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iSociety

You Don't Know Me, but…
Social Capital & Social Software

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Foreword – Will Hutton

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Successfully marshalling human and technological resources in tandem is the key organisational and social challenge of our times. Organisations have been mystified as to why ICTs have failed to deliver promised productivity benefits, only to find that they have paid insufficient attention to the social infrastructure in which these new tools are embedded.

Policy-makers have spent years considering ways of preventing the arrival of a 'digital divide', where of course such a phenomenon has always been indistinguishable from a social divide. Making strong distinctions between the 'technological' and the 'social' is not only getting harder, but the usefulness of doing so is diminishing. This lesson is now being learnt.

iSociety's mission is to understand the power that everyday social norms exert over the uptake of new ICTs. Nowhere is this dynamic more acutely felt than in the recently emerged social software movement. Finally we have the discourse that was so lacking through both the boom and the bust of the New Economy, backed by the sensible recognition that the internet will cause neither utopia nor anarchy. What it can do is connect people in ways that they desire, but otherwise struggle to. This is the challenge that social software sets itself.

Both policy-makers and organisational strategists need to be alert to this debate. Dramatic changes have afflicted communities and organisations over the past decade of rapid economic and technological change. As knowledge management and access to information have become central to all of our social and economic well-being, so it has happened that social networks – very often informal ones – have grown in significance and power. Social software not only gives us tools to understand these social networks, it potentially

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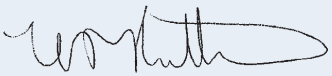
Foreword

empowers individuals, communities and organisations to manage networks better, and to build social capital.

Getting this right will be not be easy, but I believe a cautious optimism is justified. The new integrated debate introduced in this report draws as much on social capital analysis as it does on technological insight, and this represents a key step in the right direction. The internet is clearly already part of everyday life for many of us. Its ability to assist us in creating and cementing social ties is one of the key ways in which this dramatic technological advance may be able to make our everyday lives more fulfilling.



Chapter 1
Introduction

We now have the ability to communicate with over 600 million internet users worldwide. Meanwhile, research suggests that trust levels have been falling in both Europe and the US over the past ten years. As we welcome the internet into our everyday lives, are we replacing quality of connection with quantity?

'The internet is the largest and most fully connected social network of them all'. BARRY WELLMAN.[1]

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Introduction

In February 2000, Norman Nie and Lutz Erbing published the first Stanford University *Internet and Society* report.[2] The study's most widely reported finding suggested that the internet was isolating its users. The more time people spent using the internet, the authors claimed, the more they lost contact with their friends, families, and communities. Nie, speaking at the report's launch, put the point bluntly: 'email is a way to stay in touch, but you can't share a coffee or a beer with somebody on email or give them a hug. The internet could be the ultimate isolating technology that further reduces our participation in communities even more than did automobiles and television before it.' The internet, rather than being a technology for social connection, was making us lonely.

The internet, rather than being a technology for social connection, was making us lonely.

Nie and Erbing were contributing to a fierce debate that began with two unconnected events in the middle of the 1990s, both of which changed our understanding of the social impact of the internet. Although the net had its origins in the 1960s, and the world wide web was established in 1990, it took Netscape's initial public offering in August 1995 to finally throw the internet into the spotlight. The flotation not only triggered five years of frenzied stock market activity; it also appeared to herald the birth of a new economic and technological era with the internet as its engine of growth and progress. Perhaps most importantly, the browser software that Netscape developed gave many ordinary people their first taste of a new world online.

Six months previously, on the opposite side of the United States, Harvard Professor Robert Putnam published an essay called 'Bowling Alone'.[3] The essay catapulted 'social capital' into the mainstream intellectual and political lexicon, embodying a sense of anxiety that the very fabric of American community was under threat. The term 'social capital' refers to those social networks that go beyond our families, workplaces or official public bodies, and connect us to friends, associates and strangers for mutual benefit. It is the very basis for much collaborative behaviour. Putnam's thesis – that levels of trust, association and collective endeavour in the US were in decline – struck a chord in the UK and elsewhere around the world.

It did not go unnoticed that this fear of declining social connectivity coincided with such an astonishing advance in technological connectivity.[4] The mainstreaming of the internet and the mainstreaming of social capital theory led to contrasting visions of the relationship between the internet and community, between technological networks and social networks. On the one hand there emerged a futuristic vision of new types of online community that would be decentralised, cosmopolitan, and would give voice and power

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to the margins of society. Technology enthusiasts were quick to criticise the view that internet use necessarily led to a decline in meaningful community. Internet guru Jakob Nielsen, for instance, suggested that studies like Nie and Erbing's were asking the wrong questions: 'If somebody had conducted a similar survey 100 years ago, they would surely have claimed that phone calls were a cold medium that undermined traditional forms of social contact such as visiting people to have tea. In assessing the impact of the internet, the question is not whether it replaces (fully or partly) some other forms of communication and social contact. Because the internet adds its own new forms of communication and social contact.' [5]

Meanwhile, contrasting perspectives on the internet emerged using social capital theory as their basis. The most apprehensive perspective flowed from Putnam's work. This view stressed the importance of geographically local networks, face-to-face contact and trust. These social goods, it was argued, required safe-guarding from the disruptive changes being promised by technology evangelists. Putnam was broadly pessimistic about the internet's ability to increase social capital, and sometimes saw it as harmful. The rival vision was advocated by the prominent Canadian social network analyst, Barry Wellman. Wellman argued that modern social association had changed, and that social connection was now normally found in social networks based around individuals rather than geographic communities, or what he called 'networked individualism' Wellman was more optimistic that ICT could help to strengthen these bonds, claiming that 'the internet is increasing social capital, civic engagement, and developing a sense of belonging to online community'. [6]

In some respects this debate is nothing new. Any significant new technology comes with a social balance sheet. The mass production of motor cars in the 1920s made independent travel widely available, but could also result in the neglect of public spaces and city centres. [7] Televisions entered people's homes in the 50s and 60s, binding whole nations together through major televisual 'events', but threatening to make neighbours strangers to one another. Still, an intense debate continued. The by-now mainstream internet coincided with concerns about social isolation: would it turn out to be part of the problem or part of the solution?

> This fear of declining social connectivity coincided with an astonishing advance in technological connectivity.

Society goes technical, software goes social

More recently the debate has entered a new stage. In short, society got more technical while software got more social. A previous iSociety report, *RealityIT: Technology in Everyday Life,* suggested that Information and Communication Technology had

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now moved well into the social mainstream, penetrating the everyday lives of British people in a manner that exhibited neither the futuristic melodrama predicted by the techno-evangelists, nor the social fragmentation predicted by nostalgic luddites.[8] It has happened quietly and gradually, principally to help people do things that they would have been doing anyway. In particular – and most relevantly to this report – over half of British people now regularly use email either at home or at work, most commonly to communicate with friends.[9] The latest UCLA Internet Report, *Surveying the Digital Future,* found that 63% of Americans now regularly use email to keep in touch with friends and family.[10] Evidently, the internet is already being calmly integrated into the everyday social lives of a growing number of people. Society is getting more technological.

Society got more technical while software got more social.

The converse of this process is the main focus of this report: how software is getting social. Initial commentary on the social implications of the internet suffered from two problems. On the one hand too few people were online for the internet to mirror accurately mainstream communities and their practices, and the cultural movements that were represented online were inevitably skewed towards those of technology evangelists. But equally, as the internet did become more popular, perceptions of it were largely limited to two software applications, web browsing and Email. Perhaps with these in mind, Putnam thought that the internet would go one of two ways, either to become 'a niftier telephone or a niftier television.' [11]

'Social Software' expands on the social capabilities of web browsing and email, but without making false promises about utopian online communities. After the hysteria that surrounded the first decade or so of the web – hysteria which included everything from 'virtual communities' living on a 'cyber frontier' to a 'New Economy' fuelled by 'dot.com mania' – the debate has now come full circle to focus in on everyday people in their everyday social lives. In short, new types of software are being developed which are much more adept at helping groups of people organise themselves in their day-to-day lives. The expression 'social software' only really entered circulation during 2002 to characterise a significant increase in group applications. But by the time of the April 2003 O'Reilly Emerging Technology Conference in Santa Clara, 'social software' was becoming the key concept for anyone interested in the social possibilities of the internet. A new and more level-headed optimism has emerged, the fruits of which could render some of the more pessimistic social analyses of the internet redundant.

So far there has been little consensus on exactly what 'social software' means.[12] Certainly,

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Figure 1: Types of social software

Software	Examples
Email	Outlook, Sendmail, Pine, Hotmail
Weblogs and Wikis	Movable Type, Blogger, Wikipedia
Messenger System	ICQ, MSN, Trillian
Document Editing System	Groove, Hydra, Lotus Notes
Group Diaries	Livejournal
Introducer System	MeetUp, Udate, Ryze
Group discussion System	SmartGroups, BBS, Usenet

any technological definition is hard to come by in view of the number of applications that it potentially covers, as displayed in Figure 1. It includes old communication tools such as email and Instant Messaging; and traditional group discussion facilities such as SmartGroups. Howevever, it also includes new types of group filtering mechanisms, notably reputation systems; web sites designed to introduce people, either for business (eg, Ryze), dating (eg, Udate) or just common interest (eg, meetup); and new group publishing software like weblogs (referred to as 'blogs') where people share and discuss their online and offline experiences.[13]

As much as anything, 'social software' is a statement of intent, a cultural, perhaps even political expression of how the internet can improve our lives. Rather than offering some sort of wardrobe into an online Narnia of disconnected virtual reality, the principle of social software is to break down the distinction between our online computer-mediated experiences and our offline face-to-face experiences. It is software that pays heed to the lessons of social capital, and seeks to integrate the internet further into our everyday lives, and our everyday lives further into the internet. It is software that seeks to eradicate the gulf separating two such separate social networks, and such separate world-views.

These developments are positive, and have moved forward the debate about the social potential of the internet. But there are significant barriers to be overcome. The potential of such new types of software to improve working life by helping groups of people achieve tasks at work, and to help improve social life by enriching the communication of social groups on and offline, is great. Yet for it to achieve its potential we need to understand some basic things about how social

> The debate has now come full circle to focus in on everyday people in their everyday social lives.

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networks fail. If we do not accurately understand how social capital and social networks function, software built to increase social opportunity is less likely to be successful.

↓ The agenda for communities and organisations

The prophets of the information society promised fundamental change to many of society's key building blocks. Barry Wellman plotted the shift towards 'non-local community', while Manuel Castells confidently asserted that many organisations were shifting towards a new network-based structure. Geography and hierarchy were meant to be on the verge of losing influence, but of course it never happened. In 2003, it is fairly commonplace to laugh some of these claims off, pointing out that people still chat to neighbours, still have line managers, and that organisations and communities are much as they were twenty years ago.

But this may be true only up to a point. Organisations and local communities do retain much of their traditional aspect, but only if we define them via their visible, concrete manifestations. Once we can understand the changes in *informal* and often *invisible* social networks that accompany these technological changes, then we may begin to realise how much was true in these predictions, and respond. The tangible physical infrastructure of the information society appears familiar; the intangible social infrastructure may not, not least because we normally lack ways of visualising it. And yet there are reasons to consider that informal social networks may be growing in political and economic significance, meaning that mapping and managing them becomes all the more important.

Those in positions of responsibility for communities and organisations need to appreciate the dynamic relationship between social and technological networks. Because technology networks are social, often they will be at their most effective when they operate on a local level, connecting neighbours, employees and friends who see each other face-to-face anyway.

At the same time, because social networks are increasingly technological, communication becomes more codified, and potentially integrates others from separate organisations, or separate parts of the world. The relationship between social and technological networks is not an either/or: 'virtual community' and 'real community' are not mutually exclusive. A community depends on local, face-to-face interaction, but may also have international links; a corporation remains a hierarchical phenomenon, but not to the exclusion of having valuable cross-cutting networks. The convergence of the internet with existing social capital forms will produce these ambivalent results.

Why does this matter? Many people already intuitively recognise how social capital affects them, their communities and their organisations. Traditional social institutions still order our lives in many of the ways that they always have done,

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but an institutional perspective alone may not capture some of the most important relationships through which knowledge circulates, collaboration occurs and identities are formed. Informal social networks do not respect institutional boundaries, they integrate separate organisations, and create new inter-sectoral communities.

The perspective of social capital analysis is ideally suited to anyone seeking to understand the shifting relationship between traditional forms of organisation and new, informal and often quite complex social networks. Intangible and implicit forms of organisation have not superseded traditional institutions, the two run side by side, but the former are exerting greater influence than in the past. Certain workers, for instance, may feel only a weak sense of identity with their employer organisation, while being strongly allied to a professional network that they will carry around with them for life. Their professional identity is formed as much out of their membership of a community as it is out of their membership of an organisation. Equally, more progressive trade unions are beginning to realise that defending the interests of members should no longer be distinguished from the waging of a broad community-wide campaign for better work for members and non-members alike.[14]

This paper takes a dual perspective, considering communities and organisations side by side, while recognising that social capital analysis does not really make a strong qualitative distinction between the two. That analysis poses as many of the identical questions to communities as to organisations: how do people commit to one another, where and why do they trust one another, who is included or excluded from a given group? Under this analysis, two inter-related threats emerge as areas in which social capital may often fail, but where social software may offer solutions: cliques and cronyism.

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Against bad social capital: combating cliques and cronyism

The informality of significant social relations is a problem. Valuable social capital is hard to manage and distribute, meaning that it becomes a major source of inequality and division. New hierarchies emerge as a result of people hoarding information, and circulating it amongst only their most trusted friends. This is the problem of *cliques.* Social software potentially aids organisations and communities here, if it can open up social connectivity and prevent it being used so much as a basis for advantage. If broader, more public conversations are possible, this will benefit both organisations and communities by breaking down internal hierarchies and achieving a better distribution of knowledge.

Following this is another problem. The tacit, informal nature of structures of power makes them opaque. As explored in the next chapter, a lack of transparency surrounding highly influential areas of public life can create a trust and legitimacy deficit. There is a sense that the public face of

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institutions is no longer an accurate reflection of their real constitution, that excessive trust and secrecy between insiders is to the detriment of the interests of outsiders. This is the problem of cronyism. Social software potentially helps here, illuminating, codifying and tracking communication for potentially good effects. It bestows institutional form upon social relations that otherwise elude the public gaze and thereby escape any accountability.

We will know that the internet is truly enhancing our lives when it enables us to form the types of social relationships which we want, but for one reason or another fail to achieve.

