Networked Learning, a relational approach – weak and strong ties.

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ABSTRACT

In this paper, we explore the idea of weak ties in networked learning. We go back to the original conception of the strength of weak ties (Granovetter 1973) and relate this to a dialogic understanding of networked learning (Koschmann 1999, Dysthe 2002). These theoretical ideas are applied to the examination of two networked settings in which educational leaders exchange ideas and have the potential to create knowledge. We examine these networks from the point of view of the overall pattern of interaction and from an interest in the kinds of dialogues engaged in by participants in the network.

Keywords
Networks, networked learning, weak ties, leadership, community

INTRODUCTION

Networked learning focuses on the connections between learners, learners and tutors and between learners and the resources they make use of in their learning. This approach to learning suggests *a relational view* in which learning takes place in relation to others and also in relation to an array of learning resources (Jones 2004, Jones and Esnault 2004). This view of networked learning has been explicitly applied to networked management learning employing a dialogic approach (Hodgson and Watland 2004). Our view of networks is informed by the idea of scale free networks, which are a regular pattern of organization found in network environments, and the ways in which an order of this type may affect learning (Barabasi 2002, Buchanan 2002). Networked learning understood in this way doesn't privilege any particular types of relationships, either between people or between people and resources. As such it differs from two of the more popular approaches applied to the use of computers and digital networks in education, communities of practice (CoPs) and computer supported collaborative learning (CSCL).

Both CSCL and CoPs place an emphasis on the strong relationships found in communities and collaboration, relationships that imply a certain closeness and unity of purpose. These approaches also tend to emphasize human-human relations even when these are mediated through an electronic network and are separated by time and distance. Network analysis has the potential to focus more strongly on the relationship between humans and the objective forms through which mediation takes place, either the device connecting the person to the network or the resources through which the relationship between persons become reified.

In this paper we explore examples of networks and networked learning that allow for the possibility of relationships involving *weak ties* and looser and less focused groupings. We take the view that strong and weak links are not mutually exclusive. Strong and weak ties are relative conceptions, and strong and weak ties may co-exist in any given set of relationships. We suggest that the strong ties found in community and collaboration are likely to be special cases of a rather more general set of phenomena found in networks and involving ties with a variety of forms and strengths. Two other papers presented at this conference symposium also deal with the nature of weak links and how to characterize relationships in networks (Ryberg and Larsen 2006, Enriquez 2006).

Wellman (Wellman et al 2003) and Castells (1996, 2000) describe the form of sociality in network society as 'networked individualism' (Castells 2001p129 ff). On the one hand the new economy is organized around global networks yet on the other hand the work process is increasingly individualized. This general social trend raises fundamental questions about the relationships between the networked society and the organization of learning. The term 'networked individualism' suggests that it is possible to take a critical approach to theories of community based on consensus and collaboration, without ruling out the possibility of communication and dialogue. In this paper we examine the use of digital networks by educational leaders. The posts occupied by such workers are often isolated and the use of digital networks has been suggested as a way of developing forms of cooperation and community. We examine the interactions in such environments to try to characterize the types of links that are made during the processes of engagement in and through the network

Weak ties

Network theory would suggest that the strong notions of community contained in Communities of Practice might ignore the importance of the 'strength of weak ties'. The idea of the strength of weak ties originates in the journal article written by Granovetter (1973) in which he develops this notion as a way of linking macro and micro approaches in sociological theory. Furthermore he argues that previous network theory had implicitly prioritized strong ties that were primarily within small well defined groups. Weak ties he argued would allow for the analysis of interaction *between* groups and for analysis of social activity that was not confined to primary social groups. Weak ties are also a potentially interesting topic to explore in relation to digital networks in which we are concerned with large relatively diffuse groups in which there may be no clear boundaries. This approach also suggests a connection with the question of boundary objects, explored in another paper in this conference symposium, and the way in which different kinds of links relate to boundaries (Dirckinck-Holmfeld 2006).

