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Project Report: Social networking and knowledge sharing

The writing on your wall: can organisations benefit from the use of social networking websites to build and maintain knowledge-sharing relationships?

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Abstract

A wide network of external relationships can provide valuable access to knowledge from outside traditional organisational boundaries. Social networking sites such as Facebook, LinkedIn and Twitter have the potential to make it easy for people to maintain wide networks of contacts, but little is known about their value as a means of creating and building relationships that might provide knowledge-sharing benefits for organisations. In this paper we examine the perceived benefits and pitfalls of using social networking websites to build knowledge-sharing relationships that can be exploited for business purposes. We compare these with the perceived benefits and pitfalls of other, more well-established networking methods. Our findings suggest that although people recognise the potential benefits of using social networking websites, these are outweighed by the perceived risks associated with networking in public and mixing personal and professional networks. People are therefore using social networking sites exclusively for personal networking, for personal career enhancement, or not at all. We suggest that if organisations wish to benefit from access to employees' social networks, they could provide training and support in the use of networking websites so that online behaviours enhance employees' reputations and make organisations more attractive as employers.

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Introduction

Knowledge is an important strategic resource and arguably the most valuable of an organisation's intangible assets. According to Kogut and Zander (1992), the reason organisations exist is to create, integrate and transform knowledge into goods and services. In today's complex and changing world, organisations increasingly need access to knowledge from outside traditional organisational boundaries. A wide network of external relationships can provide access to such knowledge and challenge an organisation's dominant logic, supporting strategic renewal and organisational development (McKenzie and van Winkelen, 2004).

Social networking sites such as Facebook, LinkedIn and Twitter have the potential to make it easier for people to create and maintain such wide networks of relationships, but many factors influence the way people use (or don't use) social networking sites. Norms around the use of social networking sites are still developing. Individuals and organisations have different expectations of value, and different motivations for using them. There is no agreed best way for organisations to get value from participation. Some organisations actively encourage their use; others prevent or limit access and some have developed elaborate policies to guide employees on how to behave online. Organisations are also struggling to understand what benefits (if any) social networking websites might bring to the workplace.

Although research on social networking websites is starting to appear in scholarly journals, it is too recent a phenomenon for theories to have become established. This raises questions for organisations faced with the need to make immediate decisions based on the value of using social networking websites (Bersin, 2008). Should organisations allow access to such sites from work? What are the pitfalls of using them – and do these outweigh the benefits? What guidance, if any, should organisations provide for employees using social networking websites? This was the starting point for a working group of knowledge management professionals in the Henley Knowledge Management Forum based at Henley Business School in the UK.

Through discussion, the group developed the following initial research question:

Does using social networking sites affect knowledge sharing and creation *at work*?

In this paper we are concerned with the **effects** of using social networking websites on work-related knowledge sharing. The **use** of the social networking websites might be at work, at home or on the move. Our focus is on the use of social networking websites to build and maintain relationships that might lead to work-related knowledge sharing. The communication mechanism for the knowledge sharing itself might not be the social networking website, and the relationships might not be work-related when they first develop.

The specific questions addressed in this paper are:

1. Do people use social networking websites to build and maintain relationships that lead to work-related knowledge sharing?
2. What are the benefits of using social networking websites?
3. What are the pitfalls of using social networking websites?
4. How do the benefits and pitfalls of using social networking websites compare with the benefits and pitfalls of using other networking methods to build and maintain relationships?

In questions 2, 3 and 4 we are concerned ultimately with benefits and pitfalls for the organisation, but also with benefits and pitfalls for the individual, because these will affect individuals' motivation to use social networking websites in the work context.

The working group defined a social networking website as "**a website that can be used to make connections to other people, through choice**". In line with Orlikowski's (2000) argument that today's technologies are not fixed artefacts that can be used in only one way, the emphasis is on the way the website is used. Obvious candidates such as Facebook, LinkedIn and Twitter are included – as are sites such as Flickr, YouTube and blogging sites **if they are used to build and maintain relationships through individual choice**. Organisations' internal networking sites are also included if they meet the criteria.

Literature review

Published work on the use of social networking sites is still emerging and researchers have approached the subject from many different angles. In this section we examine the main approaches that researchers have taken so far and introduce more well-established frameworks that have the potential to build our understanding of the benefits and pitfalls of using social networking websites to build and maintain relationships that might lead to work-related knowledge-sharing.

We start with a brief overview of the published research on the use of social networking websites. Then we consider social networking and social capital theory, which provide more well-established frameworks for examining the use of social networking websites in the broad context of knowledge sharing. As relationships are built and maintained through communication, which technology can enable (Haythornthwaite, 2002), we also review recent literature on the use of technology for communication and on the way people respond to the introduction of new technology.

Social networking websites and knowledge sharing

Published research on the use of social networking website tends to focus on specific contexts such as the use of Facebook amongst student populations (Lewis et al, 2008), or critical factors for success derived from case studies (for example Chui et al, 2009).

The practitioner literature lists the applications and pitfalls of social networking sites. Applications include mining sites such as Twitter for market intelligence and recruiting new employees. Pitfalls include loss in staff productivity; leakage of information from staff gossiping freely in an open environment; and access to the company servers by casual attitudes towards passwords (Wilson, 2009).

Although some authors (for example Paroutis and Al Saleh, 2009) make the connection between social networking websites and knowledge sharing, their focus tends to be on the websites as a knowledge-sharing channel rather than as a means of building and maintaining relationships that might lead to work-related knowledge sharing through any medium. Chiu et al (2009) recognise the importance of social networking technologies for leveraging connections between people, and Iverson and Vukotich (2009) recognise the role of social networking websites in relationship building and building trust, but don't explicitly connect these with knowledge sharing.

Social capital and knowledge sharing

The concept of social capital can be understood as "the goodwill that is engendered by the fabric of social relations and that can be mobilised to facilitate action" (Adler and Kwon, 2002). The connection between social capital, organisations and knowledge was made when Kogut and Zander (1992) proposed that "a firm be understood as a social community specialising in speed and efficiency in the creation and transfer of

knowledge". This connection was developed by Nahapiet and Ghoshal (1998) into a framework that describes how three dimensions of social capital (structural, cognitive and relational) facilitate the knowledge-sharing processes of combination and exchange, which in turn leads to the creation of knowledge in organisations.