Chapter 2 argues that, for social software to complement our existing social networks in these ways, it must take advantage of two key ways in which it can affect them. Firstly it has the ability to affect the size of a social network. This is the theme of chapter 3. Differently sized social networks are useful for pursuing different ends, as analysis both of Computer Supported Collaborative Work (CSCW) and of social capital makes clear. Secondly, any benefits that social software can deliver to social capital must be a consequence of the *more codified* means of communication that the internet delivers. As explored in Chapter 4, *how* people communicate – be it face-to-face or via computers – should depend on what type of knowledge they wish to develop and share. We need to be alert to the differences between online and offline social contact, so that we can then decide which is best for what.

These twin levers over social networks – determining their size and their communication medium – have potentially positive implications, as explored in Chapter 5. Groups often display a self-destructive tendency towards introversion, privacy and closure, to the exclusion of outsiders and new information. Social Software may be able to tackle this. We will know that the internet is truly enhancing our lives when it enables us to form the types of social relationships which we want, but for one reason or another fail to achieve. What it offers us is the opportunity to make social networks bigger and more explicit. A greater openness and integration is possible for organisations and communities, as internal and external communication, insiders and outsiders become merged. Ultimately this is the promise of trust without homogeneity, cosmopolitanism without social fragmentation.

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WHAT IS SOCIAL CAPITAL?

'Social capital' refers to the value of social networks. To describe something as 'capital' is simply to highlight that it is a resource which we can invest time and money in, and which pays returns. Social networks deliver a range of goods – they provide efficient circulation of information and facilitate mutual support, leading to a range of social and economic benefits. The norms and trust levels that facilitate collaborative behaviour provide communities with public goods: lower crime, economic vitality, higher health levels, better environmental standards, and greater happiness. Social networks are also implicated with private individual benefits – most notably, job prospects.[15]

WHAT IS SOCIAL SOFTWARE?

'Social Software' is an expression that has been gathering momentum since 2002. It refers to any software which enables groups of people to communicate and to collaborate, from something very familiar such as email, through to a more obscure application, like Hydra, a document editing programme. Online collaboration in programming is as old as the internet, and the study of Computer Supported Collaborative Work has been ongoing for many years. But what is new about Social Software is not so much that it facilitates online collaboration *per se,* but that it exists for the benefit of the everyday non-specialist user. Rather than supporting advances in programming or science, social software is about supporting and improving mainstream social practices that go on both offline and online.

Chapter 2
Social capital: who needs it?

Robert Putnam tells us that 'the core idea of social capital theory is that social networks have value'.[16] This insight unites social capital analysis and social software with a shared agenda: they both seek to exploit the value of social connections.

Social capital: who needs it?

Recognising the importance of social connections is nothing especially new. Social network analysis can trace its origins back to the 1930s, while the nostalgic fear that community is unravelling is part and parcel of a modern political culture. People have always belonged to communities and networks, and organisations have no doubt always been more 'porous' than they realised. But what may have changed is that social networks are now more important as a source of advantage in life. The informal social and cultural areas of our lives are no longer a trivial economic or political concern.

Two significant things have changed in the UK and many other developed societies. Firstly, traditional, formal organisations no longer command such a strong allegiance from people, and authorities no longer receive the same levels of trust. Consider trade union membership for example. More than half of the British workforce was represented by a trade union in the late 70s, but now that proportion is below a third, a quite dramatic decline in a highly influential type of formal association.

Meanwhile, a growing body of evidence shows that trust in companies, governments and professions is in ongoing decline.[17] As 'short-termism' grips companies and labour markets, people's trust and affiliation is shifting away from formal organisational structures, and towards informal associations that seem to be more enduring. Informal social networks are nothing new, but as the amount of time spent by people socialising rises, so the amount of time and effort dedicated to formal types of collaboration falls.[18] Informal social networks are becoming more important.

Secondly, these networks are not only a valuable source of identity and trust; they are of growing economic significance. As our economy has become more orientated around intangible goods – ideas, skills, effort, information – so social capital has become more valuable. We need to trust the people whose advice we receive; service organisations need to know more about those they are about to hire. Social and professional networks circulate such valuable information quickly and efficiently. In a more weightless, more service-based economy, social capital is a major source of advantage and disadvantage, often determining whether information is shared or sold.[19] As we are about to explore, as a private economic asset in the sense of an information resource, social capital may display winner-takes-all symptoms. Meanwhile, most studies of the UK have concluded that social capital is not in decline but is very unequally distributed.[20]

The informal social and cultural areas of our lives are no longer a trivial economic or political concern.

Social capital: who needs it?

The internet has often been implicated in some of these social trends. Once so much free information is available, why should people rely on traditional authorities? If sending an email to ten people costs the same as sending it to one thousand, why restrict information only to members of an organisation? Yet if someone lacks access to the net altogether, won't they become more socially marginalized? But the internet doesn't order our social relations for us. It's up to us to decide what kinds of social relations we want to form with it. In particular, organisations and communities need to consider how the internet may be a force for a more equal social connectedness that will facilitate better distribution of knowledge, more transparent and public conversations and, hopefully, restore levels of trust.

What's required is a calm analysis of how everyday social networks function.

The premise of social software is that online and offline interaction can complement each other, rather than replace each other. social software will not create some virtual community wholly separate from day-to-day life, but nor will it suddenly conjure social capital out of thin air. What's required is a calm analysis of how everyday social networks function, how they occasionally let us down, and how the internet may provide a better form of connectivity than otherwise exists. social software should not distract us from our everyday lives, but enhance them. Rather than offer a rival community, it should appreciate how the internet can be integrated into our everyday lives as a tool.

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A tale of two networks

However our ability to appreciate the everyday social uses of the internet are obscured by a familiar problem: the internet is viewed as a self-contained world, running in parallel to mainstream society, rather than as a tool to be used as we wish. This is because over the decades that led up to the creation of the world wide web in 1990, and the consequent take-off of internet usage in the years that followed, internet users were already reflecting on what kind of social network it could be. As a medium with unprecedented power to connect people from across the world, no matter who they were, what they looked like, or what their beliefs were, it seemed a foregone conclusion what kind of social network the internet would create. It would be a network where strangers could meet, where any number of people could gather, where cultural identity was irrelevant and where any type of conversation could be held. The internet was a self-proclaimed revolution: both in its development and in its use, it represented a gleeful escape from the confines of social normality.

Imagine if the first 20 years of television broadcasts had been targeted at people working in broadcasting, very often to discuss broadcasting. This is close to what happened with early online

Social capital: who needs it?

communities. So when social capital theorists started to observe the internet in the mid-90s, they not only had to contend with a potentially transformative new technology, they faced a fair amount of rhetoric on top because the early users had written their own history. Either they could believe much of the hype and recognise that wholly new forms of social interaction are possible, and will be widely engaged in. Or they could keep their eyes firmly fixed on the everyday, rather more humdrum social networks that the vast majority of us continue to belong to: our old friends, colleagues, neighbours and so on.

A 'two-worlds' view of the internet and everyday society has developed. We talk of a 'virtual' and a 'real' world, of actually *'being'* online, not expressions that one would use about watching television. However, such a view would not be recognised by most of the 42% of British people who use the internet at home.[21] Most of these people do not seek to separate their lives into on and offline, instead using the internet to enrich their lives as a whole. Moreover, this two- worlds view has prevented us from extracting the full social benefits from this technology.

So long as the internet is understood only as a vast and very technical social network, its social uses and benefits will remain aloof. Many of the early experiences of online social behaviour demonstrated how bizarre and useless a social network is when it is predicated on scale and technological possibility alone. The famous *New Yorker* cartoon, with the line 'On the internet nobody knows you're a dog' summed up a lot of people's early experiences of using the net as a social tool: it was a place of disconnected and ephemeral experiences.[22] This is the nature of an under-socialised, vast technological network.

The 'two worlds' view is equally unhelpful from the other side of the divide. Where social capital analysis views social and technological networks as alien to one another, it ignores much of the potential to make social networks larger, longer-distance, more integrated and more codified. The internet is not – as its evangelists hoped – a social revolution, and has not brought about huge shifts in power, utopian communities, or entire virtual worlds. A dramatic and sudden transformation of our existing social relationships was never likely, precisely because our existing social relationships are such an important source of identity, security and knowledge. Such social relationships prove surprisingly robust because they supply us with important resources. This is the chief insight of social capital theory. But at the same time, transformation does occur, usually slowly, sometimes intentionally, sometimes unintentionally. Perhaps only social historians will fully grasp how the internet affected our society from the mid-90s onwards, but social capital theory must surely make a stab at doing so. By seeing the internet as wholly alien to our everyday social life, it fails to do this.

Social capital: who needs it?

What causes this two-worlds view of the internet and everyday society? From the perspective of the social capital analyst, there are two very simple distinguishing characteristics which create the sense of a gulf between our online and our offline lives, namely, the issues of network *size* and communication *medium*. Let's look at these in turn.

Network size

The internet itself is a vast network of computers with over 600 million users, according to a recent estimate.[23] Unless we already have some online social network in place, the internet offers us only the most bizarre of social experiences.

Beyond a certain size, members of a social group find it harder to align their own individual interests with the collective interest, and feel tempted to opt out of the group effort.

Experienced purely as an open technological network, the internet is barely social at all. This is because a defining feature of any social network is its *size,* and different sized networks are suitable for different social tasks. The study of Computer-Supported Collaborative Work (CSCW) has explored this very point for many years now, while social scientists also attempt to work out what different sized social groups can achieve. The same issues pertain to both: beyond a certain size, members of a social group find it harder to align their own individual interests with the collective interest, and feel tempted to opt out of the group effort. This is as true online as it is offline.

Meanwhile, there is a limit to how many people a single individual can maintain ties to. One widely cited theory states that the highest number of people we can actually claim to know properly has a limit at 150.[24] Whether from the perspective of the individual or the group, and whether online or offline, very large social groups don't offer direct benefits, unless there is some outside intervention to regulate or filter them. Let's consider how social capital theory in particular addresses the question of network size, and why it matters.

One important function of social capital is the distribution of information and, in terms of this, social networks often tend to become more valuable as they grow bigger. People whose social networks include a large number of what's known as 'weak ties' or 'bridging social capital' are known to be more successful in their careers or in entrepreneurial activities. 'Weak ties' are relationships with people we see fairly rarely and with whom we have few friends in common. They're what we often call our 'contacts'. American sociologists and network analysts, Mark Granovetter and Ronald Burt, have repeatedly highlighted the economic advantages that accrue to people whose social networks contain large numbers of these

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types of links, bridging into other groups in ways that those of our contemporaries don't.[25]

Such networks are very useful for distributing information across sectors, or between separate communities, but the point made by Granovetter and Burt is that the prime value of these networks is enjoyed by the individual creating all the links, the person acting as the 'hub' in the network. The value of bridging social capital lies in its rarity, in the fact that I have something you don't. Entrepreneurs, journalists or socialites who circulate information and bring people together most often receive private economic benefits because they achieve a rare status in their own social network of being the only person who connects A with B, and each of them with C. This type of social capital potentially creates 'winner-takes-all' scenarios, whereby people with a lot of contacts become people who are good to know, and they accrue further contacts. The opposite is the case for people with few valuable contacts.

There are no doubt public benefits which spill over – the fortunate minority gain a 'first mover advantage' from their unique access to information, but the existence of various 'bridging ties' should eventually ensure that society at large becomes better informed. The more bridging social capital a society has, the more cosmopolitan it may be and the faster ideas will circulate, but the complexity of this situation makes it all the more necessary that a small clique of people come to act as the 'hubs' through which a lot of this information is routed. A society and economy that produces a large quantity of information demands this, and new hierarchies and inequalities develop as a result.

To believe that knowledge-based economies with a prevalence of bridging social capital create a more egalitarian and inclusive society may actually be the very opposite of the truth. As Karen Wright and Paola Grenier of the London School of Economics have found, social capital in Britain is 'becoming increasingly commodified, chosen as a private good', often being hoarded for the advantage of the individual.[26] Large social networks prove useful and valuable sources of information, but a lot of that value lies in the fact that only a few people have access to this information. As Ronald Burt puts it, 'social capital is a metaphor for advantage'.[27]

Social capital potentially creates 'winner-takes-all' scenarios.

Smaller social networks deliver different benefits altogether, chiefly, higher levels of trust and mutual support. 'Strong ties', or 'bonding social capital', exist between long-standing friends and family, people who see one another regularly, can depend on one another in times of need, and do favours for one another which they know will be reciprocated. Large social networks will not generate high levels of trust because they suffer from what economists call 'the free rider problem', the possibility that individuals will piggy-back on the efforts of the

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rest of the community without being found out and penalised. This is why collective action, and especially trust, amongst large networks will often require the organisation of some outside third party or authority, Thomas Hobbes's explanation of the need for a modern state.[28] But in a small network, it is far easier for individuals to align their own self-interest with the collective interest of the network, not least because if they prove themselves untrustworthy, this will become known about and they will suffer in future.

A local neighbourhood is a good example of how social capital benefits from a network's size limitation. I would feel reasonably confident that I can trust my next-door neighbour to look after my dog for a couple of reasons. The first is reciprocity. I can assume that my neighbour will be fairly willing to do me a favour, because this will create an incentive for me to return the favour some time down the line. It's in the self-interest of my neighbour for her to honour my trust. The second reason is that a neighbourhood is a social network with fairly high barriers to entry and exit.

To trust someone, we need to know who we're dealing with, which means thinking back to how they behaved before.

What this means is that, even if I dislike my neighbour, I know that she will still be around tomorrow and would therefore be very foolish to cheat me in some way. Were she to do so, she would develop a *reputation* in the street which she would not be able to shake off very easily given the limited size of the street. People would stop trusting her, or helping her out, and she would suffer. Reputation is a crucial factor in the development of trust in any social situation, but it requires an effective means of being distributed. Unless someone's reputation is broadcast in some way (for instance if they are famous), it generally requires a group to be relatively small, so that people can get to know one another over time. To trust someone, we need to know who we're dealing with, which means thinking back to how they behaved before. As we will discuss in the next chapter, the identical issue pertains for online groups.

One shouldn't automatically associate this basic description of a set of incentives with the belief that local people have a lot in common with one another. I may have far more in common and get on far better with someone I happen to sit next to on an aeroplane, but still feel unwilling to trust them. Neighbourhoods on the other hand may not necessarily be thriving communities, but they do at least have the same relatively small number of people in them from one week to the next. If, on the other hand, I asked a stranger in the street to look after my dog on the basis that they were a fellow Londoner, not only do they have little incentive to honour my trust (being unlikely to ever have the

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favour returned), they could quite easily be on their way out of London without me knowing. There is no way that I would do this on the basis of a social network as large as London. The size of the social network involved determines what types of relationships we are capable of making within it.