Granovetter offered the following definition of the strength of an 'interpersonal' tie:

> The strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie. (Granovetter 1973 p 1361)

An assumption, he adopted for simplicity, was that ties were positive and symmetric rather than negative or asymmetric in character. Granovetter also discounted certain face-to-face ties that are existent but extremely weak, treating them as absent links. The examples he gave were 'nodding' relationships with near neighbors and the casual relationship one might have with a newspaper vendor. In drawing comparison with work by Milgram, Granovetter accepted that 'friend' in Milgram's work could be thought of as a strong link, whilst 'acquaintance' would equate to a weak link. It should be born in mind that Granovetter's work preceded digital networks by some years and the kinds of relationship he discusses are limited by the usual geographical and temporal constraints of a face-to-face environment, Granovetter is also concerned with *individuals*, and networks in this view are composed of persons who form nodes and the links are relationships between these people. Now networks composed of digital media are more likely to be thought of as comprising nodes of various types, including individuals, small, medium and large organizations, technological artifacts and systems etc. The stance Granovetter takes is also one that tends towards essentialism, suggesting that networks are what individual nodes make of them. This view could be contrasted with a more relational view of networks, which we would favor, in which the individual components of networks, whether persons, groups or institutions are emergent in their character, conditioned by their position in the network.

Weak ties have been identified as an enabling factor in social activism and the building of 'social capital' (Kavanagh et al. 2003). The educational focus on strong links and the emphasis on community may have downplayed the many necessary but weak connections that make networks so powerful. The nature of networked learning is such that whether the network is used for distance or largely place based learning the participants do not have to be co-present. The learners in a network may well have weaker ties with each other than might be expected in terms of a community of practice. This may be even more so when the learning community is composed of educational leaders who are diverse and often senior, mature and professional learners who have their primary commitments to work and other communities.

Dialogue and addressivity

Bakhtin's ideas on dialogue are perceptive and relevant to considering online discussions particularly within the context of networked learning and the standpoint that learning emerges from relational dialogue. Bakhtin's ideas have been explored by Tim Koschmann in the context of Computer Supported Collaborative Learning (CSCL) and Olga Dysthe in the context of dialogue in online discussions (Dysthe 2002). In this theoretical tradition dialogicality is a term used to explore an ontological distinction between *self* and *other* such that all speech (even internal) has an intended audience, a property referred to as *addressivity*. (Koschmann, 1999: 313.). For the purposes of this paper addressivity is an idea that we think can be applied to the nature of the relationships between a member and the networks of which they are a part. For Bakhtin and those theorists who have developed his work the "other" enters into speech not only as an audience and interlocutor, but is also embedded *in* every utterance. For Koschmann it is the conflict between the need contributors have in online environments to develop a shared understanding with others and the need to distinguish the 'self' as different to others that is the fundamental basis for dialogicality.

For Bakhtin real units of speech communication can be thought of as utterances, with a definite beginning and end marked by when the speaker (or writer) begins speaking and when they finish speaking (or writing). Every utterance is dialogical and the speaker or writer seeks to address a particular audience and the listener or reader takes an active part in responding to or receiving the utterance. As Bakhtin states, 'Sooner or later what is heard and actively understood will find its response in the subsequent speech or behavior of the listener' (Bakhtin 1986 p 69). It is both the assumption of an audience for the speaker or writer and the assumed responsive

position of the listener/reader (implicit or explicit) to an utterance that for Bakhtin makes all speech/text dialogical. For Bakhtin even a monological utterance is full of dialogic overtones. As he explains, 'In reality, and we repeat this, any utterance, in addition to its own theme, always responds (in the broad sense of the word) in one form or another to others' utterances that precede it.' (p94). ' For the purposes of our argument, this idea is important since it suggests that the process of reading a post might be seen as dialogical. If a member of a forum reads a posting, and this then has an impact on their subsequent activity, they can be seen as having entered into a learning dialogue even if they do not formally respond to the posting. One of the advantages of online communities may be that they allow users to draw on a large number of weak ties, often with individuals with whom they do not have any relationship other than both being members of the same network.