Nahapiet and Ghoshal's work is based on the assumption that the business purpose of the organisation creates a focus around which to organise, and this provides the context for the development of the cognitive dimension of social capital: shared language, systems of meaning and interpretations. The cognitive dimension of social capital affects people's anticipation of value from exchanging knowledge. The relational dimension of social capital (trust, behavioural norms, obligations and identification) affects people's motivation to exchange knowledge as well as their anticipation of value.

Although this work was completed before the advent of social networking websites, Nahapiet and Ghoshal acknowledge the potential of the internet to improve access to parties for the processes of combination and exchange to take place. The effect of this improved access on knowledge sharing is likely to depend on the structural dimension of social capital, which describes the overall pattern of connections between people (network ties and configuration) and the extent to which social capital that is developed in one context (such as family and friends) can be transferred to another social setting (such as work situations). Network ties and configuration are discussed in the following section. The relational and cognitive dimensions of social capital are also likely to influence how improved access affects knowledge sharing, as they affect motivation and anticipation of value.

Social networking and knowledge sharing

Social networking theory provides a rich context for studying online practices (Iverson and Vukotich, 2009). Social networks consist of nodes (people) and ties (relationships) and are characterised by the patterns they form in terms of measures such as density, connectivity and hierarchy. A network tie exists between people where they exchange or share resources such as social support or information. The strength of a tie is usually assessed with reference to factors such as frequency of contact, length of association, intimacy of the tie and provision of reciprocal services (Granovetter, 1973, Haythornthwaite, 2002). Strong ties can be thought of as friendships, and weak ties as acquaintances (Totterdell et al, 2008).

Strongly tied people are motivated to share information and other resources, and therefore have easy access to resources in their network of close relationships (Haythornthwaite, 2002). But in a small group of close relationships these resources tend to be limited. When we move outside our small groups of close relationships into larger networks of acquaintances, we benefit from non-redundant information, hence "the strength of weak ties" (Granovetter, 1973).

Most people maintain a range of strong and weak ties with friends and co-workers. Although strong ties have benefits for knowledge sharing, they are expensive to maintain. It has been argued that weak ties not only provide access to non-redundant information, but are also are cheaper to maintain than strong ties (Adler and Kwon, 2002). Technology can support the formation of weak ties by connecting people through social networking sites (Iverson and Vukotich, 2009). It could also be argued that technology (including social networking sites) reduces the cost of maintaining strong ties, as technology provides an additional means of connection that can be used anywhere with internet access. Where ties are strong, people are more likely to adopt new technology to provide additional means of expression to support their relationship needs (Haythornthwaite, 2002).

Social networking websites also make it easy to connect different groups (Iverson and Vukotich, 2009). We can benefit from bridging ties to span structural holes and create channels for knowledge to flow between

previously unconnected groups – provided the relationships that evolve have sufficient trust and shared understanding to allow the relevant knowledge to flow (Burt, 2001).

Individuals have different networking styles

Some people seem more inclined than others to form strong or weak ties and to make bridging connections between groups and individuals. Cross and Prusak (2002) identify four common roles that people play in informal organisational networks: **central connectors** who link most of the network members; **boundary spanners** who make bridging ties and span structural holes in the network; **information brokers** who bind sub-groups in the network together; and **peripheral specialists** who provide expert advice to the network. Cross and Prusak argue that much of the important knowledge work in organisations takes place in these informal networks, and that employees playing these four roles should be identified and supported.

To understand the effect of individual differences in shaping social networks, Totterdell et al (2008) develop the concept of "propensity to connect with others" (PCO). They define PCO as "an individual's orientation towards making connections with other people that is not specific to context". PCO has three components: making friends (strong ties), making acquaintances (weak ties) and joining others (bridging ties). They use a self-report scale (Appendix A) to demonstrate that PCO is a measurable trait that can help explain individuals' position and role in organisational and other social networks. Although Totterdell et al (2008) don't comment on how PCO might affect individuals' motivation to use social networking websites, the self-report scale is a useful tool for understanding individuals' networking styles and preferences.

Online ties

Ties are maintained through communication, and technology enables this. As most of the research on the strength of ties is from studies of offline behaviours, it is important to state the key assumption that **the characteristics of ties hold in the online environment as they do in the offline environment** (Haythornthwaite, 2002). This is a controversial point, as online communication is viewed in contradictory ways. The arguments as to whether the online environment destroys, builds, or supplements other forms of social interaction are summarised by Wellman et al (2001), who conclude that people's interactions online supplement face-to-face and telephone communication without increasing or decreasing social capital. Studies of the characteristics and use of technology support this and stress the need for multiple communication channels (Dennis et al, 2008). Studies also propose that the fit between media and task varies with the maturity of relationships and over time (Dennis and Valacich, 1999, Maruping and Agarwal, 2004).

Haythornthwaite (2002) suggests that it is helpful to examine the contradictory evidence about the impact of online interactions from the perspective of the strength and nature of social network ties. She argues that where ties are strong, people will choose to adopt new media because it provides an additional means of communication that can help maintain and build their relationships. For strongly tied pairs it is worth learning the new technology. Where ties are weak, people tend to rely on communication channels provided by their organisations (or, presumably, by a networking site such as LinkedIn). The introduction of new communication technology to a network of weak ties can have a beneficial effect by providing a channel for making new connections and strengthening ties, but if it replaces an existing, familiar means of communication there is a danger that the network based on weak ties will dissolve.

Haythornthwaite (2002) introduces the term **latent tie** to describe a tie that is available technically through an online network, but that has not yet been activated by social interaction. An important feature of latent ties is that they are not established by individuals; they exist because there is a system for connecting people. Although Haythornthwaite's work does not refer explicitly to social networking websites, the insights she

provides can readily be applied to this context. A good example of this is the business networking site LinkedIn, which provides users with network statistics on the number of latent ties available through existing connections.

Using technology for communication

Most of the literature on technology and communication focuses on matching communication media to the information needs of tasks. For today's 'new media', this approach doesn't explain the relationship between media and performance very convincingly (Dennis et al, 2008). Rather than focusing on task-technology fit, media synchronicity theory (MST) is based on the premise that it is **the way communication media are used** that influences communication performance. The way communication media are used depends on the fit of the media capabilities to the **communication** (rather than the information) needs of the task.

MST (Dennis and Valacich, 1999, Dennis et al, 2008) describes communication technologies in terms of immediacy of feedback (later replaced by transmission velocity), symbol variety, parallelism, rehearsability and reprocessability (Table 1). These media capabilities influence the ability of media to support **synchronicity**, defined as people working together at the same time, with a common focus and a shared pattern of co-ordinated behaviour. **Media synchronicity** is how well media capabilities enable a group of people to achieve synchronicity.