On the face of it, then, the difference between a small social network and a large one can be explained in terms of risk analysis. I would be prepared to leave my dog with a neighbour but not any Londoner, because the neighbour has sufficiently high incentives to look after my dog, meaning that the risk involved is very small. If we consider social networks in terms of size alone, then risk analysis would be the governing principle behind social capital accumulation, and collective action would be explicable wholly in terms of mathematics or game theory. Where the benefits of being a free-rider were sufficiently high, and the risks of suffering for this were sufficiently low, then free-rider behaviour would take over and social capital would perish. This too is especially pertinent to social software, as discussed in the next chapter. But this analysis alone misses an important element in social behaviour, that of how we communicate, which is the second fundamental difference between online and offline social interaction.

↓ Communication medium

Social interaction via the internet is computer-mediated communication (CMC). Let's not leap to any conclusions here, and suggest that this automatically makes the internet a distance-shrinking device, after all, the majority of telephone calls are made locally. More importantly is the fact that CMC is fundamentally a codified type of communication. Computers speak to one another in code – in the case of the world wide web, this code is HTML – and information which can't be reduced to code in any way, won't be communicable via computers. In terms of what this means for users, codification can be very useful. Because CMC has to be captured in some way, communication via email, for instance, is communication that is automatically stored. This results in the codification and storage of knowledge and information which might otherwise be lost.

Our everyday social networks, which are rooted in face-to-face communication, use rich, subtle and unusual cultural languages.

Meanwhile, our everyday social networks, which are rooted in face-to-face communication, use rich, subtle and unusual cultural languages. Things like body language, fashion, vocal intonations and accents are used in order to convey meaning, and this meaning is rooted in its specific social, geographic cultural context. It can't simply be grabbed, packaged and sent across the world without it being affected in any way. Equally, it is rooted in its temporal context: communication

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and ideas can be lost or kept secret in a way that emails are less likely to be.

ICTs and media are often held up as the bogeymen by social capital thinkers. Robert Putnam identifies television as one of the chief culprits in the decline of civic America, and has little confidence in new ICTs to avert this: 'casualness is the appeal of computer-mediated communication for some denizens of cyberspace, but it discourages the creation of social capital'.[29] Face-to-face contact is deemed to be irreplaceable by social capital thinkers such as Putnam, and social capital is generally thought to be created through quite local networks of people who are likely to meet one another fairly regularly. What is it about face-to-face contact which makes it so important to the functioning of a group? Or to put it another way, what in particular does face-to-face contact achieve which can't be achieved via a telephone conversation or radio broadcast?

Outside contemporary western societies, people would identify and associate with the families and local communities that they were born into. In modern society, of course, things are different, and many people have the ability to choose who they want to associate with, what cultural identity they wish to subscribe to, and how they want to express this identity. A local neighbourhood is a useful resource, but many of us would find it suffocating if it were the only source of social capital. Instead, people create meaningful identities by supporting a football team, going to certain types of restaurants, or wearing a certain kind of clothes. All of these are social, communicative practices, and none of them can be replicated by communicating through a technological device. As Barry Wellman has argued, people now tend to associate in networks, rather than communities, choosing who they want to ally themselves to. Networks, he says, 'are only partial communities that do not command a person's full allegiance. Rather, each person is a limited member of multiple communities such as kinship groups, neighbourhoods, and friendship circles.'[30]

Wellman's work shows us that contemporary communities aren't necessarily tied to geography. But this doesn't mean that face-to-face contact isn't important, or that technology can replace it. Vast numbers of Manchester United fans are scattered over east Asia, and satellite television obviously plays an important role in broadcasting football games live around the world. It is a constant jibe made against Manchester United that the vast majority of its fans have never been to Manchester. And yet actually wearing the club's colours is no less important to the fan in Bangkok than to the fan in Manchester, because affiliation to a football club is really a cultural statement to one's immediate social peers, rather than an affiliation to some distant group of players or stadium. Self-expression and cultural association remains principally a face-to-face and local phenomenon.

Face-to-face contact is the glue which binds people together culturally, and provides people

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with their social identity. The example cited is not entirely typical – most people draw their social identity from the group of friends who they happen to hang out with, rather than select it as a badge of honour. But in either case, the social capital formed out of this collective behaviour requires people getting together physically. Why? What is it that ICTs fail to capture about social relationships? The answer lies in a simple but important philosophical distinction, between 'codified' and 'tacit' knowledge.

'Codified knowledge' is information. It is the data which we store in books, on computers, or on CDs. We can store it and forget about it for years on end this way, and it won't change. 'Tacit knowledge', on the other hand, is the knowledge we hold in our heads to go about our day-to-day lives. This is a kind of 'know-how' which allows us to relate instinctively to one another and to the stuff around us, so that we know how to get stuff done without consciously thinking about it. It is 'that which we know but cannot tell', just as I 'know' how to drive but could not pass this knowledge on to someone simply by 'telling' them.[31] It differs from codified knowledge in that not only is it far harder to transfer from one person to another, but also in that it is pretty much impossible to store, and hence, equally difficult to communicate via ICTs. It resides in social practices and intuitions, many of which people may not even be conscious of (hence it is 'tacit'), and so it is people, not computers, that are capable of holding this knowledge.[32]

The crucial thing to appreciate is that codified knowledge is rooted in tacit knowledge. If you ask me the time, you want a piece of quite codified information, but I make use of tacit knowledge in my reply. I look at my watch instinctively, understand its symbols instinctively, and reply using vernacular language like 'half nine' because I know enough about you to know that you have no interest in the time to the nearest second. But if you and I were both wearing camouflage and holding assault rifles, my tacit understanding of your question would be very different. My reply may be something like '0928 hours', because of the nature of our shared situation. So codified knowledge and its exchange is constantly parasitic on tacit knowledge.[33]

As many have argued, the dawn of the computing age has raised the premium on high quality tacit knowledge, while disburdening human beings from having to process or memorise so much codified information. Manuel Castells, for instance, suggests that ICTs 'replace work that can be encoded in a programmable sequence and enhance work that requires analysis, decision, and reprogramming capabilities in real time at a level that only the human brain can master'.[34] For the same reason, the idea that the influx of ICTs would radically transform the way we socialise, killing distance to create widespread remote working and virtual communities, may be the very opposite of the truth. Rather, a world full of ICT networks may

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make it more crucial that we cluster together to do what human beings are uniquely able to do, namely chat, precisely because 'judgement and discretion are not features of software'.[35] Face-to-face contact has, maybe ironically, become more celebrated in many quarters as ICTs have infiltrated our social lives.

↓ What's social about social software?

ICTs have been so often implicated in globalisation or 'the death of distance' that the possibilities for them to enhance face-to-face interaction is often underplayed. Meanwhile, the fact that people expend much of their time online communicating with people who they know and see anyway is also under-appreciated. Social software needs to escape the either/or presumption, that social interaction happens either online or offline.

The more important question is: why might people choose to interact online as part of their everyday lives. Where do offline social networks let us down? Social capital in the UK displays certain deficiencies. Firstly, it is poorly distributed and there is a lack of connectivity between separate communities, even where they are side by side. It is true that the internet makes global social networks possible, but this doesn't preclude the possibility that it also makes better local social networks possible.

Secondly, in our contemporary climate, social capital displays winner-takes-all symptoms, as key 'hubs' in given networks become more and more powerful as 'knowledge brokers' creating links between separate communities. Finally, the UK has suffered a decline in general trust levels over the past decade. This may be associated with the problems of distribution of social capital: tight-knit, introverted communities and unaccountable elites do not make for a trusting cosmopolitan culture.

The perspective we need to take involves abandoning the hope for a virtual community. We need to recognise that online and offline interaction are different in some ways, but similar in others. Social software can take advantage of both the similarities and the differences, building on the similarities while channelling the differences towards social benefits. Two key axes stand out: the size of a social network and the codification of its communication. Many of the same issues surrounding the size of a social network apply online and offline, as the next chapter explores. But social software offers new ways of affecting this, while retaining the possibility of connecting any given number of people. This may be especially viable and useful where cultural barriers to entry exist, and a more formal means of interaction is required to integrate newcomers and create diversity, which is where social software exploits the key difference between online and offline interaction, namely the more codified nature of the former.

Chapter 3
Expanding and filtering: size matters

The internet will not do anything to improve our everyday social networks, our communities or our organisations, if all it is able to do is to open up a bedlam of global chatter. But this has been the predominant image of the internet in the minds of many over the years. The sheer scale of this network has often made it appear unutterably alien to everything that we find useful and practical about the groups and associations that we belong to.

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The internet makes it technically possible to maintain social ties with as many people as we are humanly able to. The technical barriers to entry are virtually zero, assuming that individuals have some access to a computer. No matter how cautiously we reappraise the social implications of the internet, we should not ditch altogether the optimism that this invention initially provoked. Judged as sheer technology, the social and political possibilities opened up by the 'largest and most fully connected social network of them all' remain enticing.

Where social software aims primarily at openness it may often be characterised by random encounters, without repeat interactions.

But as has been stressed, the internet should not be seen as a law unto itself. Very similar dynamics apply in online groups and offline groups. Online groups succeed and fail for similar reasons to offline groups, many of which are associated with their size. Just as the previous chapter argued that a shared neighbourhood provides a better basis for cooperation and trust than a shared city, many people will find that an email sent to every member of a large organisation will be met with far less cooperation than one sent specifically to two or three people. The same dynamics of group size apply in both cases. The difference is, of course, that something like email gives us very acute control over exactly what size group we wish to communicate with. Let's consider the contrasting options.

↓ Expanding social networks: lowering barriers to entry

After the arrival of the world wide web, user-friendly forms of social software developed over the course of the 90s. Message boards and chat rooms all potentially create the conditions of an entirely new form of community, namely, virtual community where membership is open to anyone, and total anonymity is possible. These forms of social software enable distant strangers to communicate, without it mattering who they are or the quality of their contributions. Of course they could also be used for close friends to communicate, but where social software aims primarily at openness it may often be characterised by random encounters, without repeat interactions. Chat room and message board moderators often attempt to steer the debate, and maintain a certain level of conduct (primarily erasing obscene contributions), but otherwise, these groups witness individuals exercising their hallowed freedoms of speech and association in whichever way they chose, to a largely anonymous audience.

Meanwhile, email can have similar properties if we want it to. Once again, this creates the technical opportunity to greatly expand a social network: placing email addresses on homepages makes it

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possible for complete strangers to contact one another, while the integration of an address book into email software such as Outlook makes it possible to store a vast number of contact details. If we come across a completely unknown individual on the web, either through their home page, weblog or place of work, very often we will be able to email them either for good or bad purposes. As in a chat room, our identity can be obscured and we may have no further contact with them. On the other hand, if they can verify our identity in some way, then some meaningful or useful connection can be struck up.

A variety of different types of social network can be sustained by email, anywhere between a one-to-many publishing model to a quite intimate few-to-few discussion. An email list, for instance, is used to coordinate a relatively large group of people who have signed up to gather information on some shared interest. Often many of them will contribute little or nothing to the discussion, and the function often veers closer towards publishing. The opposite extreme occurs where the Carbon Copy (cc) header is used by someone to introduce two people to one another. As Ronald Burt explains, the ability of a third party (or 'broker') to connect two people who otherwise have no connection is an important element in the creation of social capital.[36] Trust between strangers becomes possible in the company of a shared acquaintance, and email enhances this process. After all, where someone is 'cc'd' into a discussion, they not only develop some minor connection with all other recipients of the email, but they automatically have their contact details. Consequently, the 'broker' might lose the privilege of being an essential node in the network, because recipients of the email can in future email one another directly.

This ability of the internet to connect strangers without face-to-face contact has been responsible for much of the political idealism that has surrounded it. The appeal of social groups formed purely around shared interests or values was initially great – perhaps, it seemed, this might be the basis of a bright new political future in which race and nationality slowly became redundant. Boundaries would not just be broken down, but become utterly invisible, creating the same liberal utopia achieved at the end of the film *Volcano,* where, witnessing a crowd of people covered in ash, a child says 'but I can't see what colour their faces are any more'. But it swiftly became clear that there

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are huge social inadequacies in open virtual groups. Enthusiasts and developers of this early social software led it in bizarre directions, focusing on the most abnormal aspects of online interaction.[37] They saw the web as an opportunity for socially unusual behaviour – ID-switching, chatting to strangers, one-off interactions – failing to appreciate that the web could ever be a basis for more normal, everyday social behaviour.

Ultimately, the size of the internet is often too vast, and the barriers to entry too low for groups to develop anything resembling social capital. Obviously, good moderation can counter this, as it can in real world debates, but chaos is often just around the corner. The practice of disrupting online groups for fun – 'trolling' – is a constant threat, indeed disruptive behaviour may even become the norm. And even where each member of a group has the best intentions, the group dynamics can become unmanageable once too many people are all trying to have their say. As Howard Rheingold puts it, the discussions held by very large groups can suffer from 'the opposite of the free-rider problem', where *nobody* is prepared to sit back and opt out of the collective venture, the result being a free-ranging cacophony.[38]

Most commonly, a discussion wanders away from its original focus, each individual seemingly complicit and with little way of steering the conversation back. Figure 2 displays an online discussion of social software, organised by the social software Alliance during the O'Reilly Emerging Technology Conference 2003. The contributors to this debate are all people with a sincere interest in the topic, and a desire to see social software work successfully; but even here, they find themselves at cross-purposes, while one is jokingly adopting a false identity.

Figure 2: Online discussion of social software during Etcon 2003[39]

(15:39)	User Kevin_Mark enters the room Lounge.
(15:39)	User billGates enters the room Lounge.
(15:39)	<BryanFE> (mozilla equivalent of hand-raise here).
(15:39)	<Liz> need a place to find out what others are doing, be collaborative rather than working at cross-purposes.
(15:39)	<hylton> hi bill.
(15:39)	<billGates> identity is important ;-)
(15:39)	<jshellen> hi Bill.
(15:39)	<marccanter> howdy bill - how´s melanie?
(15:39)	User ClayShirky enters the room Lounge.
(15:39)	<Stowe> standards for file transfer too, for example.
(15:39)	<Liz> Identity is important in some contexts. Not all.
(15:40)	<ClayShirky> did we decide what isn´t Social Software?
(15:40)	<jess> no.

