron, and Field 2000). Enthusiastic commentaries have suggested that by emphasis-ing the interdependence of individuals, social network analysis has the potential to bridge micro- and macro-sociological concerns by illustrating how the 'flow of material and non-material resources' is patterned (Schuller, Baron, and Field 2000, 19). As we can see, this is a wider ambition than any number of studies of online behaviour could hope to reveal.

This short overview of theory and research in the substantive field of social network studies highlights a number of important issues that can be brought to bear on the topic of online social networking. The first of these has to be an acknowledgement that there is much more depth and density of activity in social networks than is represented or enacted in SNSs. Social networks may depend on a variety of modes of communication, but they are also necessary to the flow of material resources, activity and action in the physical environment. They are, for example, key to a range of activity from the day-to-day maintenance of household life, to achieving a sense of community cohesion and civic participation (see Putnam 2000). SNSs may have an increasingly significant role to play in this range of activity, but there is insufficient evidence to suggest that they are about to transform existing structures.

The second issue is not entirely unrelated to this, and that is the clear possibility that SNSs *can* provide an arena in which some aspects of wider social networking can be achieved and in which some of the kinds of activity and action referred to above can be negotiated, arranged and co-ordinated. But current research simply does not tell us enough about how social networks are enacted across material and virtual spaces. This interplay between online and offline interaction offers a rich vein for future research along the lines suggested by Leander and McKim (2003). Finally, since social identity shapes and is shaped by the structures and networks in which we are located, these can be seen as conferring a 'sense of place' either in a spatial or a metaphorical sense. It is this sense of place (and lack of it) that I now address.

A new sense of place

It has become popular to argue that our identities develop and emerge through interaction and, following the theories of Goffman (1959) and others, that the social self is performed in front of an audience of others. This point of view is particularly persuasive when applied to online environments in which the individual self-consciously chooses to display biographic data (with varying degrees of accuracy and disclosure), selects an avatar to represent herself on screen (like or unlike the 'real' self), and even a name (real or fictive). Of course, in some online settings, the invitation to play a role is overtly constructed by the design of the environment – this is the case in Second Life and most MMOGs in which an avatar has a fictional identity whose relationship to a real-life person is more complex. Admittedly, there is nothing to prevent one from disclosing personal details in these contexts, an act often achieved through sharing profile data, but there is an important difference between this sort of identity play and what normally occurs on SNSs. The difference can be accounted for in terms of the nature of the relationship between the virtual and material worlds. The highly connected relationships promoted by SNSs allow, and even encourage, users to anchor their relationships and social activities to the real world and this raises new and complex issues concerning privacy and self-expression (Livingstone 2008). In short, the identity work done online has an iterative relationship with offline identity (see Dowdall 2009b for an illustration of this).

This notion of identity anchorage inevitably raises issues of place and belonging. Spencer-Oatey argues:

> Identity helps people 'locate' themselves in social worlds. By helping to define where they belong and where they do not belong in relation to others, it helps to anchor them in their social worlds, giving them a sense of place. (Spencer-Oatey 2007, 642)

As the boundary between online and offline social networking becomes increasingly porous, we might well ask *where* our friends are: in our friendlist or in the 'real' world? The question may well prompt us to investigate how the two arenas of social life may be interwoven or re-integrated (as suggested in the introduction to this paper).

In a careful exploration of the role of the mobile phone in contemporary life, Gergen (2003) uses the metaphor of the 'floating world'. Historically speaking, the floating world refers to the urban lifestyle associated with the Japanese Edo period – an unregulated social world devoted to everyday pleasures and pastimes. The similarities between this informal social world and the floating world of mobile phone users is carefully sketched out by Gergen; yet, the contrast lies in the different conceptions of space and place that are involved. Geography is clearly less significant for networked communities and, as

Gergen poetically suggests, these communities are 'elevated from the physical terrain'.

> We may imagine here that dwelling about us at all times are small communities that are unseen and unidentifiable. However, as we stroll the thoroughfare or sip coffee in a café their presence is made constantly known to us. Each mobile phone [….] is a sign of a significant nucleus, stretching in all directions, amorphous and protean. (Gergen 2003)

As an increasing number of SNSs are available on 3G mobiles, the idea of a phone as the hub of the individual's portable and dispersed connections, and Gergen's idea of the invisible web (of networks) in the floating world are enduringly powerful images – particularly when the everyday reports of what has taken place '*on* Facebook' or '*on* Twitter' appear to invest those environments with something rather like a sense of place. At the same time, it is clearly not the case that places in the real world have emptied out, or become bare stages on which absent presence is enacted. It is perhaps more helpful to see how social networks have become more densely layered with the advance of new communicative tools.