MST argues that media supporting lower synchronicity is better for tasks in which people convey information and explore divergent possibilities, whereas support for higher synchronicity results in better performance on tasks in which people need to converge and agree on meaning.

MST also proposes that the fit between media and task varies with team maturity and over time (Dennis and Valacich, 1999; Maruping and Agarwal, 2004). Using multiple media (either concurrently or consecutively) is probably more effective than choosing a single medium, and Dennis et al (2008) argue – with good justification – that "*Face-to-face communication is not always the richest medium, and richer is not necessarily better*".

Table 1: Media capabilities (Dennis and Valacich, 1999; Dennis et al, 2008)

Media capability	Definition
Immediacy of feedback (1999 version)	The extent to which a medium enables rapid bi-directional communication
Transmission velocity (2008 version)	The speed at which a medium can deliver a message to intended recipients
Symbol variety	The number of ways in which information can be communicated (including verbal and non-verbal symbols)
Parallelism	The number of simultaneous conversations a medium can support
Rehearsability	The extent to which a medium enables the sender to rehearse or fine-tune a message before sending it
Reprocessability	The extent to which a message can be re-examined or processed again in the context of a communication event

MST was recently revised and expanded (Dennis et al, 2008), and the concept of **transmission velocity** was introduced to replace **immediacy of feedback**, recognising that the latter is actually an outcome of interaction rather than a media capability.

The revised MST also includes appropriation (the way people use technology) factors, including users' familiarity with particular technologies, past user experience and social norms. Barry and Fulmer (2004) additionally cite **surveillance** (the 'publicness' of interaction) as an attribute of media that influences user choice. The inclusion of these individual and team factors acknowledges the social nature of technology use and makes MST more relevant to today's technologies than the earlier task-technology-fit models.

Responses to new technology

Some people appear to embrace the use of social networking websites and other communication technologies, whereas others resist them. Although this can be partly explained by individuals' motivation to build and maintain relationships as described above, online interactions differ from offline communication in other ways. For example, use of social networking websites is usually highly transparent and public (Iverson and Vukotich, 2009; Barry and Fulmer, 2004) and high on **reprocessability** (Dennis and Valacich, 1999, Dennis et al, 2008), in that it leaves a trail of evidence that can be re-examined and re-processed. It is becoming common for organisations to scan social networking websites when making employment decisions (Genova, 2009) and this can affect individuals' use of sites such as Facebook, LinkedIn and Twitter.

Beaudry and Pinsonneault (2005) propose a coping model of user adaptation (CMUA), in which people presented with a technology event (such as the introduction of social networking websites to the workplace) choose different strategies based on whether they perceive the technology as an opportunity or as a threat, and on the degree of control the users feel they have over the situation (Figure 1). The adaptation efforts and outcomes lead to reappraisal and can trigger a new round of adaptation efforts. The model provides a useful framework for assessing different individual responses to social networking websites.

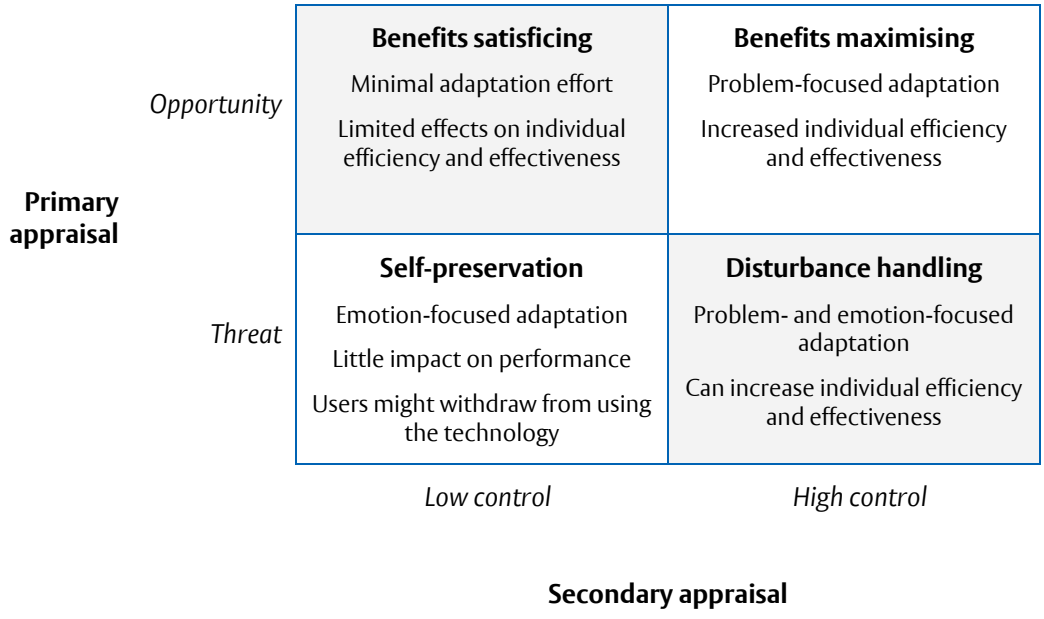

Figure 1 Technology user adaptation strategies (Beaudry and Pinsonneault, 2005)

Factors that affect users' appraisals might include their perceptions of task-technology fit and individual factors such as anxiety levels, personal innovativeness and prior experience with technology (Beaudry and Pinsonneault, 2005).

Taking a different approach to the way people use new technology, Yates et al (2008) use the concept of **genre** to explain how new technologies tend at first to be used in ways that emulate their predecessors. As their use evolves, new norms develop and new genres emerge. People using email in the 1990s, for example, adopted a formal style that closely mimicked the then more familiar business memo. Email later became more informal than memos, and spelling and grammar errors that would not be acceptable on paper are now generally tolerated. The concept of genre can be used to understand and evaluate the use of communication technologies in the workplace – recognising that people don't always use technologies in the way the designer intended, or in the way organisations expect, and that this can provide significant payoffs. No technology is 'right' or 'wrong'. The concept can also be used to identify risks and mitigate them – for example by providing guidance on how to use new technologies so that people have a behavioural framework before norms for using the technology have stabilised. This is of particular interest when considering social networking websites, as the norms around their use are still evolving rapidly.

Summary

The literature suggests that use of social networking websites has the potential to make it easier for people to create and maintain wide networks of relationships. Communication is an integral part of this process; social networking websites enable communication that supports relationship building and the development of social capital, which is likely to affect knowledge sharing.