Email can suffer from equivalent problems. Firstly, using email to coordinate extremely large groups in a social way (that is, rather than as a publishing mechanism) is difficult, and creates a false sense

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of community that may be worse than no community. Robert Putnam uses the good example of governmental use of email, arguing that 'The ability to send a message to president@whitehouse.gov can give the illusion of much more access, participation and social proximity than is actually available.'[40] Secondly, even where a group has a reasonable size limitation, there remains the risk that any individual could hijack the group for some ulterior purpose. This may mean benignly veering way off topic, or malignly trolling, but either way leading the group to become redundant. And finally – and most notoriously – email's legitimate publishing function constantly teeters on the edge of an intrusion into privacy, namely spam. Representing an estimated 40% of all emails sent, spam is so widespread and so annoying, it has perhaps done more than anything to damage trust on the internet.[41] The problem is that the internet itself lacks a clear-cut boundary between legitimate publishing (eg, newspaper articles) and the public drone of the spammers (eg, lose weight fast!), but this acts as a constant threat to the integrity of email as a piece of social software.[42]

This analysis demonstrates that quantity of connections is important, but not at the expense of an element of network closure. In certain circumstances, an online group may be feasible with a specific topic of debate which not only interests a very small number of people, but interests them sufficiently that the conversation retains this focus. If, for instance, a website is dedicated to some very obscure historical figure, maybe as few as 20 people around the world would have any interest whatsoever in this person. A group email discussion could be established, which would be small enough not to become unwieldy, and probably secret enough not to become victim to trolling or spam. This is a genuine, if limited, achievement of social software, spreading information between strangers, and creating a shared identity between people who otherwise thought they were alone in their interest. But we know how rare such groups are – imagine setting up a discussion forum dedicated to American foreign policy that was open to anybody. The group would be too large and chaos would ensue. Filters would be required.

In certain circumstances, an online group may be feasible with a specific topic of debate which not only interests a very small number of people, but interests them sufficiently that the conversation retains this focus.

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Raising barriers to entry: filtering members

Social software developers now recognise a number of things – that total anonymity is not necessarily the best condition for online interaction; that non-verbal communication is an important element in social behaviour; that forms of moderation are necessary. But perhaps their most important realisation has been to recognise what Clay Shirky, a prominent American commentator in this field, calls the difference between a 'community' and an 'audience', namely that 'communities have strong upper limits on size, while audiences can grow arbitrarily large.'[43] More primitive online social forums failed to recognise this distinction, meaning that a lot of groups were effectively audiences trying to behave like communities, and suffered from being excessively large. The ability to prevent this through cutting down networks in size, and cutting down the quantity of information – in short, filtering – is one of the most important functions of social software.

Cutting down the quantity of information – in short, filtering – is one of the most important functions of social software.

'Filtering' can either mean the filtering of people or the filtering of information. Filtering people means reducing an online group in size by excluding the majority of web users, while filtering information means creating ways of cherry-picking the best information on the web. The two are closely entwined, and very often the former exists for the purposes of the latter. Take Haddock for instance, an exclusive group of 50 or 60 new media professionals working in Europe and the US. The group is coordinated via an email list, and when a link is sent to the list the coordinator then posts it on the central Haddock website where anyone can see it.[44] The group is fixed in size, and as a network it is highly exclusive, but this exclusivity means that it is a useful filter of information. As far as any web user is concerned, Haddock acts as an excellent type of 'recommender system', a manageable way of discovering interesting new sites. But the reason it achieves this is that it is immune to trolling, spamming, the free-rider problem, and the 'opposite of the free-rider problem', and this is because it is a small closed network.

Just as we saw when discussing how social capital functions amongst any small network, the critical aspect of small online groups is that they allow reputations to be formed. In a group of 1,000 people meeting haphazardly, nearly everyone will be strangers to one another. They will be unlikely to remember one another from one interaction to the next and will have no reputations in one another's eyes. But smaller groups are either formed around existing reputations (as with Haddock) or create the basis for future reputations to be formed. Recognition of each others' personalities and the

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ability to trust each other only become possible in an online environment if users know how other users have behaved in the past. As Rheingold puts it, 'reputation marks the spot where technology and cooperation converge.'[45] This is one of the chief reasons why the size of a social network matters. The question is how to reduce networks in size.

Closed networks

One option is to deliberately, and somewhat arbitrarily, close off online groups by making them invitation only, or introducing tight application procedures. This is effectively what Haddock does, although the difference is that Haddock's members have an offline affiliation. They have reputations formed through real-world behaviour (in this case, they all work in new media), rather than simply through online behaviour. As a piece of social software, Haddock is not significantly different from a network of friends sending round group emails. It only becomes a public issue because it acts as a useful source of recommendations for non-affiliates.

But where clubs are set up purely on the web, so that strangers from around the world can band together in an exclusive network, any broader social benefits may become diminished. Sites like Howard Rheingold's 'Brainstorms' Clubs' is an online discussion where prospective members must either wait to be invited personally or appeal to Rheingold to let them join, and declares that it currently has 'a few hundred members' [46] The purpose – namely filtering – is understandable, but non-members are offered no explanation of why or how they may join, and nor do they get to read the content of discussions between members.

Similar traits are displayed by organisations like Senseworldwide or General Thinking. These are fairly exclusive global networks of self-employed knowledge workers and entrepreneurs who use the internet to collaborate on projects.[47] The members of the network need not know one another, but reputation is ensured by the organiser of the network, in the sense that only fairly likeminded people are invited to join. Members of these associations would be able to email other members around the world as complete strangers, but knowing that they have a reputation by virtue of having been admitted to the network. This sort of online club may not be technologically sophisticated or politically progressive, but is a remarkably effective means of organising an online group. Where the group aims for a few hundred members, as these do, this tack is an effective one.

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Semi-closed networks

Online social networks needn't be fully closed. If we remember, Putnam argued that 'casualness' was both the attraction of online interaction, and its greatest limitation. If someone can enter an online group at the click of a mouse, trolling becomes that much easier and more tempting, especially since they can quite easily go and find another group to enter tomorrow. What's required is to make it slightly less easy to join the club, that is, to create an element of closure around a network. Haddock is effectively impossible for me to join while Brainstorms is very hard to join. But sites like Metafilter or The WELL are open to me, just not with the greatest possible convenience.[48]

> Anonymity in a digital environment is more risky than in a face-to-face environment.

The WELL was established in 1985 in San Francisco, and remains perhaps the most famous example of an online community.[49] Hippy libertarianism and niche geek interests converge in the various 'conferences' it hosts. Membership is open, but its principle is that users may not remain anonymous, plus a relatively small fee ($10-$15) is charged to cover its costs. Someone could not descend on a conference and disrupt it anonymously or cheaply. Metafilter, meanwhile, is a weblog where anyone can post interesting links and stories, and comment upon them, but it does insist that new members cannot contribute immediately. Occasionally it may even choose to temporarily stem the influx of members when it becomes too popular. These are practices used by Casinos (new members only gain entry 24 hours after having signed up) for similar purposes: they do not seek to know very much about the member's reputation, other than to ensure that they're not looking for somewhere to come and mess around on a whim. The exclusivity of The WELL or Metafilter is not great, partly because they want to receive the advantages of a large membership network, but total openness is prevented.

Reputations

Reducing the size of online networks is done primarily to make reputations and trust possible. Either, with a site like Haddock, pre-existing reputation is the criterion for entry to the network, or, with a site like Brainstorms, the network is maintained at a certain size so that members can develop knowledge of one another over time, recognise the coherent identities of other users over time, and grow to trust them. But social software can enhance the quest for trust and reputation by adding artificial mechanisms to enhance identity and reputation formation.

One factor in the effort to build online reputations is how to create online identities that can be carried around, so that ID-switching or ID-theft is not possible, and anonymity less of a threat

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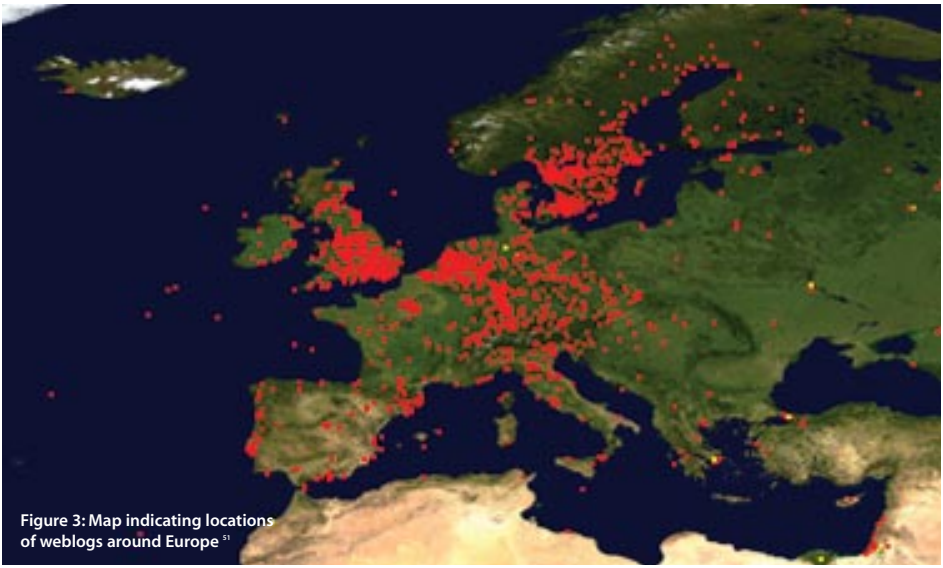

Figure 3: Map indicating locations of weblogs around Europe [51]

to a group. Anonymity in a digital environment is more risky than in a face-to-face environment, because in the latter one can pick up a lot of extra information about someone, beyond merely what they've said or done. If someone harms me in some way without telling me who they are, I can still be fairly confident that I can *identify* them. In an online environment, I can't, because I am unable to link their user name to a real name, nor can I be sure that they will return under the same user name. Tackling this is the purpose of building 'Digital Identity' software, certificates of a user identity that can be used in a range of scenarios, thus carrying the identity between different online interactions.[50]

But online conventions of social software also act to tackle the problem. Weblogs (blogs) are a particularly good example of how social software users can set about developing an online identity and reputation.[52] A blog is a publishing system that creates an online journal, with inbuilt software that makes it easy for the owner to update and to include links, plus enables viewers to add comments. Much of the success of blogging lies in the ease with which the software can be used – people can have their own online journal without knowing any code at all.

The blog appears in a diary format, and bloggers tend to interweave stories and links of

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general interest with more personal information. Bloggers build an online identity through discussing their own private interests, such as their favourite music, their local culture or their pets, and will often include photos. Much of blogging protocol exists to combat the anonymity of virtual community. Figure 3, for instance, is an image formed through a piece of software that enables bloggers to post their geographical location, so that they can discover other blogs near to them.

Beyond this, a blogger will then carry their identity to other media and forums, and other blogs in particular. For instance, their comments will appear on someone else's blog, usually with their email address and the URL of their own blog. This way, two separate bloggers can slowly develop a relationship if they have shared interests, often manifested by setting up permanent links to one another's blogs. This connection may be an international relationship between strangers, or it may be an add-on to an existing friendship. Finally bloggers can be emailed through their sites, and convention dictates that they will reply. Doubts about the veracity of a blogger's identity slowly diminish the more times and the more places their name, photo and comments appear.

The criticism frequently made of blogging culture is that it endorses people publishing views and information which are of no public significance. One American media expert is quoted as saying 'Bloggers are navel-gazers… there's an overfascination with self-expression, with opinion. This is opinion without expertise, without resources, without reporting.'[53] But the purpose of blogging conventions is to create enduring identity and reputation.

Perhaps the ultimate mechanism for reputation formation is, as the name suggests, a reputation system. These software systems allow individuals to rate the behaviour of one another, so that over time each member of a group develops a score of some sort, reflecting how well they are perceived to have acted in the past. Reputation is slowly developed, and as a result each individual has a strong incentive to try and impress other members. Companies can use this software in order to incentivise staff to share their best ideas, as Siemens have done between their frontline staff around the world with a system called ShareNet.[54] Staff who may never have met get the opportunity to rate one another by how useful they have been as a source of advice in the past. Or a site like Amazon now has a reputation system, whereby users can rate the usefulness of reviews to incentivise high quality reviews.[55] On top of creating positive incentives for responsible behaviour, these systems may then go a step further and create a smaller elite group for those with the best reputations.

The most famous, and arguably most successful, example of a reputation system at work is that of the online auction site, eBay.[56] Users bid for one another's items online, and must then complete the transaction on the basis that a complete stranger will keep their side of

Expanding and filtering: size matters

the bargain. Newcomers have no reputation, and may find it slightly harder to find people willing to trade with them. But over time, each honest transaction will bring the user a higher and higher rating from others, until they begin to look highly trustworthy. As the American social capital theorist, Paul Resnick puts it, 'reputation systems seek to restore the shadow of the future to each transaction by creating an expectation that other people will look back on it'.[57] The remarkably high levels of honesty witnessed (eBay estimates that 99.99% of its transactions are carried out without fraud), are partially attributable to the efficacy of the reputation system. Free-riders are not automatically banned from eBay, but their reputation will ensure that they will struggle to find anyone willing to trade with them.

eBay does not go the extra yard of developing exclusivity around an elite, but functions primarily to publicise bad reputation, that is, to exclude a small minority. Paul Resnick has conducted a close analysis of eBay and finds that it displays 'Pollyanna Effects', whereby members' feedback is almost entirely positive, although it remains impossible to say whether this is because people are decent or because the less decent people do not get rated as much.[58] It remains questionable whether eBay is an example of social software – it does not create groups or discussions as such, but just provides a vast space in which to trade. It certainly achieves trust, but that is only one element in social capital. Given that its function is that of a market – to distribute goods amongst a vast number of strangers – it is no surprise that it has very little network closure, although occasionally cliques of users will trade amongst each other to develop reputation further. But in the main, and unlike most forms of social software, eBay actually benefits as its network of members grows in size.

A more interesting example of a reputation system, from our point of view, is Slashdot, the notorious geek discussion site.[59] On Slashdot, users post up stories, links and opinions which they believe will interest and impress the rest of the hacker community – in this, it is like many other discussion forums. But a sophisticated reputation system aims to ensure that only the highest quality contributions get the highest prominence on the site it onto the front pages of the site, out of the 50,000 comments that are held in total. Contributions are rated by registered readers, and by a limited number of editors. These ratings then

It remains questionable whether eBay is an example of social software – it does not create groups or discussions as such, but just provides a vast space in which to trade. It certainly achieves trust, but that is only one element in social capital.

Expanding and filtering: size matters

accumulate over time to create different 'Karma' levels for various contributors, which determines how likely those contributors will be to get their comments high up on the site. Entering the discussion is voluntary, but only a select number of comments will get read, and often these will be those by the same few highly respected contributors. In such an environment, the technology of reputation exists less to create trust, and more in order to improve the quality of debate. A variety of mechanisms are used to achieve a discussion free from disruptive contributions, and dominated by views (and view-holders) most likely to interest the majority of Slashdot readers.