The other important aspect of Bakhtin's theory, noted above, is the notion of addressivity. The composition and, in particular, the style of an utterance will depend on those to whom the utterance is addressed, how the speaker (or writer) senses or imagines his/her addressee. How the speaker views the addressee will in turn influence the choice of speech genre used by the speaker. Choice of speech genre can vary amongst other things depending on the experienced personal proximity of the addressee to the speaker. Where there is deep confidence or trust in the addressee the speaker is more likely to adopt a more familiar or intimate speech genre. Every utterance has two aspects, one that concerns the relation between the message and the proceeding messages and other is concerned with the addressivity of the message, i.e. to who it is directed. It is this aspect of speech that suggests that an analysis of utterances in a networked environment may reveal the quality of the links between people active in the network and from this we may gain a better understanding of the nature of weak links in such settings.

NETWORKS FOR LEADERSHIP AND LEARNING

The paper report findings from two case studies conducted as part of a research project funded by the Centre for Excellence in Leadership (CEL), a United Kingdom leadership college for the learning and skills sector funded by the Department for Education and Skills (DfES). This paper reports on one informal network that has arisen organically within the learning and skills sector and another more formal initiative from the schools sector related to the National College for School Leadership (NCSL). Both networks have broad constituencies that might be expected to show relationships that can be characterized as weak links.

The principals' network

The Principals' network originated from a number of informal email discussion groups about key topics such as funding and government policy. In late 1999, one principal with an interest in information technology raised the possibility a single bulletin board which could potentially be accessed by all principals and which would allow them respond to the challenges of significant policy transitions within the sector by sharing ideas and information.

The list was established in March 2000 using JISCmail, a mailing list service sponsored by the Joint Information Systems Committee (JISC) to provide listserv systems for workers in further and higher education in the UK. JISC's involvement is limited to hosting the lists, with individual list owners (in this case the individual principal responsible for setting up the list) providing facilitation, moderation and support. The following invitation was sent out to all English FE colleges, attracting 149 members by May 2000, a figure which gradually increased to over 300 members by 2002:

> Dear Colleague,
>
> This is a note to let you know that I have arranged for the colleges mailbase to set up a special bulletin board for FE Principals. I hope that this facility will provide an informal space where Principals of English FE Colleges can share reactions to government and FEFC policies, enquire about good practice, seek partners for new initiatives or just gossip.
>
> This is a time of transition for FE colleges as we move from TEC and FEFC systems to the new Learning and Skills Council. It is also – allegedly - changing from a competitive market system to a collaborative and planned environment – making it all the more important for Principals to be able to share ideas, views, reactions and values. The mailbase will also allow the sharing of materials, policies, draft documents and information on contractors.
>
> For the time being I will act as list administrator. I have established two rules to start with – any FE Principal who wants to be on can be, and no-one else will be admitted. This should allow some freedom in exchanging views, though remember that the normal rules of discretion and libel apply! If you would like to add your name, please send a message to fe-principals-request@mailbase.ac.uk and I'll exercise my embryonic net skills to put you on. What then happens is that any message you send to fe-principals@mailbase.ac.uk will be automatically copied to all list members, and appear as an in-box e-mail item in the normal way.

In this example, we can see a number of assumptions relating to the ways in which the addressivity of postings to the list will influence speech genre. The rule that 'any FE Principal who wants to be on can be, and no-one else will be admitted' is assumed to lead to 'freedom', and the list administrator makes specific suggestions about how this might allow users to employ particular genres (such as 'sharing' and 'gossip').

Talk2learn and school leaders

Talking Heads was an online community for head teachers established in February 2000, as a pilot study and developed into a working model and placed under the remit of the National College of School Leadership (NCSL) in August 2000. Initially Talking Heads was a research and development project based at Ultralab at Anglia Polytechnic University. The project focused on developing and engaging in informal online learning community. The community was developed through a process of active facilitation by educational professionals who trialed a variety of strategies to reduce isolation and to enable head teachers to share good practice. The original pilot project began with over 1300 members, and moved on to large-scale use from 2001. The development team argued that:

> The fundamental challenge faced was generating participation, without this there is no online community. The theoretical frameworks outlined in the literature review gave us starting points as to what conditions might generate participation. It is our contention that a multi-faceted approach – community, self-direction, networking, online events - building on the different models for learning and professional development produces the highest rates of participation. (Bradshaw *et al* 2002 p8)