Individual and collective responses to social networking websites will determine whether people choose to add them to their communication methods and change the pattern of their relationship building. These responses are likely to be shaped by many factors including individuals' anticipation of value (Nahapiet and Ghoshal, 1998), individual networking style (Cross and Prusak, 2002; Totterdell et al, 2008), social norms (Nahapiet and Ghoshal, 1998; Yates et al, 2008; Dennis et al, 2008), the media capabilities of the websites (Dennis et al, 2008, Barry and Fulmer, 2004), familiarity with the technology (Dennis et al, 2008), the strength of existing network ties (Haythornthwaite, 2002) and individuals' appraisal of how social networking websites will affect them (Beaudry and Pinsonneault, 2008).

Empirical evidence

Design

The research was undertaken using the interactive research method (van Winkelen and Truch, 2002, van Winkelen et al, 2008). The method involves working collaboratively, in this case with members of the Henley Knowledge Management Forum based at Henley Business School in the UK. A working group of KM Forum members participated in the development of the research question and the collection and interpretation of data. Involving practitioners in this way ensures that the research is relevant to their needs; testing the findings against practitioner experience as well as the academic literature creates both rigour and relevance.

The working group of 26 people comprised KM experts, academics and practising knowledge managers. The practitioners were from 17 public and private sector organisations with significant operations in the UK.

The research was based on a qualitative, exploratory focus group design with individual employees as the main unit of analysis. Qualitative research using focus groups was chosen because of the limited availability of

published research on relationship building and maintenance using social networking websites (Flick and Barbour, 2007).

Data collection

Data was collected in three organisations selected for their diversity and different policies on the use of social networking websites: a global energy company (Global Energy), a firm of lawyers (Law Firm) and a large government department (Gov Dep). In each organisation, two focus groups were formed: a 'do' group consisting of employees who use social networking websites at least once a week, and a 'don't' group consisting of employees who use social networking sites rarely or never.

Within each organisation, focus group members were selected for similarity of role and individual members of the 'do' and 'don't' groups were paired by their propensity to connect to others (Totterdell et al, 2008), so that any differences in views and experiences between the 'do' and 'don't' group could be attributed to their level of use of social networking websites rather than to the networking requirements of their job or their individual networking styles.

Initial survey

An online survey was conducted in six organisations to identify focus group members. The survey asked for information on propensity to connect to others (Appendix A) and frequency of use of social networking websites.

Each organisation was asked to invite a large group of employees (all performing a similar role) to complete the survey. The requirement to identify focus group members paired by their propensity to connect to others meant that at least 20 responses were needed from an organisation to generate a pool of focus group members large enough to arrange focus group sessions.

Pairing of focus group members

In each organisation, the survey results were used to pair 'do' and 'don't' employees by their propensity to connect to others (Appendix A). Respondents were profiled by their propensity to network (high, medium or low) measured by the friends, acquaintances and connecting questions. This generated a three-letter profile (e.g. HHH, MML) for each respondent. Using these profiles, individuals who use social networking websites were paired with individuals who don't to generate the two focus groups. Pairs of individuals were then invited to attend 'do' and 'don't' focus group sessions so that availability of individuals did not affect the PCO pairings between the groups.

Focus group sessions

Each focus group had between four and eight members who attended a single 90-minute face-to-face session, facilitated by two researchers. One of the 'don't' focus group sessions was conducted by phone and email because of difficulty in arranging a face-to-face session. The stated purpose of each session was **to get participants' views on how social networking in general (and the use of social networking websites in particular) affects knowledge sharing at work.**

Each focus group:

- generated a list of social and professional networking methods (without prompting)
- identified networking methods they found valuable for building relationships that had led to work-related knowledge sharing

- discussed the benefits and pitfalls of different networking methods for building relationships that could be exploited for work purposes
- identified reasons for why they do/don't use social networking websites
- generated anecdotes to illustrate the points above.

The main points made by each focus group were captured on flip charts so that focus group members could confirm their validity during the session. Detailed notes were taken by one of the facilitators, and each session was audio recorded.

Data analysis

Networking methods identified by focus group members were categorised into a standard list for analysis (Appendix B). The benefits and pitfalls of using various networking methods were analysed using thematic coding (Miles and Huberman, 1994), starting with themes from the literature and following an iterative process of grouping, separating and adding themes until all the benefits could be explained using a standard set of themes (Appendix C).

Limitations

The limitations of qualitative research with a small sample size are well known. We do not know whether the results can be generalised beyond the individuals and organisations studied. The value of the research is in its ability to generate insights into current practice.

Focus group findings

Focus group members

Views were gathered from 32 people in six focus group sessions conducted in three organisations (Table 2).

Global Energy is a UK-based private sector organisation with interests around the globe, specialising in the exploration and supply of natural energy resources. Employees include engineers, geologists and scientists. It is common for employees to work on overseas assignments and live in expatriate communities with their colleagues. The focus group members were mainly IT and KM professionals with an interest in improving collaboration and knowledge sharing. Some of the IT people were consultants working on full-time long-term contracts. According to our main contact, all Global Energy employees have access to Facebook, LinkedIn and various other social networking sites at work.

Law Firm is a private sector organisation with offices throughout the UK. They work for domestic and commercial clients, including large corporates. The focus group members were all young lawyers – some trainees and some very recently qualified. According to our main contact, employees have access to social networking sites (including Facebook) at work. There is a general 'don't waste time' policy.

Gov Dep is a large UK government department with well over 10,000 employees based around the world. Employees posted overseas typically live in communities with colleagues so their social and professional networks overlap considerably. The focus group members were all working in information and knowledge management roles, including policy development and training. Employees do not have access to social networking websites through Gov Dep systems, and in some parts of their offices the use of mobile phones is forbidden.

Although every attempt was made to maintain the pairing described above, no-shows on the day meant that some focus group members lost their matched partners. The PCO profiles of those who did participate were still closely matched between the 'do' and 'don't' groups in each organisation. This also created an imbalance between the numbers of 'do' and 'don't' participants. As each group had the same amount of time to generate data (and in practice, time was the constraint), this is not considered to be a serious limitation.

Table 2: Focus group participants

	Global Energy		Law Firm		Gov Dep	
	Do	Don't	Do	Don't	Do	Don't
Number of participants	5	6	5	5	4	7

Identification of networking methods

The six focus groups identified a total of 127 social and professional networking methods. These were grouped to reduce the list to 37 methods (Appendix B), which were placed into categories derived from Haythornthwaite (2002) and the definition of social networking websites given above. Figure 2 shows the breakdown of networking methods identified by all focus groups and Figure 3 shows the breakdown by the 'do' and 'don't' groups.