↓

Size matters… a bit

Both online and offline, differently sized social networks achieve different outcomes. Reputation formation requires that groups are not entirely open, and that there are mechanisms and conventions to be able to trace the sustained identities of people. With hundreds or thousands of contributors, or where ID-switching is prevalent, no form of recognition is possible. A larger network of several hundred people can be a useful resource for members, if they have some reason to believe that the other members have been carefully vetted, as the 'online club' model aspires to do. If, on the other hand, the network benefits from being as large as possible – as with a market – then the purpose of the software is to make trust possible between strangers in one-off and repeat interactions, and filtration is not really the point.

Why does size matter? Issues like trolling, spam, irrelevant contributions, or excessive volume of contributions are all problems associated with getting network size wrong, and have direct parallels in real world group behaviour. They are forms of free-rider behaviour, or, in the case of excessive volume, the opposite of free-rider behaviour. It is certainly the case that an email discussion between only ten people would be unlikely to suffer from trolling – the incentives to strengthen the group are sufficiently high when the group is at this size. Equally, a member of an online club would be foolish to start sending out spam, as their reputation would suffer and they may be blacklisted. These examples are no different from pointing out that villages suffer from less litter than cities: villagers are no more morally decent, its just that, as members of a smaller network, they have more effective reputation mechanisms (gossip) and stronger incentives to act in the collective interest. Network size matters inasmuch as it aligns individual interests with collective interests.

We all know that this is not the end of the matter. We know that discussions on Slashdot are not quite the same as discussions down the pub, that we don't trust people on eBay in the same way as we trust an equally unknown shopkeeper, that jokes are not quite the same in an online environment. And this is because of something which goes beyond sheer size, namely the cultural basis for collective behaviour.

Chapter 4
Finding the right language: medium matters

A key challenge for knowledge-based organisations is how to convert tacit communication into codified knowledge. Meanwhile, the integration of the internet into our everyday lives can only succeed through software that enables us to communicate instinctively, that is on a tacit level. Bridging the divide between online and offline social interaction requires software that can facilitate the transition between codified and tacit knowledge, and vice versa.

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Certain forms of collaborative behaviour via computer networks have always been possible. Open source software development or scientific projects achieve remarkable results, with strangers interacting from around the world. The All Species Foundation, for instance, has recently established an open source network model of taxonomy, so that taxonomists around the world can work together on classifying species in the rush to identify them before they go extinct.[60] The mapping of the human genome was also undertaken via an open source model. What marks out these success stories is that they are joint projects in pursuit of codified knowledge. Contributions are pretty much either right or wrong.

Cultural communication is far broader than simply what we say to one another, requiring interpretation of a variety of symbols and actions.

In our everyday lives, the majority of things can not be so easily classified. We like certain people instinctively, develop trust with others over time, form judgements on people on the basis of their clothes. None of this is 'right' or 'wrong', it is lodged in our tacit social and cultural knowledge. Cultural communication is far broader than simply what we say to one another, requiring interpretation of a variety of symbols and actions. This is what face-to-face communication captures which computer-mediated communication misses, something tacit that goes beyond what is explicitly stated.

Social software cannot ignore the crucial distinction between two types of communication. It must recognise the fundamental differences between face-to-face communication and computer-mediated communication, and consider how the two may inter-mesh. How, for instance, might we best *switch* between offline and online contact? Here we classify two ways in which social software can recognise its own position vis a vis everyday, face-to-face contact. It can attempt to replicate face-to-face contact or it can build on existing face-to-face contact.

↓ Replicating face-to-face contact

What online social networks require is the ability to communicate in non-literal ways. Non-linguistic forms of communication, and common recognition of tacit knowledge and the 'social environment' are important *pre*conditions of meaningful interaction. Philosophers such as Martin Heidegger and Hans-Georg Gadamer argue that people are 'always already' in social situations, meaning that when we talk to one another we are already making assumptions about the world and are respective statuses in it. A pre-existing social environment predetermines the type of conversation that any two people are capable of having, even where they are complete strangers to one another. If I encounter someone in some entirely open chat room, we

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already have certain shared assumptions about our common situation but they are very basic ones. We know that this is a chat room, we are fairly sure that other users are people and not robots, we know that we don't know much about one another, we know that we're all using computers, and so on.

The problem with such a situation is that the social environment created has a very general cultural character, which offers little specific group identity. The members of the group don't have very much in common beyond the fact that they are internet users. So while they may be able to discuss the Qwerty keyboard which they're all touching, or the nature of Microsoft Windows that many of them are using, or perhaps global events which they may be all aware of, it is hard to develop much collective identity beyond this. The freakish social behaviour that results – ID-switching, obscene contributions, political extremism – is simply one reflection of the fact that there are no specific social norms at play or particular tacit knowledge being developed. This is the familiar problem with social software at its simplest.

But the opposite of anarchic behaviour can also result. On a site like Slashdot, the lack of a shared social environment (beyond being 'on the net') is compensated for by creating a shared world out of opinions, i.e. a strong homogeneity of viewpoints. Even many Slashdot devotees would agree with Putnam's view, that 'real world interactions often force us to deal with diversity, whereas the virtual world may be more homogeneous, not in demographic terms but in terms of interest and outlook'.[61] Opinion-based debate – especially political discussion – is bizarrely difficult to facilitate successfully using social software, a source of frustration considering the optimism for a new civic engagement that the web once engendered.[62]

Opinion-based debate – especially political discussion – is bizarrely difficult to facilitate successfully using social software, a source of frustration considering the optimism for a new civic engagement that the web once engendered.

The problem is, for something like Slashdot, that users are not 'always already' *anything,* they're not neighbours, they needn't be computer programmers, they do not share any set of cultural norms. They are just unrestricted voices in search of similar opinions. In real world interactions, and real world politics, people are thrown together into a shared environment, creating a common cultural starting point from where differences of opinion can emerge. Radical disagreements may be possible in politics, but only on the basis that there is already a shared society, and sets of norms shaping the conversation. Without some shared terms of conversation, people would not be capable of remotely meaningful communication in the first

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place, not even disagreement.[63] In an online environment, a shared world must be constructed out of the users' opinions. The web creates excessive freedom to associate, allowing individuals to seek the group identity they choose, without being shackled to the past, beyond the recognition acquired from a reputation system. The liberal utopia of being a voice only, without gender, race, or culture, can lead social groups to splinter into cliques of like-minded people. James Madison's comment on the embryonic USA 'liberty is to faction what air is to fire' is astonishingly prescient with regards to the web.[64]

The liberal utopia of being a voice only, without gender, race, or culture, can lead social groups to splinter into cliques of like-minded people.

Perhaps, then, online groups require the same solution as Madison helped create for the United States: constitutions. This is exactly what Clay Shirky has argued.[65] He uses examples that I've already explored, such as Slashdot's complicated reputation system and Metafilter's self-regulation. Shirky accepts that these are relatively primitive means of regulating groups, but sees this as the model that must be pursued further. Rather than hope that groups will start to form and organise themselves autonomously, assuming they can communicate on a sufficiently subtle level, Shirky's argument is that more elaborate mechanisms for controlling online conduct must be developed. Just as constitutional government makes diversity possible but within the bounds of the same society, preventing either faction or anarchy, social software should do the same for online groups. The striking short-coming of the analogy (as an analogy, rather than as an idea in itself) is that a real political constitution organises people who have little choice but to live together. Although the United States may still understand itself as a place one travels to voluntarily, constitutional government is usually a response to the fact that we can't decide what nationality we want to be, and that we can't decide which fellow citizens we wish to live alongside. In the main, we are 'always already' in a polity; the same is not true of Slashdot, where people come of their own accord, and can leave as soon as they become bored or dissatisfied.

Clearly online interaction does not completely capture or accurately simulate face-to-face interaction. But social software can try to replicate the everyday world by constructing more sophisticated social environments.[67] Chat Circles, depicted in Figure 4, is just such an attempt. This is a programme developed by Fernanda Viegas at MIT's Sociable Media Group. In it, users appear on the screen as circles which bubble up with each comment, and can be dragged around the window towards different visual focal points that are put there to create some sense of place for users to

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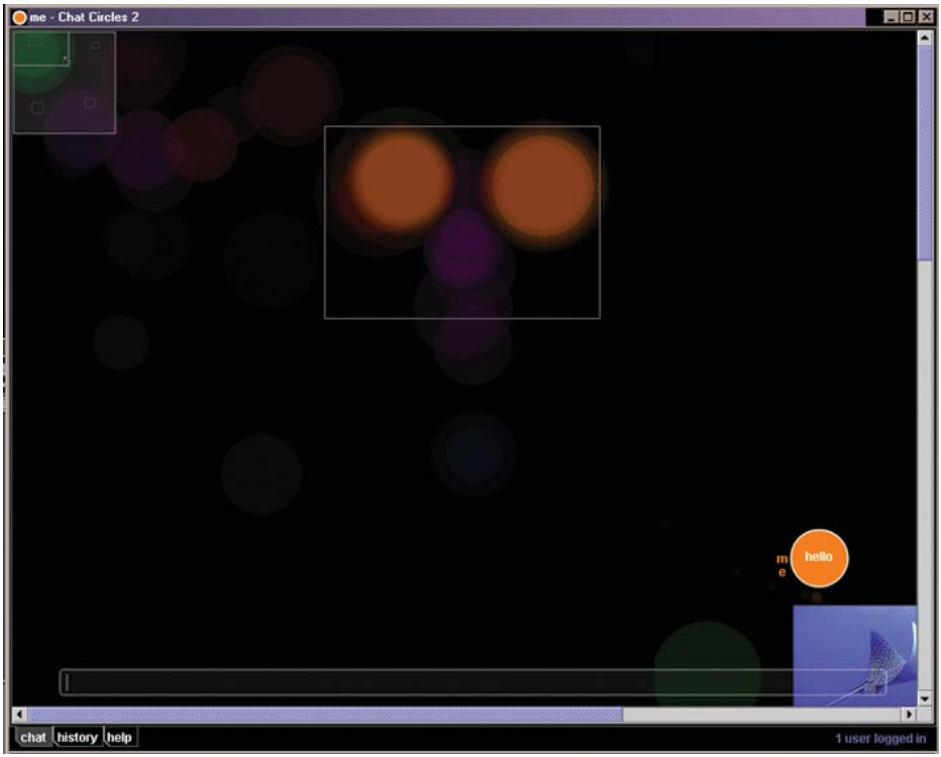

Figure 4: Chat Circles[66]

chat, rather as water coolers do in offices.[68] The window around which users move is far bigger than the size of a computer's screen, and therefore what users can see at any one time, so potentially I could drag my circle into some far corner of the window, and encounter a user who I didn't know was there. We could then have a private conversation, until another user happened to 'wander by'. The analogy would be to something like a house party, containing a number of rooms. People wander into a certain room, bump into someone and already the furniture and wallpaper provide a shared social environment which not everyone at the party is sharing in. These are ways of making the codified more tacit. Now let's consider how the tacit can be more codified.

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↓ Building on face-to-face contact

Our everyday social lives will not be completely grasped by social software, where the latter tries to replicate it. But where the social software is simply a tool to be used as part of our everyday lives, its success in aiding collaborative behaviour can be far more profound. Email and messenger systems, such as MSN Instant Messenger or ICQ, have swept Britain to help us share knowledge, make social arrangements, and cooperate online. The key differences between email and messenger systems are, one, that the latter is designed for simultaneous, real-time interaction (whereas emails can be picked up at a time of the recipient's choosing), and two, that users can only exchange instant messages if they have already granted one another permission to. Messenger systems are specifically designed to be used between friends and acquaintances. Notwithstanding these differences, there are three points to be made in respect of both these systems.

Email and messenger systems, such as MSN Instant Messenger or ICQ, have swept Britain to help us share knowledge, make social arrangements, and cooperate online.

Firstly, they benefit from being used in small groups. Email can be used for one-to-one, one-to-many or many-to-many forms of communication, although, as discussed in chapter 3, the latter can be unmanageable. Meanwhile, messenger systems do not really sustain large groups at all, as they operate in real time and chaos ensues if dozens of voices are all trying to be heard. As forms of social software, these applications are most effective for one-to-one or few-to-few communication. But the problem of group size is not normally a relevant one for email use, and even less so for messenger use, because the group has an offline social identity. It has selected itself prior to the involvement of social software, making all of the familiar problems (trolling, spam, cacophony) disappear. As discussed previously, the network benefits from an element of closure.

Secondly, these applications are developing opportunities for ever richer communication, with a stronger tacit dimension. The challenge of creating greater cultural intimacy is tackled by this sort of software in a couple of ways. Firstly, there is a broadening range of symbols available to users. At the simplest level 'emoticons' are used in email and messenger systems to create the most basic of non-verbal communication.[69] But the potential for more elaborate forms of non-verbal communication is vast, as witnessed in Microsoft's forthcoming messenger system, 3 Degrees, which integrates music and images to create a sort of online party for friends.[70] For instance, when new users 'arrive' they can bring their music with them, and they take

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it away when they leave. Secondly, the greater the diversity and integration of social software, and the more ways friends have of staying in touch with one another, the less their relationship seems to be defined by a given medium, and the more it is allowed to develop its own distinct character. When communicating with friends, however, constant switching between email, messaging systems and telephones means that the medium is not allowed to become the message. Links, photos and stories can be sent around and discussed via a number of media, all constant reminders of the people behind them, not the technology transporting them.

There's little difficulty in allowing the online group to develop its own unique cultural identity – it has one before the software is even used. Something like 3 Degrees takes this group, and gives it a range of online tools in which users can carry offline social norms into their online environment. Friends already have their own code of communication – all it takes is a little adaptation of the new tools for these existing norms and well known personae to translate into an online environment. But this leads to a third point: much of the responsibility for enriching computer-mediated communication rests with the ingenuity of users. An element of adaptation is required if a group's existing social norms are to be carried over to an online environment. At the simplest level, anecdotes, in-jokes, or shared secrets can be referred to in an online environment to make it richer, and these will be carried directly over from offline, face-to-face incidents. But even very good friends may need to create *new* conventions and etiquette for this environment, if jokes are not to be taken in the wrong way, or email brevity is not to appear like rudeness.

When communicating with friends, constant switching between email, messaging systems and telephones means that the medium is not allowed to become the message.