The original project now forms one part of the in house facility operated by the National College for School Leadership "talk2learn". Talk2learn is an online environment developed specifically for school leaders. Within talk2learn, school leaders share information and build relationships with their peers. The intention is that by doing so, leaders will develop their own learning and generate new knowledge and understanding that they can take back to their own schools. The online communities are available to school leaders at all stages of their career. The original Talking Heads was a professional support community other groupings in the talk2learn environment are learning communities which support a particular course of study with the NCSL (such as Virtual Heads), or consultation communities such as Hot Seats, in which school leaders can directly question leading figures and policy makers in the world of education.

The patterns of engagement

In this section we provide a very limited set of figures, illustrating the general pattern of relationships that we claim can be thought of as weak links. The information should only be thought of an indication of activity and not as robust. Within the principals network there are between 300 and 400 members at any one time. The interviews with participants and moderators of the list generally agreed that there were about 50 regular posters and about 10-20 frequent posters. Most members of the list are 'watchers' and could be encompassed by the terms 'lurkers' or 'vicarious learners'. It may be interesting to note that one interviewee reported that she checked the mailbase every day and often downloaded documents, but had only replied to a posting once when she had specialist knowledge of the topic.

Within the talk2learn environment there is a great deal more structure and the environment itself is nested within the NCSL web site. Perhaps the easiest way to distribute activity is between:

- Formal Programs such as National Professional Qualification for Head teachers (NPQH) and Bursars
- Non-program areas such as NCSL in Dialogue
- Non-cohort programs such as Fast Track

Each of these areas of activity have their own characteristic patterns of activity. The levels of activity are conditioned by issues such as a requirement to post that can be found on some programs. For the purposes of this paper we are reporting only on the non-program areas.

The non-program areas have a very large potential constituency with an overall 70,000 registered users. If we take what was described to us as a fairly typical month, November 2005, there were 29,000 visits and these were made by 9,000 unique visitors about 13% of the overall number of users. There were 700 contributions, and 400 unique contributors made these contributions to the discussion, just over 0.5% of users. Within the environment the ability to track individual contributors is thought to be "almost impossible as the numbers are just too big to keep track of." So longitudinal data is difficult to generate. However we argue that the pattern of interaction in this environment is one of weak ties in which in any one month a minority of users read and a tiny minority of users are active contributors.

The qualities of relationships

The crude statistics of participation cannot provide a picture of the kinds of interactions that take place and the following section examines the nature of the posting within the two networks and tries to draw out what types of

dialogues are taking place. It does this by examining the content of the dialogues, what forms of address are being using towards the 'other' in the network and by looking at the genre of different contributions. We begin by looking at the ground rules, concerning boundaries, that apply in the networks by examining the original invitation to join the principals' network.

Privacy and boundaries

> I have established two rules to start with – any FE Principal who wants to be on can be, and no-one else will be admitted. This should allow some freedom in exchanging views, though remember that the normal rules of discretion and libel apply. We do hear that some of the more salty comments are passed on to the LSC or NATFHE or DfES or AoC or whatever. Don't do so, but as you send your message remember some other plonker might.
>
> [Invitation to Principals' Mailbase]

Our research in this area suggests that one of the practices online communities engage in, is creating a space that feels safe. Safety in such environments is mainly defined in terms of privacy, which depends on the ability both to exclude outsiders and to determine what members can say, and to whom.

In this study, we found that the closed nature of the list was cited as an important factor that allowed users to feel comfortable sharing their opinions and practices: for example, the participant quoted above felt that the list provided a powerful base from which to share experiences of what they called 'the war'.