But having a sense of place in a social world is at the same time more complex and more varied than the above account might suggest. For the purpose of the current argument I suggest two reasons for this, one general and one more specific to the world of SNSs. Firstly, social networks at large are not entirely neutral. In other words, they constitute or reflect the divisions, diversity and inequities of the social fabric. One has only to read MacDonald's study of networks in the North East of England to understand how a particular social network can simultaneously limit opportunity and re-inforce social exclusion (MacDonald et al. 2005). If networks describe a relational context, then that description must apply equally to criminal activity and legitimate professional interchange, to affluent urban youth as well as those growing up in poor neighbourhoods. Here, Putnam's notion of 'bonding capital' is relevant: networks which connect the like-minded are simply likely to perpetuate or increase social divisions (Putnam 2000). Secondly, it is often assumed that online social networking is in some way a unitary phenomenon, whereas in actual fact SNSs themselves are silos, traversed in particular ways by particular users who are locked into particular sites (Lanier 2010). Even within a single SNS, it is simply not the case that individuals are part of a big happy family. Division continues to perpetuate, interest groups form and dissolve, and levels of use vary widely.

The problem of the social graph

When *Facebook* founder Mark Zuckerberg was named Time Magazine's person of the year (Time Magazine 2010), he was lauded for 'connecting the

world'. He was praised for the way in which *Facebook* had 'wired together a twelfth of humanity into a single network, thereby creating a social entity almost twice as large as the US'. Whilst *Facebook*'s success should not be under-played, the claim that it has created a 'single network' or, for that matter, 'a social entity' is a misreading of online social networking for reasons that by now should be quite clear. Nonetheless, the mythology of the single network is pervasive in some quarters in which it is imagined that we might soon inhabit a world in which one's position on the 'social graph' (Fitzpatrick 2007) – the global mapping of everybody and how they're related – seems to count for a lot. The concept of the social graph easily plays into the sort of naïve 'cyber-libertarianism' lampooned by Buckingham (2010); but I suspect that for most of those interacting through SNSs, and particularly young people in the education system, more parochial concerns predominate.

However, the concept of the social graph also evokes the idea that who you know matters, and with this the more unsettling idea that making this visible is important. Rather than the globalised egalitarian world suggested by SNS enthusiasts, this could turn out to be how social capital is rendered in the digital age. Take Bourdieu's definition that social capital is:

> the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual aqua-intance and recognition [. . .] which provides each of its members with the backing of collectively owned capital. (Bourdieu 1997, 51)

It is not difficult to see from this that social capital can be conceived in terms of the resources that reside in individuals' social networks, and that these resources might be mobilised by them for their own ends. As a result, the totality of our interconnections, both online and offline – our *Facebook* friends as well as our work colleagues – contribute to this capital, and so too do the social institutions and organisations that we participate in. But given the sorts of social divisions and inequities that I referred to in the previous section, it seems unlikely that increased engagement in online social networking will serve to transform or 'bridge' social capital; perhaps at best it will augment it.

Online social networking and education

In a social context of rapid technological innovation and dissemination strongly shaped by consumerism, corporate interest and techno-utopian imaginings, it is vital that we are critically aware of the role that technology plays in all our lives, and particularly in the lives of those we are responsible for, including the children and young people in our education systems. So far, this paper has focused on a single manifestation of new technology, namely the rapidly growing engagement with SNSs. I have argued against simplistic views that tend to

exoticise online social networking, to exaggerate its popular appeal, or to ignore its position in wider social networks. Whilst acknowledging the widespread use of SNSs, I have also drawn attention to the realities of occasional, persistent or even reluctant engagement, as well as the existence of those who refuse to participate. In this section, I draw on earlier themes to identify ways in which educators might respond to the phenomenon of online social networking, and the related research questions that need to be asked.

To begin with, it is worth underlining the fact that we simply do not know enough about children and young people's experience of online social networking and how this is interwoven with life offline. Despite the succession of Pew internet reports from the US (e.g., Lenhart et al. 2007), the work of Livingstone and colleagues in the UK (Livingstone, Bober, and Helsper 2005), OfCom studies (OfCom 2008) and the like, we only gain a limited impression of the spread of SNSs. Few studies point to demographic variation – Hargittai (2007) is a notable exception – and even fewer explore the experiences of online social networking and the role it plays in the everyday lives of young people. In this respect, Greenhow, Robelia, and Hughes' argument is supported. We need:

> 'a stronger focus on students' everyday use and learning with *Web 2.0* technologies in and outside of classrooms. (Greenhow, Robelia, and Hughes 2010, 255)

We also need to know about the part these activities play in their wider social lives and to place this alongside a sensitive exploration of what has been referred to as the 'participation gap' (Jenkins et al. 2006). Some key themes emerging from the earlier overview of social networks in 'The social network' section are applicable here. For example it has been argued that we would profit from a better understanding of: patterns of use *across* SNSs and the ways in which these are located in the wider textual universe of online practices; the nature of the relationships that are formed and maintained and how these relate to activity and action in other contexts; and how online social networks constitute or reflect broader divisions, diversity and inequities in society.

But also, given the growing significance of SNSs in students' lives, it is important to look at the influences that already frame educational responses to digital literacies (see Dowdall 2009b). Some of the difficulties that educators face in tapping into their students' experiences in the context of formal education may be beyond their control, constrained by curriculum and assessment regimes as well as institutional policies – but there are also some other areas of difficulty. First, there is the perceived danger of unfiltered and open access to online interaction, fuelled as it is by moral panic over internet safety. Secondly, there is the suspicion, still felt in some quarters, of anything that smacks of popular culture in which young people are often more expert than teachers. Thirdly, there is a lack of knowledge or familiarity – because, to some extent, online social networking is still seen as the province of the young – a

foreign country to some teachers. Fourthly and finally, there are relatively few models of good practice to draw upon.