Eventually, social software becomes so normal as to be invisible, and its not long before the most dominant rules governing users are social norms rather than technological necessities. The existing cultural rules of a social network become accompanied by a range of new ones that have emerged specifically for social software. 'The invention of convention', as iSociety terms it, is witnessed in the etiquette of email (where did 'Warm regards' suddenly surface from?) or the lay-out and contents of a home-page or weblog (for instance a link to one's favourite books on Amazon).[71] While these practices are obviously new, they exist to counter-act the disorientation and novelty of virtual community, not to revel in it. 'ICT will change the structures of everyday social life, but it will do so only through the

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invention of new traditions.' iSociety's *Reality IT* argues, 'Innovation of tradition remains the inescapable partner to the invention of new technologies.'[72]

What much of this suggests is that social software's prime function for social networks may not be, as it once appeared, overcoming distance. Instead, social software is especially valuable when used between people who meet regularly anyway. As one social study of the internet in Britain concluded, 'people are not doing anything particularly new, they are doing old things in new ways and finding that some of the those new ways suit their lifestyles better'[73] And rather than benefit these people by enabling them to overcome spatial obstacles, social software benefits them through overcoming temporal obstacles. Communicating via email creates asynchronous conversations. A face-to-face conversation must occur not only in the same place, but at the same time, while a telephone or messenger conversation must occur only at the same time. But an ongoing email discussion enables individuals to contribute at a time which suits them, making it more likely that they will contribute. Organising a petition, or an amateur sports club is made far easier through asynchronous communication. People can shift much of their involvement to a time that suits them. In addition, where mobile technology is in use, the user has even greater freedom to manage their time, and get tasks done – sorting through emails while on the train is a classic instance of this.

Rather than benefit these people by enabling them to overcome spatial obstacles, social software benefits them through over-coming temporal obstacles.

Paul Resnick points out a further temporal aspect of email which makes it beneficial to social capital, namely its ability to automatically generate group histories and identities. The slow building and storing of conversations acts as a form of reputation system, maintaining the shadow of the past in future interactions. On the one hand this discourages dishonest behaviour and makes it harder in the future. Past remarks and opinions can come back to haunt people, where email is commonly used, potentially creating a rather unforgiving cultural environment. But equally, the use of email should enable groups to develop a unique body of knowledge over time, enabling their chat to be stored and to coalesce into something distinct and useful. The business challenge of converting tacit knowledge into codified knowledge, of taking rich and insightful conversations and extracting something useful and transferable, requires social software that turns complex webs of chat into a body of information. social software applications like Babble (depicted in Figure 5) have been developed for specifically this purpose, in the

Finding the right language: medium matters

hope of extracting value from the ephemera of conversations.[74] Although email already does this to a large extent, such applications are part of a wider drive to make tacit knowledge more codified within social groups and organisations.

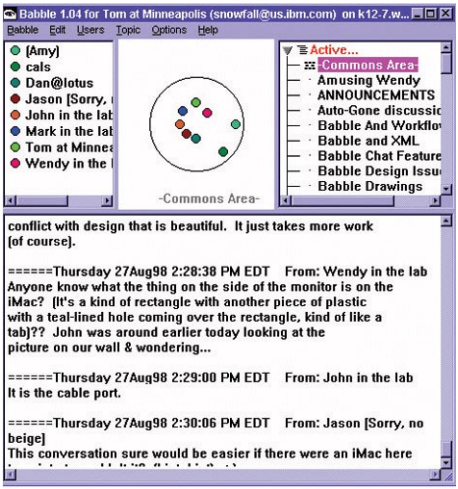

Figure 5: Babble[75]

↓ The limits of social software?

Robert Putnam poses the hypothesis that 'Social capital may turn out to be a prerequisite for, rather than a consequence of, effective computer-mediated communication'[76] A recent study of ICTs in Europe confirms this, suggesting that 'While ICTs represent a powerful opportunity to connect socially, the network and secondarily the understanding of the technology's potential have to be in place before one can conceive of adopting the technology.'[77] It seems plausible that social software is most closely integrated into our everyday social lives in the way that it connects those who already know one another. If this remains the case, then social software will not have the ability to generate social capital out of thin air, but only to preserve social networks which already exist. Even if this is the case, it's worth appreciating how social software does build on these networks, by enabling them to overcome spatial and temporal barriers to interaction, while also codifying discussions more.

But speculation will continue over whether social software could do more. It will never rival face-to-face interaction for subtlety and cultural richness, but is that necessarily the end of the story? If there were occasions in our everyday social lives when exchanges of codified knowledge were more effective than tacit knowledge at generating social capital, then social software may yet have a role to play in creating new connections. Certainly, people will not forge social relationships with strangers simply because they can. And certainly, the vast majority of our social relationships are heavily dependent on the tacit dimension which face-to-face contact affords. But there remains the possibility that social networks occasionally fail us because we lack a suitably codified means of communication.

Chapter 5
The future: saving social capital from itself?

The issue of whether social software can generate social capital out of thin air, by connecting strangers to one another, provokes heated debate.[78] An obsession with exceptions-which-prove-the-rule, such as people who got married after meeting in a chat room, or paedophiles trying to befriend children through the internet in order to then meet them, has led to hysterical claims made both for and against social software's impact on the outside world.

The future: saving social capital from itself?

What is misunderstood about the possibilities for building social capital through social software is that the latter cannot and will not replicate or replace face-to-face relationships. To say that social software can be integrated into our everyday social lives is entirely different from saying that social software can recreate our everyday social lives, or replace them. The potential benefits of social software to social capital lie in the ability of the former to create social networks which we all want, but for some reason find difficult to create. What types of social capital do we currently fail to generate, left to our own devices?

The answer lies in understanding the social uses of codified knowledge. By its very nature, codified knowledge has broader cultural reach than more subtle and tacit types of communication. Scientific languages or computer code create types of communication which lack rich cultural content, but are designed to be broadly understood. Their formal, codified nature exists precisely to enable them to cross cultural divides. Mathematical formulae, for instance, would be of little use if they were culturally local. The same is true of something like a monetary currency – it exists to make cooperation possible between strangers.

And so to give up on the possibilities that social software holds for social capital formation would be drastically to under-estimate how valuable it can be for people to interact in a structured, formal fashion. Occasionally culture or tacit knowledge gets in the way of the expansion of social networks, or of the flow of valuable information. We need to look beyond the richness and cultural specificity of communities, and ask how codified language might produce more open, transparent and cosmopolitan types of social networks that might otherwise be impossible. I outline three areas where this trend exists and may continue: the creation of local social networks, the ability to introduce individuals to one another for specific reasons, and finally, the potential to create greater transparency and trust in public life.

To say that social software can be integrated into our everyday social lives is entirely different from saying that social software can recreate our everyday social lives, or replace them.

Creating local networks

A variety of policy experiments and studies have explored how it may be possible to develop local social networks using ICTs. The hypothesis is that people may be able to introduce themselves to neighbours using the technology, or at least to put names to faces. Where people live on the same street, or on the same estate, they will probably recognise one another anyway – to many people this is quite enough. But for

The future: saving social capital from itself?

those in search of more substantial levels of contact, community projects like email lists or residential websites may create more contact amongst neighbours. Something like Paul Resnick's 'Who's That?' experiment aims to investigate precisely this, studying how the use of local email lists creates larger numbers of social connections than a traditional mail out.[79] Yet such a project does have to assume that some offline connections are already in existence as the kernel from which stronger community can be developed. Not least it requires a coordinator to go around collecting names and email addresses.

If coordinators can be found, and neighbourhoods are fairly small or tightly bounded, the potential benefits that something like an email list brings to neighbourhoods are enticing. Barry Wellman and Keith Hampton's landmark study of Netville, a suburb of Toronto, confirmed the modest but significant increase in local connections that was achieved through a fully integrated broadband network.[80] Deprived communities may have something to gain here. In the UK, Edenfaster in Cumbria will aim to create opportunities for residents by laying down a universal broadband network, while Tenantspin, an online TV station for Liverpool housing estates, aims to build social capital with the addition of a crucial visual dimension.

What most social capital and social software commentators seem to be agreed on is that the technology can not conjure thriving community out of thin air.

The jury remains out on what the social policy implications of social software are. Extreme optimism and extreme pessimism are probably equally misguided. What most social capital and social software commentators seem to be agreed on is that the technology cannot conjure a thriving community out of thin air. If there is no desire for greater social capital, people are not suddenly going to start communicating with their neighbours simply because it has become easier. Knowing one's neighbours and meeting them face-to-face may be desirable if one has something in common with them, that is, if there is some sort of local culture, or some clear shared interest in knowing one another. Retired people may wish to live near other retired people, because their neighbourhood is a more important social resource for them – they don't have workplaces in which to be with other people.

Local areas may or may not have their own cultural identity. Social software is relatively powerless to affect this in any strong sense, but we shouldn't forget the importance of much more minimal social networks. People may not really know their neighbours, or identify with them, but they may benefit from a very weak shared understanding. Face-to-face contact invariably

The future: saving social capital from itself?

occurs, but not especially deliberately. We recognise the same people at the bus-stop, we say 'good morning' to the local newspaper vendor, and get to know the routines of people in our street. None of this means we have anything much in common with these people, or that we necessarily like them very much, but whether we like it or not, we have shared interests with them. Basic norms of reciprocity would hopefully ensure that we look out for one another's property for instance. As discussed in chapter 2, our ability to trust neighbours is not a cultural phenomenon, but a calculative one, that is, the fact that we have sufficient mutual incentives to act collectively.

This stripped down, rather acultural form of social capital requires only that information is effectively circulated. We know that social software is more suited to distributing codified knowledge than tacit knowledge, but the former may be all that communities actually *want or need* to distribute. This is surely the premise of the web site Upmystreet. The site allows users to type in their postcodes, and then provides them with specific local information on things like transport services, political representatives and a demographic breakdown of their area, while its Conversations pages allow users to strike up online debates with people from the same area.[81] The role assumed by Upmystreet is relatively unambitious – it does not strive for anything much more utopian than supplying a one-stop local information base. People use the Conversations to seek out opinions and local knowledge on things like housing and crime, rather than to recreate 1950s-style bunting-infested street parties. In fact, while locality is the central theme, what marks it out is that face-to-face contact is neither a necessary input nor particularly desired output from the whole scheme.

To reiterate, we have to consider why computer-mediated communication might be more effective than face-to-face communication. Local neighbourhoods and people will benefit from more local knowledge, and yet for some reason we often don't feel able to approach a crowd of people in a pub and ask them if they can recommend a good car mechanic, hence Upmystreet's value. The initial, quite limited introduction to the details of one's neighbourhood then makes it easier to go and get further involved, even if this just means striking up a relationship with a car mechanic. The nature of local involvement may be very meagre indeed, but that

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The future: saving social capital from itself?

doesn't mean that people don't benefit from having greater local knowledge. We should be able to accept this, and recognise that sites like Upmystreet can benefit us, without having to go as far as saying that social software will do anything as dramatic as transform communities, resuscitate democracy or create rich networks of local friendships. Social capital is generally much more banal than that.

↓ Introducer systems

The transition from online contact to subsequent offline contact is also the specific objective of a range of introducer systems. These are software applications which enable you to introduce yourself to people you wouldn't otherwise meet, to chat with them, find out about them and then

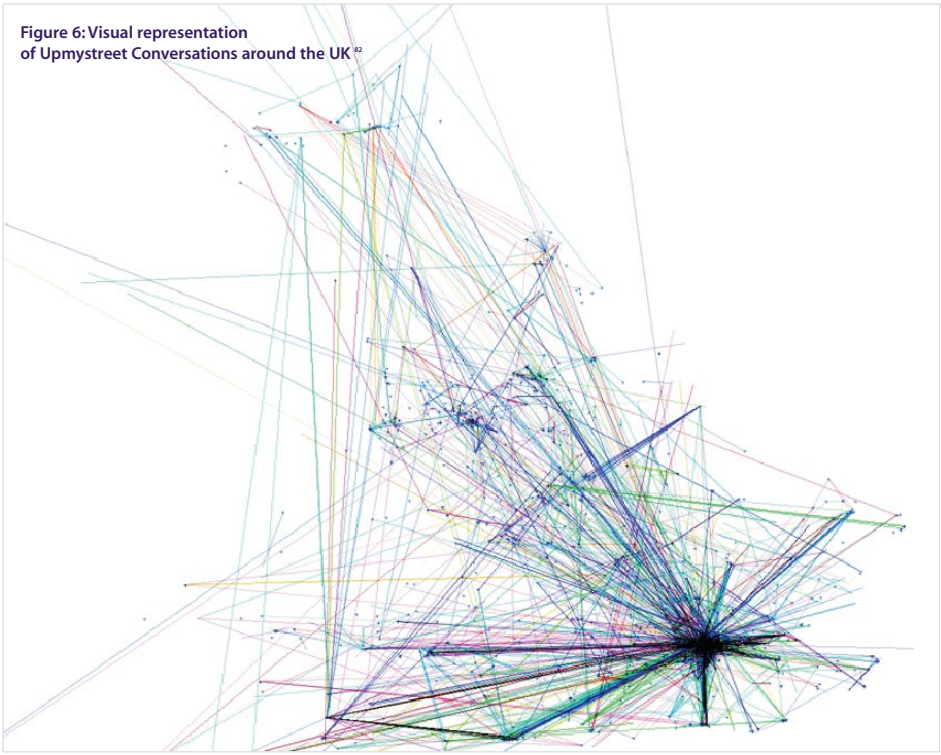

Figure 6: Visual representation of Upmystreet Conversations around the UK [#2]

The future: saving social capital from itself?

have the chance to meet them if you wish. The most obvious example would be a dating site, but the model is also used to create business networks, or people seeking to meet others simply to discuss topics of common interest, or make friends. Unlike an online discussion like Slashdot, then, the success of an introducer system is not witnessed in the type of online interaction it achieves, but the quality of face-to-face interaction it leads to. The issue of an online social environment is not so relevant, since the aim of the online discussion is to move beyond the online environment, and to meet face-to-face somewhere.

But why would anyone want to initiate social connections via social software? Online groups are no substitute for offline groups, it is not as if we could wander into an online discussion and get on with someone so well that we could suddenly deem ourselves friends as such. The cases where social software may be a good way of meeting people for the first time are fairly rare, but perhaps we can understand them as follows. As we have seen, social networks generally create social capital value through being relatively small and culturally specific, with tacit knowledge playing a key role in the fostering of trust and mutual support. They have informal rules of conduct that are embedded in very subtle social norms, gestures and euphemisms. But although all of these features of face-to-face social contact are a source of identity and value, they may equally become a source of unease and frustration. The very informality and subtlety of communication may become stifling and inconvenient, producing social networks which are closed to newcomers, stagnant and too exclusive in the eyes of both insiders and outsiders.