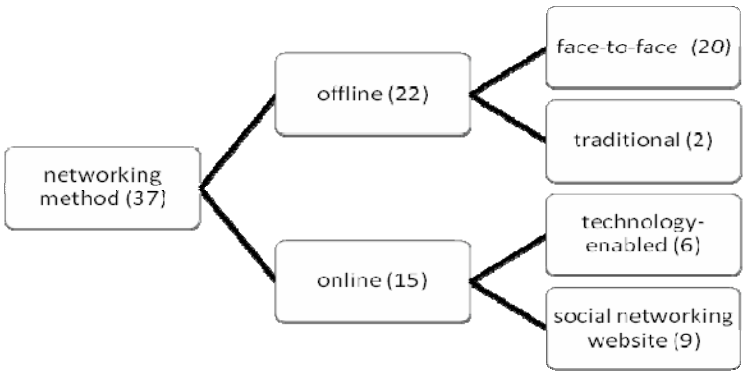

Figure 2 Networking methods identified by all focus groups

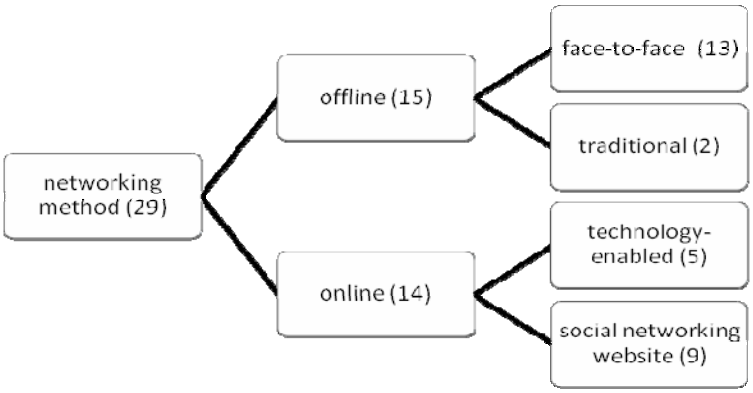

Figure 3a Networking methods identified by 'do' groups (users of social networking websites)

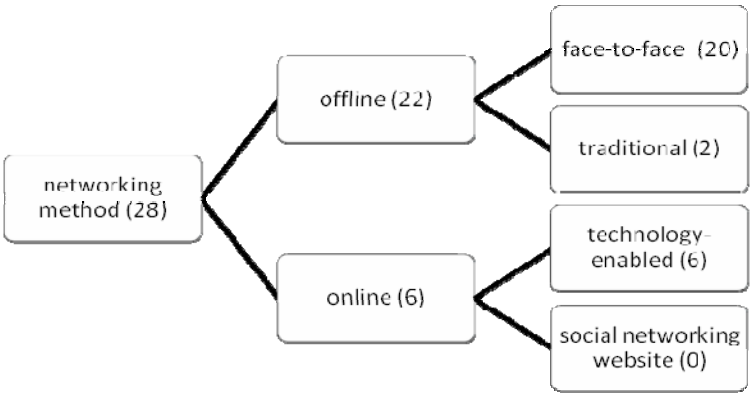

Figure 3b Networking methods identified by 'don't' groups (non-users of social networking websites)

Users and non-users of social networking websites each identified similar numbers of networking methods and similar numbers of traditional (e.g. phone) and technology-enabled (e.g. Skype and virtual conference) methods. As well as identifying more social networking sites, the 'do' groups identified fewer face-to-face methods.

Most valuable networking methods

The networking methods that each focus group found most valuable **for building relationships that had led to work-related knowledge sharing** are shown in Table 3. In Law Firm and Gov Dep, the preferred networking methods are similar between the 'do' and 'don't' groups, with a strong preference for face-to-face and other offline methods. Global Energy was the only organisation where the users of social networking sites included these (LinkedIn and online communities) in their highly valued methods. Members of this focus group working as contractors reported that use of LinkedIn was important to them because of the nature of their work – it was important to build a wide network of potential clients.

Table 3: Most valuable networking methods for building knowledge-sharing relationships

	Global Energy		Law Firm		Gov Dep	
	Rank	Method	Rank	Method	Rank	Method
DO	1	LinkedIn	1	Professional groups	1	Face-to-face work meeting
	2=	Work restaurant/café/smoking place	2	Friends of friends	2	Email
	2=	Online communities/forums	3	Face-to-face in the office	3	Phone
	2=	Face-to-face in the office	4	Sports	4=	Face-to-face in the office
	5	Email	5	Email	4=	Face-to-face external conference
DON'T	1	Face-to-face in the office	1=	Face-to-face in the office	1	Face-to-face in the office
	2	Phone	1=	Professional groups	2=	Phone
	3	Face-to-face external conferences	3	Family contacts	2=	Social events (non-work)
	4	Email	4=	External training/learning	2=	Email
	5	Face-to-face work meeting	4=	Sports	5	Face-to-face external conference

Use of online communities was important to them because of the IT element of their work – they were comfortable with technology and frequently turned to specialist online communities for technical advice. In Law Firm and Gov Dep, social networking sites are not seen as valuable for building relationships that lead to work-related knowledge sharing.

Some of the other differences between organisations can be explained by the nature of the organisations and groups. In Law Firm, for example, the focus group members were young lawyers who relied heavily on a local group of young professional lawyers and on contacts made through friends and family.

Table 4 lists the most valuable networking methods across all focus groups. Over 70% of the methods identified are face-to-face, with email the only widely valued online method.

Table 4: Most valuable methods for building knowledge-sharing relationships (all focus groups)

Overall rank	Method	Categories	
1	Face-to-face in the office	Offline	F2F
2	Email	Online	Tech
3	Phone	Offline	Trad
4	Professional groups	Offline	F2F
5	Face-to-face work meeting	Offline	F2F
6	LinkedIn	Online	Sns
7	Sports	Offline	F2F
8	Work restaurant/café/smoking place	Offline	F2F
9	Online communities/forums	Online	Sns
10	Friends of friends	Offline	F2F
11	Social events (non-work)	Offline	F2F
12	Face-to-face external conference	Offline	F2F
13	Family contacts	Offline	F2F
14	External training/learning	Offline	F2F

Separation between personal and professional networks

In most of the focus group sessions, identification of the most valuable networking methods led to discussion about the separation of personal and professional networking. Focus group members reported different degrees of separation between their personal and professional networks and networking activities. Some kept their personal and professional lives completely separate; others made no distinction between them. In Global Energy, focus group members who had previously lived in expatriate communities reported efforts to keep their UK personal and professional lives separate. People working as contractors at Global Energy made less of a distinction between their networks, recognising that any of their contacts might connect them to their next client. In Law Firm, the young lawyers socialised with each other and in professional groups with other young lawyers, citing the confidential nature of their work as a major reason for keeping their personal and professional networking separate. In Gov Dep, focus group members who lived in communities with colleagues made no distinction between their personal and professional networks, whereas others separated them to different degrees.