Yet, when we think that the popularity of SNSs stems from the way they provide a context for friendship, interaction and affinity around shared interest, and see how they become spaces in which self-directed learning *can* take place, they begin to seem more attractive. SNSs clearly do provide opportunities for geographically and temporally dispersed groups and individuals to communicate, exchange information and develop ideas, and from this perspective, we may be able to glimpse some new ways of structuring learning communities (Davies and Merchant 2009b). The innovative work of Hull and Stornaiuolo (2010), discussed below, provides an example of this as they follow the dictum that:

> the rewards could not be greater, or the risk of failure more grave for educating a citizenry able and willing to communicate with digital tools across differences in a radically interconnected yet divided world. (Hull and Stornaiuolo 2010, 85)

Despite the strength and validity of this statement, there is still important work to do in conceptualising the learning that can occur through these sorts of connections. So, although there may be broad agreement that learning is dependent on interaction, we need to be wary of the assumption that all interaction results in learning. Claims that the digital age is characterised by new kinds of learning, although seductive in their appeal, still require empirical support. Here, the work of Ravenscroft, Wegerif, and Hartley (2007) on learning dialogues and Pachler and Daly's (2009) study of narrative as a tool for knowledge construction offer possible ways forward.

Three approaches to the use of SNSs in educational settings

An initial exploration of how young people and their teachers currently use SNSs (Merchant 2010a) identified a number of areas of interest for educators, and these are broadly suggestive of three different kinds of activity that are relevant to educational settings. These are characterised as *learning about SNSs*, *learning from SNSs* and *learning with SNSs*. Each is explored, in turn, below.

The first of these is to *learn about* SNSs and their role in learners' lives – doing this is crucial in understanding the worlds that our students inhabit as well as in identifying the knowledge, skills and dispositions involved as social and cultural capital. This underlines the imperative to recognise and validate the learning that takes place in SNSs (Owen et al. 2006) and to begin to explore the relationship between casual sociality, informal learning and the endeavours of institutionalised education. Such an approach can involve a benign form of media literacy in which the over-riding purpose is not to evaluate or denigrate the enjoyment of online social networking but merely to exchange experiences and to discuss general issues such as privacy, safety

and responsibility (Livingstone 2008) as well as the role of commercial and corporate interest. This kind of activity leads into potentially fruitful explorations, investigating what sort of practices might constitute 'advantageous' online activity (Greenhow and Robelia 2009) and the nature of the influences that shape the presentation of self in SNSs.

The second approach is to *learn from* social networking in order to appreciate the kinds of social interaction and informal learning SNSs can support, and as a result to reflect upon and refresh our own pedagogies and designs for learning. Here, the work of Hull and Stornaiuolo (2010), which chronicles the development of an international SNS to promote 'cosmopolitan' educational practice, is of significance. Although the presentation of self is still important in this work, this takes its place in the context of fostering mutual understanding between students in a variety of dispersed geographical and socio-cultural environments.

The third and final approach is to *learn with* SNSs, and involves making use of learners' existing online social networks to support and extend curriculum-based work. This is an approach perhaps best-suited to older learners who may be encouraged to choose among freely available SNSs to support collaborative learning, but also can include younger children as my own case study work has shown (Merchant 2010b). In a similar vein work by Waller (2010) on the use of *Twitter* with his class of 6 year olds shows the value of online social networking in evaluating and reflecting on learning.

Conclusion

Conceptions of social media that fail to acknowledge the rich body of literature on social networking are likely to provide an impoverished view of the challenges and opportunities that are presented by new technologies of communication. In this paper I have distinguished between different kinds of social networking and, in summarising some influential themes in theory and research, I have presented an overview of the key concerns for educators. By emphasising the ways in which SNSs may simply reflect the divisions, diversity and inequities of the social fabric, the paper has explored the notions of 'social capital' and 'belonging', and provided a critique of the popular notion of 'the social graph'. This offers a context for more principled educational approaches to SNSs and one that is cognisant of its relationship to more established networks. The concluding section outlined three separate approaches to the use of SNSs in educational settings.

Despite claims that the social web is a rich space for informal learning, to date there has been little serious attention paid to the form or nature of that learning. Researchers such as boyd (2007), Carrington (2008), Davies (2006) and Dowdall (2009a) have all *described* the learning that takes place, but no model has been developed yet to theorise this learning. At the same time, there is growing evidence of innovative educators using *Web 2.0* and social networking in the classroom (Lankshear and Knobel 2006), and a growing

body of work that documents the ways in which young people learn informally in online contexts (Ito et al. 2008) – but it must be said that these are small gains in a political and educational environment that often sees new technology as a solution to all its problems – from providing for employment and skills shortages, to 'curing' pupil disaffection and under-achievement.

Notes on contributors

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