Broadening social networks requires formal rules. An international online social network can integrate all-comers where it has a highly codified language, as occurs with an open source scientific project. A highly cosmopolitan city like New York integrates all-comers principally through the bridging language of dollars and cents. As Richard Sennett illuminates in *The Fall of Public Man,* formal etiquette is a crucial precondition of cosmopolitanism, and yet a burgeoning culture of intimacy is leading people to turn inwards, seeking ever more meaning from emotional relationships and psychological phenomena.[83] Social networks have a self-destructive trait – as relationships are expected to become ever richer and more meaningful, so it becomes harder to strike them up in the first place. In a culture of intimacy, talking to a stranger is deemed weird, to the point where forming relationships becomes nigh impossible.

Social networks have a self-destructive trait – as relationships are expected to become ever richer and more meaningful, so it becomes harder to strike them up in the first place.

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Social software, on the other hand, produces interaction which is relatively codified, with low barriers to entry for newcomers, and few cultural norms at work. An open source project asks no questions of the cultural identity of contributors, and requires no tacit understanding or any complex symbolic communication. The validity of contributions is fairly black and white. As Paul Resnick points out, the limited nature of what can be communicated via social software often deliver benefits: 'the suppression of certain sensory information (smell, tone of voice, facial expressions) can, in some circumstances, allow people to transcend emotional reactions that would interfere with working together'.[84] There may be instances in our day-to-day lives where we wish life could be equally simple, where we could escape our complicated, visual and informal norms of conduct. Where these instances exist, the opportunity for social software to intervene to introduce strangers to one another may also exist.

The loss of subtlety and cultural complexity is precisely what users need in order to introduce themselves.

The most successful example of a system like this is a dating site. Dating sites allow users to categorise and describe themselves so that they may then be matched to other users. The process of formal categorisation and matching is not some unfortunate derivative way of linking people, which would be ditched if only social software could be more sophisticated. The formal and mechanical aspect of this function is central to why dating sites exist: they by-pass the difficulty of face-to-face introduction. The loss of subtlety and cultural complexity is precisely what users need in order to introduce themselves, from where on they can chat informally online and then go on a date, knowing enough about one another to know that they have certain things in common.

Dating sites are one of the most astonishing dot.com success stories of recent years – sites like Udate.com and Match.com were racking up vast profits during 2002 as stock markets slumped [85] –and the reasons are not hard to discern. Our social networks are usually limited in size, and fairly informal – both are hindrances to dating. More so even than commerce, the need to meet members of the opposite sex is a fundamental reason why social networks need to expand, and why diversity has to be created. In fact, the famous anthropologist, Claude Levi Strauss went so far as to argue that the 'incest taboo' was the driving force behind the formation of culture – were it not for this taboo, human beings would have no need to ever associate on a scale larger than the family.[86] Trade may now be a more obvious cause of interconnectedness (and its perhaps no coincidence that eBay is the other notable success story of online interaction between strangers), but the need to meet prospective sexual

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partners is fundamental, and occurs in an arena where excessive informality needs to be combated.

A range of other types of introducer system exist. Email itself can act as an introducer system, so as to by-pass a face-to-face introduction or a telephone call. Where someone is absolutely sure of shared norms existing (as with friends), email does not perform any useful codifying or bridging function; but if, for instance, I need to cold-call someone in a foreign country the potential cultural obstacles involved in doing this may make it far easier for me to initially approach them with a courteous and formal email. The greater formality made available by social software in this instance, combined with it being more convenient than penning a letter, make email a very useful way of introducing oneself.

Business network sites, such as ecademy.com or ryze.com, may be attempting to do something similar.[87] But their value is less clear. If there were a widely felt need for businessmen to meet more businessmen, or that etiquette was under-developed in such encounters, then no doubt these sites would have become essential to doing business. Yet conferences do a reasonably good job of bringing people together anyway – if obstacles exist at all, they are in the process of working one's way round the conference introducing oneself, and getting away from bores without insulting them too badly. Perhaps here is where the opportunity for useful social software arises, not in the organising of the conference itself.[88]

Other examples of introducer systems exist, such as Meetup.com which introduces people to others with similar interests. Buddynetwork.com does something similar. Friendster.com and Everyonesconnected.com create a hybrid model, whereby existing social networks of friends all put up their details, together with who else they know, and they can then see who else is in their network who they do not know, but might like to. Dating may be an implicit function of all these sites, but beyond that they rely heavily on the untested hypothesis that people want a bigger social network, and that they want to escape a closed and intimate environment. Why else would people chose to meet one another via such codified channels when what they actually seek is intimacy? The only possible answer could be that they already suffer from excessive intimacy and perhaps excessive social capital. Where might *high* levels of social capital present us with problems in everyday life?

↓ Saving social capital from itself

In the above examples, social software steps in to create forms of social capital that would otherwise not be possible. The reason this can be beneficial is that social capital may often display self-destructive properties. All too often, in seeking trust, advice and a source of identity, social networks turn inwards on themselves. Psychologists have demonstrated that people often display 'homophily' in their social relations, the tendency to attract and trust others

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who appear most similar to them.[89] Homogeneity and intimacy of social networks often appears attractive to those in pursuit of trust, but actually create harm. In the examples just cited, local areas and other types of networks can suffer because people become too attached to those they know intimately. Social capital suffers from an excess of strong cultural identity.

This takes us to one final question. Can social software help create a greater legitimacy and transparency around social networks? Social capital constantly raises questions of legitimacy, as local or organisational impulses run into conflict with broader, public interests. Take recruitment procedures for instance. One study of social capital looked at how an American firm benefited from hiring new staff through existing social networks, a practice that turned out to be 67% cheaper than hiring through formal means and generally proved more effective at finding the right person.[90] The authors viewed this as evidence of the benefits of social capital, and at an organisational level they were right. But we have also to consider the broader social and political malaises that can arise once intimate and local networks become dominant, the legitimacy short-fall, for instance, of a situation where only 4% of Britain's non-executive directors are recruited via formal recruitment procedures, while half are found through personal networks.[91] The reasons for operating through small trusted networks are perfectly clear and make sense, but that doesn't mean that these practices should go unchallenged.

> All too often, in seeking trust, advice and a source of identity, social networks turn inwards on themselves.

Social capital formation invites public political perils which too often get over-looked. This relates to phenomena identified in Chapter 2. What's known as 'bonding social capital' – the strong ties that exist in small groups – can create cliques. Meanwhile, 'bridging social capital' – the weak ties that exist between separate communities – can create winner-takes-all situations and entirely unaccountable elites. Important information (for instance, company accounts) needs to be circulated formally – informality in powerful areas of public life is a threat, and undermines the legitimacy of organisations. Organisations, including governments, benefit from a greater formality, from having their behaviour tracked, logged and codified, because they can then become more publicly trusted.

Social software produces a new type of communication, between a conversation and a broadcast. It challenges the drift towards intimacy that is so tempting for all networks and organisations, because it publicises and codifies informal chat. Email is increasingly bringing public pressure to bear on the internal operations of powerful bodies, as proved in examples

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such as the dismissal of Jo Moore from the Department of Trade and Industry, or when Merrill Lynch were fined $100m after a leading analyst confided in an informal email that he was giving a 'Buy' rating to a company which he considered a 'piece of shit' [92]. Private communication increasingly feels the pressure of the public interest thanks to social software: bonding social capital – doing favours for friends – is increasingly risky in key areas of public life.

Meanwhile, our changing business environment means that new social codes are required. As explored in Chapter 2, the most powerful and important lines of communication are no longer those within organisations and communities, but those *between* organisations and communities.[93] The complexity that arises from ever more rapid and voluminous information flows makes it essential and inevitable that social networks develop key 'hubs' through which valuable information gets channelled. People who have social connections bridging between separate organisations are now those in positions of power and potential wealth. And this tendency displays winner-takes-all or 'power law' symptoms in the sense that the more powerful a hub becomes, the better access to information it gets. By their very nature, the winners in the situation are not formally identifiable – by definition they have no status in an organisation, because their role is to link separate organisations. The winners give no explanation of how or why they are successful, other than some appeal to their own 'talent'.

Here, in the realm of bridging social capital, social software challenges inequality and mystery. Valuable information may need to be routed via network hubs as a matter of necessity but if, for instance, these hubs are weblogs then although power law distributions still pertain, the information channelled through these hubs is at least publicly available.[94] The benefits of this information are available to all even though they must still be channelled via the identical network structure. For example, a top PR agent or media operative who has a vast number of contacts, in a variety of separate communities and industries, has fantastic access to information, social capital that delivers strong benefits to that person. A weblog that attracts a lot of traffic plays an equally important role in the rooting of valuable information. In terms of their roles in their respective networks, the powerful PR agent and the powerful weblog are the same. The difference is, of course, that there are immediate public benefits for the latter, whereas only (or primarily) private benefits to the former.

People who have social connections bridging between separate organisations are now those in positions of power and potential wealth.

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↓ The future

Codified knowledge and open social networks have benefits. Too much of the social capital debate has over-looked these areas, because too much of it has focused on close ties, intimacy and mutual support.

Social software certainly will not rival face-to-face contact for cultural richness, so its true benefits should be sought in areas of our everyday lives where cultural richness is actually a problem, and a rebuilding of etiquette the solution.

Small, culturally specific networks can lead to a collapse in formal etiquette, and a consequent collapse in public life. On one level, this simply means that we meet fewer people, and have more homogenous social groups. On a more threatening evel, it undermines the accountability of public bodies and powerful organisations. Social software certainly will not rival face-to-face contact for cultural richness, so its true benefits should be sought in areas of our everyday lives where cultural richness is actually a problem, and a rebuilding of etiquette the solution. By producing communication that lies between a conversation and a broadcast, between the culturally specific and universally recognised, social software may be able to channel the benefits of the internet towards public life.

Conclusion

The challenge for social software

This report began by noting that an increased interest in social connection initially drew two contradictory analyses. The spread of computer-mediated communication was implicated in two contrasting futures: one of social isolation and the erosion of traditional community, and another of constant communication combined with new types of social organisation.

The error made by both camps was to see technology as a replacement for pre-existing social behaviour. The pessimism of some social capital experts was founded on studies of time spent using the internet, as if this could not also be time spent building social capital. The optimism of some technology evangelists was driven by the promise of online community as something separate and better than 'real world community'. The two perspectives agreed on one thing, namely a 'two worlds' view of the internet versus everyday life.

We can now see that both of these were misguided. Even the early types of online community did not represent a drastic departure from everyday social life, simply that their adherents' everyday social lives were not like everybody else's. What the early adopters were doing online was often the same as what they were doing offline. As Howard Rheingold wrote a decade ago in *The Virtual Community:* 'The WELL felt like an authentic community to me from the start because it was grounded in my everyday physical world. WELLites who don't live within driving distance of the San Francisco Bay area are constrained in their ability to participate in the local networks of face-to-face acquaintances. By now, I've attended real-life WELL marriages, WELL births, and even a WELL funeral.'[95]

iSociety's driving philosophy is that the dynamics of everyday life ultimately prove responsible for the ways in which technology is used. The dawn of social software and the debates that have accompanied it indicate that this point of view is gaining ground, that everyday life is now the focal point. This is to be welcomed. But as the quote above illustrates, to some extent it always was. The question was: what type of everyday life do you lead? Technology usage adapts to the patterns of its users, creating different outcomes for different groups of people. The twin processes outlined in the introduction to this report – society becoming more technological, and software becoming more social – suggest that understanding the social activities and needs of mainstream citizens, rather than a hyper-wired minority, is now the pressing issue.

Now that we have the relationship between society and technology standing the right way up, a more sober optimism becomes possible. As the world wide web enters adolescence, it is now clear that the internet did not herald a revolution in social organisation in the first place. It is potentially far more useful than that.

CONCLUSION/THE CHALLENGE FOR SOCIAL SOFTWARE

The challenge for social software

↓ Social capital and social software: a reprise

This paper has argued that that the new task for social software is to integrate the internet with everyday social life. Philosophically, this is a welcome move that takes us beyond both the undue pessimism of some social capital analysts, and the over-exuberant optimism of technology evangelists. But, in order to achieve this, a renewed understanding of what makes groups of people tick – at home, in communities, and at work – is needed. Social capital analysis illuminates the changing social dynamics of British society, and indicates the areas where policy-making and organisational tools need to be focused. Social software is now one of these tools. The key presumption of both social capital theory and social software is that a social network is more than the sum of its parts, and must be studied according to particular network dynamics.

Following this, two fundamental issues have stood out for analysis. The first is that different sized social groups are useful for pursuing different outcomes. Large social networks are highly effective at channelling and distributing information, although they tend to create privileges for those in key positions in the network. As a basis for mutual support and trust, small networks are more effective, because reputations can be formed and reciprocity developed. The second issue that concerns the two perspectives is the difference between face-to-face and computer-mediated communication. The former is rooted in tacit cultural understanding, while the latter is more effective at transmitting codified knowledge or facts.

In light of these issues, social software has a double challenge: to create groups of the right size, and to facilitate valuable social behaviour within the limits of what computers can communicate. The first of these often involves a variety of filtering mechanisms, be it moderation, application procedures for members, or reputation systems. Like offline groups, online groups need ways of ensuring that interaction does not turn into anarchy. The second challenge is to make codified interaction more tacit, and tacit interaction more codified. For instance, one response is to introduce a richer tacit dimension to online interaction, through a greater range of visual communication tools. This makes the transition to online interaction more seamless and enables us to transport far more of our everyday social activities into an online context.

Of course everyday face-to-face interaction will never be replicated or replaced by computers. To suggest as much is to misunderstand that computers are tools for us to use as we wish. Like any tool, the question is what is it that we want to achieve, but can't manage without it? What can social software do that face-to-face interaction can't do?

↓ A new agenda for institutions

Many informal social networks have grown in

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power and complexity. As the authority of traditional communities and organisations has come into question, and as trust in and around these bodies has declined, people have sought information and collective identity in more scattered, less visible types of social association. Meanwhile, as intangible assets – intellectual property, ideas, creativity and skills – have grown in relative importance in our economy, the social and political seriousness of the invisibility of informal social networks has become greater. In contemporary Britain, informal social networks are gaining power without gaining authority.

The danger is that a vicious circle can ensue. As publicly visible manifestations of social capital – such as neighbourhoods, workplaces, organisations, societies – become over taken by invisible scattered types of social capital, the legitimacy of traditional, formal bodies becomes further undermined and trust deteriorates. The quest for trust and collective identity throws people to place even greater emphasis on informal friendships and affiliations, further undermining publicly visible bodies.

Yet, the clock cannot be turned back. The shift to non-local communities and towards more network-oriented organisations, as described by Barry Wellman and Manuel Castells respectively, is partly a consequence of the diffusion of new ICTs. These phenomena will not go away. Fortunate people will continue to develop more non-local and international connections because they want greater freedom of expression; ideas will continue to circulate in inter-organisational networks because this is how a lot of the value of ideas is extracted. Meanwhile, many people would not wish to see a return to a time when authorities, societies and local communities were treated reverentially and trust was a given.