Some non-work-related networking methods (for example children's schools) are rarely used to build relationships that lead to knowledge sharing, but it is clear from Table 3 that sports, referrals from friends, general social events and family contacts are recognised as valuable bridges between personal and professional lives.

Benefits and pitfalls of networking methods

Several focus group members reported that all networking methods are valuable, that they would use different methods in different contexts, and that benefits and pitfalls are not inherent – pitfalls occur only when the chosen method does not match the communication needs of the task. This is in line with MST (Dennis et al, 2008) and the statement by Yates et al (2008) that no technology is 'right' or 'wrong'. This

view was held by users and non-users of social networking websites – although the non-users' comments were based on the list of networking methods identified by their group, and this list (by definition) did not include any networking websites.

Benefits and pitfalls were coded using themes derived from the literature and, where needed, from the focus group data (Appendix C). As the relationships between the themes are not known, there is some overlap between them. Themes were deliberately chosen so that a common set could be used for coding benefits and pitfalls, therefore giving an indication of the most important factors in people's communication and networking choices.

Each theme can be reported as a benefit or as a pitfall. In some instances this is because people make different judgements about the same feature; for example having access to a large and diverse number of other users is seen as a benefit by some people and a pitfall by others. In other cases the dual nature of the themes influences people's judgements; for example the cost of maintaining ties is seen as a benefit when low and a pitfall when high. We illustrate these points in the discussion below.

Benefits and pitfalls of using social networking websites

Table 5 lists the most frequently reported benefits and pitfalls associated with using social networking websites. Table 6 shows the overall ranking of reported benefits and pitfalls and the breakdown of these reports by users and non-users of social networking websites.

The most important benefits are the (low) cost of maintaining ties, access to people with (highly) relevant knowledge, and the (high) number and diversity of people that can be accessed. The low cost of maintaining ties is seen only as a benefit, and is recognised by users and non-users. Having access to people with relevant knowledge is seen mostly as a benefit, and again this is recognised by users and non-users. Where access to people with relevant knowledge is listed as a pitfall, it is because people believe the people they can connect with through social networking websites **don't** have relevant knowledge. The large number and great diversity of people that can be accessed online is also more likely to be seen as a benefit than a pitfall, but in this case the benefits are recognised mostly by users. Some non-users see the large number and wide diversity of people as a pitfall.

Table 5: Benefits and pitfalls of using social networking websites

Benefits of using social networking websites	Rank	Pitfalls of using social networking websites	Rank
Cost of creating and maintaining ties	1	Degree of surveillance possible	1
Access to people with relevant knowledge	2	Level of familiarity and social acceptability	2
Number and diversity of people that can be accessed	2	Time and priority issues	2
Level of familiarity and social acceptability	4	Degree of separation between personal and professional networking	4
Symbol variety (MST)	5	Security and confidentiality	4
Anticipation of value through combining/exchanging knowledge	5	Perception of low control (CMUA)	6
Parallelism (MST)	5	Perception of authenticity and honesty	7
Extent to which method can be used in conjunction with others	8	Symbol variety (MST)	8
Degree of separation between personal and professional networking	9	Reprocessability (MST)	8
Reprocessability (MST)	9	Focus on work-related issues	8
Degree of formality	9	Access to people with relevant knowledge	11
Synchronous/asynchronous	9	Number and diversity of people that can be accessed	11
Creation of latent ties	9	Rehearsability (MST)	11
Degree of surveillance possible	14	Extent to which synchronicity is supported	11
Security and confidentiality	14	Perceived as threat (CMUA)	11
Rehearsability (MST)	14		
Transmission velocity (MST)	14		

Table 6: Benefits and pitfalls of using social networking websites: breakdown by users and non-users

Theme	Overall rank	As benefit %	As pitfall %	As benefit by users %	As benefit by non-users %	As pitfall by users %	As pitfall by non-users %
Degree of surveillance possible	1	6	94	6	0	72	22
Level of familiarity and social acceptability	2	42	58	25	17	8	50
Cost of creating and maintaining ties	3	100	0	60	40	0	0
Degree of separation between personal and professional networking	4	25	75	25	0	63	13
Symbol variety (MST)	5	57	43	57	0	29	14
Access to people with relevant knowledge	5	86	14	43	43	14	0
Number and diversity of people that can be accessed	5	86	14	71	14	14	0
Time and priority issues	5	0	100	0	0	0	100
Security and confidentiality	5	14	86	0	14	71	14
Reprocessability (MST)	10	40	60	40	0	60	0
Anticipation of value through combining/exchanging knowledge	12	100	0	100	0	0	0
Parallelism (MST)	12	100	0	100	0	0	0
Perception of authenticity and honesty	12	0	100	0	0	25	75
Focus on work-related issues	15	0	100	0	0	100	0
Perception of low control (CMUA)	10	0	100	0	0	100	0
Extent to which method can be used in conjunction with others	15	100	0	67	33	0	0
Degree of formality	17	100	0	100	0	0	0
Synchronous/Asynchronous	17	100	0	100	0	0	0
Rehearsability (MST)	17	50	50	0	50	50	0
Creation of latent ties	17	100	0	100	0	0	0
Extent to which synchronicity is supported	21	0	100	0	0	0	100
Transmission velocity (MST)	21	100	0	100	0	0	0
Perceived as threat (CMUA)	21	0	100	0	0	0	100

Users of LinkedIn and online communities find value in the number and diversity of people with relevant knowledge that they can access, and they anticipate that sharing knowledge with them will be valuable (Nahapiet and Ghoshal, 1998). In other words, they appreciate the value of weak ties (Granovetter, 1973), especially when these can be maintained cheaply through social networking websites.