> The most common area of discussion is the war, I mean there is a war in FE, the war is between the funders and the FE colleges, the funders being the LSE and so by far the most traffic is around what have the LSE done this week which has made life more difficult for us, rightly or wrongly, I mean essentially there's this sort of constant battle between the LSE always trying to interfere, as we see it
>
> [FE Principal]

This is true despite the fact that many respondents recognize that material posted on the mailbase may be 'leaked' to outsiders. The invitation to the list cited above emphasizes privacy, as well as expressing a strong sense of disapproval towards those who might leak details of the list to the bodies listed in the document. Documents like this are crucial in defining the boundaries of the online space, which are constructed in such a way as to exclude particular bodies as well as non-principals within the sector. As a result of the list administrator setting up known boundaries in this way, participants told us that they were able to express themselves freely and to engage in dialogue about their practices and experiences as leaders. This often took the form of informal debate about government policy: or, as one principal described it to us, *'just having a moan'* (Ferreday et.al 2005).

The boundaries of the NCSL non-program areas are much less easily defined. Members must be registered but as noted above this registration extends to 70,000 users. The NCSL in Dialogue area is open to such a wide range of contributors and readers it must be considered a public area, even though it is narrowed by a set of common interests in school leadership. In both cases there are known boundaries and it is clear that we cannot assume that network spaces are by their very nature open environments. Despite the technological possibilities, networks are socially restricted and issues of difference, diversity and privacy can be as important as in any other social setting.

Given the restriction on forwarding email, suggested in the invitation to the principals' network, it is interesting to note this counter example of how boundaries between networks are bridged, a key form of weak link activity (Buchanan 2002 32-45):

> Question: I think what we'd done was we'd gone to forwarding on emails and you were giving an example of when you'd actually forward it on:
>
> Answer: That's right, yes. So in terms of forwarding on emails, the debate about the GNVQ's and the LSE funding, that's where I was going. Various principles have various bits of expertise, somebody will be a curriculum expert, somebody will be an MIS expert, somebody else will be an HR expert, depending on their background and where they came from and some principles are very good at explaining the technicalities of the funding methodology around the way the LSE have re-based colleges funding ... I have an MIS Manager who's much more technical and expert than I am so as long as the email isn't pointing to anybody, an individual, I will cut and paste that out of that email and forward it onto my MIS Manager ... it would take me weeks to read through the funding methodology to understand what the hell he's on about but that emails just succinctly describes the impact of the changes and the effect it's had on their college and what other colleagues are saying. So sometimes you have to forward them on to get the feedback because you technically can't answer that question because you're not an expert in MIS.

Clearly one aspect of the principals' network is the ability to bridge between private knowledge gained in one context and taking that knowledge into the principals network, and this may involve crossing boundaries and, with care, opening up other private spaces. In this way privacy in bounded networks is negotiable and permeable and it is through the bridging activities of weak links between networks that new knowledge is circulated.

Introductory remarks in public networks

Within the talk2learn environment we are focused on the more public non-program areas and the Hot Seats that take place in NCSL in dialogue in particular. This selection is purposive in that it looks at an area of the talk2learn environment in which there is little formal structure and we could expect links to have little or no continuity, though it should be noted that one dialogue we followed was chosen as it was carried on after a one year time break because it had been considered a success in its first presentation.

Broadly we could discern two genres within the dialogues that we observed. One took the form of a host who moderated the discussion and intervened regularly to answer specific questions and comment on contributions. The other took the form of a free flowing discussion in which once the initial posting were made by the Hot Seat presenters the discussion followed a path decided by the contributors with little or no intervention from the Hot Seat hosts. In the hosted discussions the form of introduction to a posting commonly took the following forms.

> *Hot Seat host 1*: "Hi [name of previous contributor], many thanks for this!"

> *Hot Seat host 2*: "Good evening [name of contributor].

> *Hot Seat contributor*: "Hi [name of host], I was really interested in this post …

> *Hot Seat contributor*: "Hi [name of previous contributor] you raise some interesting and really crucial issues …"

Not all postings began with a named person being addressed, though one of the hosts used this form throughout, and some posts began by immediately addressing an issue:

> *Hot Seat host*: "Sounds like a good idea! Would co-coaching help to widen the pool of interest and support? ……."

> *Hot Seat contributor*: "It's good to see discussions focused on Mentoring and Coaching."

In the discussions that ran without regular postings from the host the common forms of address that were commonly used were:

> *Hot Seat contributor:* "I agree with [named earlier contributor] and I suspect that we all have pockets of good practice. …."