The most important pitfall is the (high) degree of surveillance possible. People don't want their networking activities to be public (as suggested by Barry and Fulmer, 2004) and expressed concern that potential future employers might access their social networking site profiles (as reported by Genova, 2009). One focus group member cited (high) surveillance as a benefit, as it supports reputation-building. Users of social networking sites are more likely to appreciate the pitfalls of networking in public, presumably because their experience of using the sites has increased their understanding of how the sites work. One focus group member told the story of a friend who lost her job after complaining about her work on Facebook. Her boss saw the comments, which led to bad feeling between them, and ultimately the friend lost her job. Of the non-users who see networking in public as a pitfall, several cited the high degree of surveillance as their reason for not using social networking websites.

Closely related to the surveillance theme is the degree of separation between personal and professional networking. Mixing personal and professional networking is more likely to be perceived as a pitfall than as a benefit. Although some users of social networking websites see mixing personal with professional as a benefit, users are also more likely than non-users to see the blurring of personal and professional as a pitfall. This seems to be because they have experienced the tensions created by mixing family, friends and professional contacts on sites such as Facebook. One focus group member told the story of an ex-colleague and LinkedIn contact that sent her a Facebook friend request. This presented her with a dilemma; she was pleased to be seen as a trusted friend, and didn't want to offend her ex-colleague, but felt uneasy about becoming his friend on Facebook. She accepted the request, and was then embarrassed to see photos of him in his swimming clothes. Another focus group member reported getting a Facebook friend request from a colleague and ignoring it, because he was not sure whether he counted his colleague as a 'friend' and was anxious not to signal anything more than a professional relationship.

The level of familiarity and social acceptability of social networking websites is an important benefit and an important pitfall. This is largely because of perceived differences in the acceptability of different social networking websites for different purposes. Use of LinkedIn and online communities for building professional relationships is widely seen as acceptable, whereas the use of other social networking sites is not. Users of social networking sites also recognise that Facebook is widely used for personal networking, which they perceive as a benefit because they can maintain multiple relationships in one place. Some non-users reported feeling 'left out' and missing social events because they were arranged on Facebook. This can be explained using the concept of genre (Yates et al, 2008). LinkedIn is clearly positioned as a business networking site, and users have adopted it as such, using it in the way they might previously have networked face-to-face and collected business cards. Facebook is used for personal networking. Separation between the two genres is therefore maintained by most people, mimicking the traditional way in which professional and social lives are kept apart.

The concept of genre (Yates et al, 2008) is based on the premise that new technologies tend *at first* to emulate their predecessors. With time, new behavioural norms develop around the use of technology. People such as the contractors at Global Energy who use a variety of social networking sites for professional and personal networking could be the vanguard of a new genre.

For non-users of social networking sites, an important perceived pitfall is finding time to use them. Typical 'don't' focus group comments were "I can't be bothered to sit in front of a laptop to look at Facebook after spending all day on one" and "I've got other things I would rather do, [like] talk to people face-to-face". Time was not mentioned as a pitfall by any of the 'do' focus group members – in fact these people reported that social networking online is a quick and easy way to maintain relationships.

Focus group members reported using social networking sites such as Facebook to maintain strong ties (family and close friends) rather than to maintain weak ties or create latent ties. This is in line with

Haythornthwaite's (2002) observation that strong ties provide motivation for people to adopt new ways of connecting. LinkedIn and work-related online communities are seen as professional networking sites where users have access to many people with relevant knowledge, and these sites are used to maintain weak ties – often with people the user has never met face-to-face.

How do the benefits and pitfalls of using social networking websites compare with those of other networking methods?

Table 7 lists the most frequently reported benefits and pitfalls associated with using networking methods other than social networking websites. Table 8 shows the overall ranking of reported benefits and pitfalls and the breakdown of these reports by users and non-users of social networking websites.

Common factors that people consider when making choices about the use of any networking method (social networking websites or otherwise) include the cost of creating and maintaining ties, access to people with relevant knowledge and degree of separation between personal and professional networking. Face-to-face networking methods, for example, are recognised as expensive, whereas low cost is identified as a benefit of email, text, informal face-to-face discussions, and social networking websites. The importance of having access to people with relevant knowledge is supported by the high value placed on networking with colleagues (see Table 3), which reflects the value of the organisation in providing a focus for sharing knowledge (Kogut and Zander, 1992; Nahapiet and Ghoshal, 1998).

Some of the biggest differences in perceptions of social networking websites and other networking methods are to do with degree of surveillance possible, level of familiarity and social acceptability, perceptions of authenticity and honesty, the number and diversity of people that can be accessed, the extent to which synchronicity is supported, degree of formality and symbol variety.

Surveillance, which is the most important perceived pitfall of using social networking websites, is not an issue for other networking methods. In some ways this is surprising, as other networking methods such as email are open to surveillance by organisations. One workshop participant reported that email allows people to have "private one-to-one conversations". Perhaps this is because surveillance of email is less visible than surveillance of social networking websites.

Table 7: Benefits and pitfalls of using networking methods other than social networking websites

Benefits of using networking methods	Rank	Pitfalls of using networking methods	Rank
Degree of formality	1	Symbol variety (MST)	1
Symbol variety (MST)	2	Degree of separation between personal and professional networking	2
Cost of creating and maintaining ties	3	Extent to which synchronicity is supported	3
Synchronous/asynchronous	4	Time and priority issues	4
Degree of separation between personal and professional networking	4	Relational dimension of social capital	5
Access to people with relevant knowledge	6	Focus on work-related issues	6
Anticipation of value through combining/exchanging knowledge	6	Security and confidentiality	6
Number and diversity of people that can be accessed	8	Reprocessability (MST)	8
Relational dimension of social capital	8	Cost of creating and maintaining ties	9
Transmission velocity (MST)	10	Degree of formality	9
Extent to which synchronicity is supported	10	Access to people with relevant knowledge	11
Reprocessability (MST)	12	Synchronous/Asynchronous	11
Level of familiarity and social acceptability	12	Level of familiarity and social acceptability	13
Clarity of specific work-related purpose	14	Transmission velocity (MST)	14
Focus on work-related issues	15	Rehearsability (MST)	14
Extent to which method can be used in conjunction with others	16	Perception of low control (CMUA)	14
Degree of surveillance possible	17		
Parallelism (MST)	17		
Rehearsability (MST)	17		
Perceived as opportunity (CMUA)	17		
Perception of high control (CMUA)	17		

Similarly, level of familiarity is seen as an important benefit and an important pitfall of using social networking websites (see above for an explanation of this apparent contradiction), whereas it is far less important a factor for other methods. Again this is surprising, as it is reasonable to assume that people are more familiar with established methods such as face-to-face meetings, email and phone. Perhaps these methods are so familiar to people that they don't recognise familiarity as a factor that influences their choices. Less surprising is the fact that concerns about authenticity and honesty appear only as a pitfall of using social networking websites. Several participants commented that it was difficult to tell whether people are being truthful online. It is also unsurprising that the high number and diversity of people that

can be accessed is more highly ranked as a benefit of social networking websites than of other methods. Technology can support the formation of weak ties (Haythornthwaite, 2002; Iverson and Vukotich, 2009).

Table 8 : Benefits and pitfalls of using networking methods other than social networking websites

Theme	Overall rank	As benefit %	As pitfall %	As benefit by users %	As benefit by non-users %	As pitfall by users %	As pitfall by non-users %
Symbol variety (MST)	1	44	56	16	28	6	50
Degree of separation between personal and professional networking	2	40	60	26	14	42	19
Degree of formality	3	79	21	34	45	7	14
Cost of creating and maintaining ties	4	75	25	42	33	4	21
Extent to which synchronicity is supported	5	35	65	9	26	13	52
Synchronous/Asynchronous	6	81	19	33	48	5	14
Relational dimension of social capital	7	53	47	26	26	11	37
Access to people with relevant knowledge	8	76	24	35	41	18	6
Reprocessability (MST)	9	50	50	14	36	14	36
Anticipation of value through combining/exchanging knowledge	10	100	0	8	92	0	0
Focus on work-related issues	11	27	73	27	0	45	27
Level of familiarity and social acceptability	12	70	30	30	40	0	30
Number and diversity of people that can be accessed	12	100	0	30	70	0	0
Time and priority issues	12	0	100	0	0	40	60
Transmission velocity (MST)	15	89	11	22	67	0	11
Security and confidentiality	16	0	100	0	0	63	38
Clarity of specific work-related purpose	17	100	0	50	50	0	0
Extent to which method can be used in conjunction with others	18	100	0	100	0	0	0
Rehearsability (MST)	18	50	50	50	0	50	0
Degree of surveillance possible	20	100	0	100	0	0	0
Parallelism (MST)	20	100	0	0	100	0	0
Perceived as opportunity (CMUA)	20	100	0	0	100	0	0
Perception of low control (CMUA)	20	0	100	0	0	100	0
Perception of high control (CMUA)	20	100	0	0	100	0	0

Support for synchronicity (Dennis et al, 2008) is mostly perceived as a benefit when it is high and a pitfall when it is low. The high ranking of this factor as a pitfall of methods other than social networking websites is largely because of email. In the use of social networking websites, support for synchronicity is a much less important pitfall.

The most important benefit of methods other than social networking websites is the degree of formality. When degree of formality is seen as a benefit it is because it matches the networking context; in the majority of reports this is because people value informal exchanges over formal meetings as a means of building relationships. The informality of face-to-face encounters in the pub and in work social areas is particularly highly valued. Degree of formality is also listed as a pitfall because people reported that some meetings are too formal for people to relax and speak freely, which doesn't help people get to know each other. Degree of formality is ranked low in the list of social networking website benefits and doesn't appear in the list of social networking website pitfalls. A possible explanation for this is that people associate the value of informality with face-to-face exchanges.

Symbol variety is the second most important benefit and the most important pitfall when considering methods other than social networking websites. In most cases high symbol variety is seen as a benefit and low symbol variety as a pitfall, although some people recognise the effectiveness of low symbol variety for conveying information (Dennis et al, 2008). In practice, the importance of high symbol variety translates into a strong preference for face-to-face networking methods amongst users and non-users of social networking sites. Users of social networking sites are far less likely to see symbol variety (high or low) as a pitfall, which implies that using social networking sites has helped them learn to interpret online communications more effectively (or they believe it has); or it has helped them improve their choice of communication method. Both possible explanations are supported by MST, as familiarity with technology influences its use (Dennis et al, 2008). Symbol variety is also seen as a benefit of using social networking websites, but only by users who report the benefits of combining different media (video, sound, etc) in a single place.

Implications for practice

Overall, users and non-users seem to recognise the benefits identified in the literature of using social networking websites; they are a low-cost means of maintaining relationships and they provide access to large numbers of people who might have knowledge relevant to work. But the perceived risks outweigh the benefits. In terms of Beaudry and Pinsonneault's (2005) coping model of user adaptation (CMUA) strategies (Figure 1), only a small number of people perceive social networking websites as an opportunity over which they have high control. These people are using a variety of sites, but mainly LinkedIn and online communities. In our limited research, these people were almost all contractors working for Global Energy – using social networking sites to develop their personal careers as much as for the benefit of the organisation. At the other extreme, a large proportion of the people we spoke to perceive social networking websites as a threat because of their public nature. Some of these people also believe they have low control over social networking sites, particularly Facebook, and have withdrawn completely from using them. Others are using them purely for personal networking purposes. In all these cases, organisations are getting very little benefit from employees using social networking sites.

So what should organisations do about social networking sites? One solution is the use of internal networking sites instead. This is likely to work only in very large organisations, but even then it seems to be missing the point somewhat. A second solution is to ban their use – but this is difficult to enforce, particularly as people can increasingly access them from mobile devices. We are far from being able to provide a definitive answer, but some of our findings concerning familiarity and social acceptability of social networking websites might point in a useful direction. It is clear from the literature and from the focus group results that norms around the use of social networking websites have not yet stabilised. In

terms of the concept of genre (Yates et al, 2008), many people are using LinkedIn to mimic traditional face-to-face business networking methods, and Facebook for keeping in touch with friends and family. A few people are starting to mix personal and professional networking and are becoming adept at choosing methods that match the context.

If organisations **as well as individuals** are to maximise the potential benefits and minimise the risks of using social networking websites, a useful response might be to provide training and guidance. For example, organisations could train employees in the use of social networking sites in the same way they train employees in how to deal with the press. This would benefit employees and make organisations attractive as employers – as well as giving organisations better access to employees' personal networks. Training could include, for example, how to manage privacy settings on Facebook and how to behave online so that networking enhances individuals' reputations. Ultimately the choice of whether to mix personal and professional networking is down to individuals, but if organisations don't support the use of social networking websites they will not get any of the potential benefits. The literature suggests these benefits are there for the taking, but our research indicates that people are resisting the use of networking websites for professional purposes because they fear for their reputations.

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