> *Hot Seat contributor:* "LSAs and HLTAs in schools are a valuable commodity which are currently only being partly utilized. …"

It can be seen that there is a clearly different expressed familiarity in the tone. In the hosted discussion the tone is familiar with both the host and the contributor using "Hi". In the discussion in which the hosts took little part the tone is more serious, addressing the issue and not the participant on most occasions. The postings were also more assertive beginning with clear statements, even when they were reports of agreement, whereas in the discussion with an active host the posts that did not name someone initially often began with a personal statement such as " I thought ..", "Hi I agree..", "I'm not sure .."

The contributors and hosts are involved in both a group presentational exercise, setting a tone for their engagement with others and making themselves understood, and a self-representation of themselves and their thoughts. An example of this tension is that in both kinds of discussion many postings situated the contributor with introductory remarks stating where the contributor was, their position, or more explicitly who they were.

> *Hot Seat contributor*: "In a small village school with only 106 pupils …"

> *Hot Seat contributor*: "I work in a special school where the remodeling agenda hasn't gone down well at all …"

> *Hot Seat contributor*: "I am currently a Secondary Strategy teaching and learning consultant…"

> *Hot Seat contributor*: "Hi I'm [name] Deputy Head of a secondary school in [county] …"

> *Hot Seat contributor*: "I work as a Finance Manager in a large primary school …

It is clearly important in such environments to state who the author of a comment is in relation to those who might be reading. This was also true of the discussion that did not have an active host, though in that discussion there were relatively many more postings that simply stated opinions and made assertions. Alongside the

personal representation of the author the work being done by this kind of statement can be read in a number of ways as:

- A need to situate a comment in relation to the discussion topic
- A statement allowing readers to see where the contributor/ion was coming from
- Permitting a reader to make allowances for the writers pre-conceptions
- Giving credibility and authority to the comments made

In this way individual postings and the contributor can be seen as placing themselves in a stream of contributions both prior and in anticipation of future contributions, that is as part of a continuing dialogue.

DISCUSSION AND CONCLUSIONS

What do the links in networks for educational leaders look like and to what extent are these networks sites for learning? If we return to Granovetter's original characterisation of an interpersonal tie there are four key features he uses to assess strength of tie.

- Amount of time
- Emotional intensity
- Intimacy
- Reciprocal services

The kinds of network we have explored clearly have limited development of some of these key dimensions. The amount of time spent on network links is limited and the degree of emotional intensity is low as are the signs of intimacy. It is interesting to note however that in both networks we came across 'war stories' that mentioned leaders who had discussed alcohol related problems online and these suggest a belief that intimacy can develop even if it is not common and we found no specific evidence of it. The one area that has a stronger development is the dimension concerned with reciprocal services. In both networks participants share their knowledge and many readers, who form the largest group engaging with the networks, join the active contributors in consuming their contributions. The relationships in both networks can be characterized as weak and this is illustrated by the limited time given over to engagement, but it is also notable that the dimensions that are weakest are those that concern affective aspects of the relationships whereas those concerned with knowledge sharing are relatively well developed.

Both networks had boundaries though in one case these were wide and in both cases they could be considered porous. Forms of address in the talk2learn in the areas we investigated show a dialogic concern with both presenting the self and contributing for others. Both network boundaries and forms of addressivity indicate a fluid interactional process in which contradictory elements are in tension. It is interesting that boundary crossing is both discouraged, in order to keep a safe environment in which the contributors feel at ease and able to post freely and at the same time the boundaries are negotiable and can be crossed for good reasons. Amongst those good reasons are matters of expertise. The implicit morality of forwarding is explained as concerning issues where the recipient of the posting is 'more technical and expert' and as long as the message 'isn't pointing to anybody'. In the talk2learn environment the forms of contributions were somewhat different but the sharing of knowledge was very much a feature of the content of messages. Just as contributors stated who they were and where they were situated so they explained their own local setting and the knowledge gained there. Knowledge is not simply transmitted or transferred across the network it is negotiated and the marks of its personal and situated origin are essential parts of the exchange through dialogue.

ACKNOWLEDGMENTS

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