Yet these societal shifts needn't be as antagonistic to traditional forms of organisation as they often are. The feeling that next-door neighbours are living in separate communities is to nobody's benefit. The fear that the best ideas in a company are all diffused and lost in informal chit-chat does not benefit employees or the company. Nobody gains from the sense that publicly visible institutions and formal conventions have become irrelevant, or that opaque, exclusive and mysterious social networks are actually where the action is.

The challenge for organisations and communities is somehow to dig down into this new social base, and try not only to realign people's social and psychological interests with institutional interests, but to reconstitute institutions around this quite complex, intangible social reality. Social software can deliver benefits here. By creating more codified interaction, and storing communication, social software may have legitimising properties for traditional institutions, while giving a greater institutional form to newer, less formal types of social affiliation. Social networks become mapped, new bridges might be built, cultural boundaries can be overcome. The

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dark side of informality can be combated.

↓ Supporting communities

Communities in modern society may be less locally based than they were, and online communities may perhaps play an increased role in everyday life as a source of identity and valuable information. But two things remain the case. First, face-to-face contact between people is most often the glue that cements relationships, and is the type of social connectivity that most people seek. Second, that people will always have certain shared interests with their local neighbours, even while they may lack any strong cultural identification with them.

Technology cannot buck social trends, but it can help us deal with them. Besides, social capital is not in apparent decline in the UK, although it is not always found in the right places. Connections are lacking where they are needed. People living in the same neighbourhood may be inhabiting separate cultural communities, but they still have shared interests that they fail to draw out. It may be that they don't want more face-to-face contact with one another, but that doesn't mean that they don't want to cooperate to pursue shared goals. Meanwhile, people do want more face-to-face contact with those who they identify with. There are three ways in which social software can support communities:

~ *Distribution of information amongst common interest networks.* Scattered communities of interest have long pursued collaborative projects, or exchanged information and opinions over the internet, although often this is on the condition of some effective filtration or moderation. As social networks become more geographically dispersed, the need for them to be able maintain ties over distance is crucial to the creation and sustenance of social ties. But these ties might just as well be across the garden fence as across the world. A local neighbourhood is also a common interest network – there are common interests in sharing information about services, crime or the environment. The local neighbourhood may be a weaker source of cultural identity than it was a generation ago, but a local cosmopolitanism can be achieved so long as information is circulated effectively.

~ *Recording and codification of the communication amongst established social networks.* The greatest influx of social software into everyday society to date has been in creating new channels of communication between people who would be communicating anyway, very often through email. In addition to creating new ties, social software can often work as a tracking mechanism, recording, and possibly mapping, the social networks that we belong to. The storing of conversations means that they can be referred to later, developing transparency around social interaction. It also means that contributors can pick up a thread at a later date, and get involved at a time that suits them. For this latter reason, many of the community benefits of social software may lie

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in over coming temporal barriers to social involvement: it allows people to make contributions to a conversation or project when it suits them. The arrival of mobile internet devices also adds to this the freedom to contribute at a place that suits them.

~ *Introduction of people in areas where formal etiquette is required.* Meeting new people via the internet may occasionally be better than doing so face-to-face if confidence or etiquette is lacking. The limited nature of what can be communicated via the internet becomes an advantage in such situations, while the size of the social network of users may also be an advantage in such a situation. What we call 'codification' in the context of knowledge management and computer supported collaborative work, we might otherwise call 'etiquette' in the context of everyday social life. Social networks may occasionally benefit from becoming more formal and explicit.

Social software can exploit the bridging properties of the internet to social benefits. Codified interaction provides etiquette to interact with neighbours at a local level, while being able to connect people who have shared goals and would not otherwise meet. New possibilities for civic behaviour open up, while more private interests – dating, business networking – are also available as a result of this software. Where social capital is built around tacit, cultural identities, it divides as much as it unites. By specialising in a more codified type of social interaction, social software holds out the possibility of new public conversations, not only between scattered parties with shared cultural interests, but between local neighbours with far less in common.

↓ Redefining organisations

One of the more confident predictions made during the 90s was that the dawn of the internet would herald the arrival of decentralised, 'networked organisations'.[96] Hierarchical corporations would be superseded by ultra-nimble networks of independent teams or small businesses trading with one another, achieving the sort of adaptability that traditional corporate models could only dream of. But today 'networked organisations' are few and far between, indeed it is hard sometimes to conceive of what one might actually look like.[97] The competitive advantages accruing to flatter, more flexible organisations have been understood for decades. But the management response has more often been to outsource peripheral services, force greater pressure up and down supply chains and introduce more team work. It's not clear that power itself is decentralised in any way.

Too often organisations made themselves leaner by ditching responsibility for everything which they didn't consider to be a core competency. Deliberate formal devolution of power was rare. However, this often means that the formal structures of organisations no longer accurately reflect their informal social dynamics, which is a problem.

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Information flows informally both inside and outside organisations, cutting across institutional boundaries, and often by-passing those who wish to control it. Professional networks cut across organisations, and wield a lot of power with little authority.

Hierarchical organisations cannot disappear entirely, but they are becoming complemented by informal, cross-cutting social forms. Often this is – or can be – to their benefit, but the benefits are often poorly understood and supported. Social software brings the following benefits to organisations in illuminating and supporting the dynamics of their social capital, both internally and externally:

~ *Knowledge Management.* The most obvious organisational benefits to be derived from social software will be in the area of knowledge management. But this may be unlike previous attempts to use ICTs for this purpose. Because social software acts as a mirror to social capital forms, rather than a prism, it will circulate knowledge in a more decentralised manner. The example of ShareNet, Siemens's reputation system, is a good example of how social software can coordinate information flows around a large corporation without control by a central authority.

~ *Achieving greater diversity.* Social software has bridging qualities, and offers the possibility of integrating newcomers to social networks more easily. This is a beneficial result of the weaker tacit dimension of Computer-Mediated Communication, plus the fact that past communication is stored, allowing newcomers to catch up. The greater formality and anonymity of interaction via social software can be channelled to create greater diversity in organisations, to challenge cultural cliques, and to create better knowledge flows across the boundaries of organisations. Organisations need to recognise that they leak knowledge whether they like it or not; social software at least makes this process more visible, and more manageable.

~ *Improving accountability.* Its often the case that social connections are most powerful and valuable where they are most invisible and tacit, which produces legitimacy crises for organisations and those in power. Trust in and around organisations is in decline: internal cliques hamper the workings of organisations, while the image of cronyism damages an organisation's reputation in the eyes of the community. Social software has properties both of formality and of visibility that it must lend to social capital networks. Social software lays communication bare, making it more visible, predictable and public. Of course this can be used malignly, to expose what should be private, but it can also be used benignly, to expose what should be public. Informal social networks currently

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have too much power, and insufficient authority. Social software leads a trend to shift the balance the other way, giving a public face to the new forms of association which cut across organisations.

Traditional organisational structures no longer accurately embody the social forms that hold most sway over our society. The circulation of information often generates most value when it happens between businesses, or departments, rather than within them. Entrepreneurs or 'knowledge brokers' have no formal status almost by definition. Formal voluntary associations, like unions or political parties, find that it no longer benefits them to make a clear-cut distinction between members and non-members on the basis of monetary subscriptions. All of this suggests not only that we're entering an era in which informal networks are rivalling the power of hierarchical organisations, but that there is a pressing lack of institutional form available to publicly represent the social relations that are ordering our society. Creating this institutional form is where social software may offer the most important benefits to organisations in the future.

Much of this suggests that many of the greatest benefits that social software can offer everyday life lie in the fostering of trust. This is a further irony, in view of the early paranoid perception of the internet as home to freaks and falsehoods. But if social software is about codifying everyday social interaction, it could surely also create the conditions for a new ethic of accountability. When people say something, it will be increasingly remembered. When people don't quite know how to approach someone face-to-face, a greater variety of useful formal means are becoming available. And where the status and location of a certain person is not known, there are a growing number of ways of ascertaining this. All of these trends have elicited fears in the past for how they may share an impact on privacy. Social software's challenge is to channel them towards the benefit of the public.

> The greater formality and anonymity of interaction via social software can be channelled to create greater diversity in organisations, to challenge cultural cliques, and to create better knowledge flows across the boundaries of organisations.

Endnotes

1 **B. WELLMAN** (2001b) *Computer Science*, 14th September 2001.

2 **N. NIE & L. ERBRING** (2000) *Internet and Society: A Preliminary Report,* Stanford Institute for the Quantitative Study of Society.

3 **R. PUTNAM,** (1995) 'Bowling Alone: America's declining social capital.' *Journal of Democracy* Vol. 6. 1, 64-78.

4 See for instance, Kraut et al (1998) 'Internet Paradox: A Social Technology that Reduces Social Involvement and Psychological Well-Being?' *American Psychologist,* 53: 1017-1031

5 http://www.useit.com/alertbox/20000220.html

6 **B. WELLMAN** et al, 'Capitalizing on the Net: Social Contact, Civic Engagement and Sense of Community' in B. Wellman & C. Haythornwaite (eds.) (2002), *The Internet and Everyday Life,* Blackwell, p. 319.

7 See for instance, the chapter 'The City as Freeway: Los Angeles 1900-1980' in P. Hall, (1998) *Cities in Civilization: Culture, Innovation and Urban Order,* Phoenix Giant.

8 **J. CRABTREE** et al (2002) *RealityIT: Technology and Everyday Life,* iSociety.

9 **J. CRABTREE** et al (2002) p. 41.

10 The UCLA Internet Report *Surveying the Digital Future* (2003) p54.

11 **R. PUTNAM** (2000), *Bowling Alone: The Collapse and Revival of American Community,* Simon & Schuster, p. 179.

12 For a good discussion of the term, see http://www.blackbeltjones.com/work/mt/archives/000472.html#000472. This includes some interesting definitions such as 'software that's better because there's people there' from Matt Jones, and software which 'treats triads of people differently from pairs' from Clay Shirky.

13 http://www.smartgroups.com; http://www.meetup.com; http://www.ryze.co.uk; http://www.udate.com

14 For a defence of this model, see R. Freeman & J. Rogers (2002) 'Open Source Unionism: Beyond Exclusive Collective Bargaining' in *WorkingUSA,* vol. 5, no. 4, Spring 2002.

15 For a good overview of the concept and the analytical discipline see S. Aldridge & D. Halpern (2002), 'Social Capital: A Discussion Paper,' Performance and Innovation Unit. Available at http://www.cabinet-office.gov.uk/innovation/2001/futures/attachments/socialcapital.pdf

16 **R. PUTTNAM** (2000) p. 19.

17 See A. McGillivray (2002) *What's Trust Worth: A Briefing on Why its Good Business to be Trusted,* New Economics Foundation.

18 **P. GRENIER & K. WRIGHT** 'Social Capital in Britain: An Update and Critique of Hall's Analysis', unpublished, used with authors' consent.

19 See 'Social Capital, Innovation and Competitiveness' by P. Maskell in S. Baron et al (eds.) (2000) *Social Capital: Critical Perspectives,* Oxford University Press.

20 See 'Great Britain: The Role of Government and the Distribution of Social Capital' P. Hall in R. Putnam (ed.) 2002, *Democracies in Flux: The Evolution of Social Capital in Contemporary Society,* Oxford University Press, p. 56.

21 http://www.oftel.gov.uk/publications/research/2003/q11intr0103.htm

22 **PETER STEINER** in *The New Yorker,* July 5, 1993

23 Estimate for November 2002, from http://www.nua.ie/surveys/index.cgi

24 See for instance **M. GLADWELL** (2002), *The Tipping Point,* Back Bay Books p. 179.

25 See. **M. GRANOVETTER,** (1973) 'The Strength of Weak Ties'. *American Journal of Sociology* 78, 6, 1360-1380; R. Burt (2000) 'The Network Structure of Social Capital', University of Chicago.

26 **P. GRENIER & K. WRIGHT** 'Social Capital in Britain: An Update and Critique of Hall's Analysis', unpublished, used with authors' consent.

27 **R. BURT** (2000).

28 **T. HOBBES** (1996), *Leviathan,* Cambridge University Press.

29 **R. PUTNAM** (2000), p. 177.

30 **B. WELLMAN & M. GULIA,** 'Net Surfers Don't Ride Alone', in B. Wellman (ed.) (1999), *Networks in the Global Village: Life in Contemporary Communities,* Westview Press.

31 **M. POLANYI** (1967) *The Tacit Dimension,* Doubleday.

32 For some useful definition around these concepts, see **J. SEELY BROWN & P. DUGUID** (2000), *The Social Life of Information,* Harvard Business School Press pp. 119-20.

33 See **T. KUHN** (1996) *The Structure of Scientific Revolutions,* University of Chicago Press, for the power of social 'paradigms' over the production of scientific facts.

34 **M. CASTELLS** (1996), *The Rise of the Network Society*, Blackwell, p. 242.

35 **J. SEELY BROWN & P. DUGUID** (2000).

36 **R. BURT,** (1999) 'Entrepreneurs, distrust and third parties', University of Chicago.

37 See **C. SHIRKY** (2003b), 'Social Software and the Politics of Groups' available at http://shirky.com/writings/group_politics.html

38 **H. RHEINGOLD** (2002), *Smart Mobs: The Next Social Revolution,* Perseus Publishing, p. 119.

39 Transcript of Happening Organised by Social Software Alliance, 4th April 2003, available at http://www.socialtext.net/ssa/index.cgi?Happening%3A%202003-04-18%2C%20Chat%20Transcript (the user called 'Bill Gates' has adopted this as a pseudonym).

40 **R. PUTNAM** (2000), p. 174.

41 'Spam Celebrates Silver Jubilee', BBCi http://news.bbc.co.uk/1/hi/technology/2996319.stm

42 See **C. SHIRKY,** (2002b) 'Weblogs and the Mass Amateurization of Publishing', available at http://shirky.com/writings/weblogs_publishing.html

43 **C. SHIRKY,** (2002a) 'Communities, Audiences and Scale' http://shirky.com/writings/community_scale.html

44 http://www.haddock.org

45 **H. RHEINGOLD** (2002), p. 114.

46 http://brainstorms.rheingold.com/

47 http://www.senseworldwide.com ; http://www.generalthinking.com

48 http://www.metafilter.com ; http://www.well.com

Endnotes

49 See 'The Epic Saga of the Well' Wired, May 1997 at http://www.wired.com/wired/archive/5.05/ff_well.html

50 See **H. ABELSON & L. LESSIG** (1998), 'Digital Identity in Cyber-Space', MIT, available at http://www.swiss.ai.mit.edu/6095/student-papers/fall98-papers/identity/white-paper.html

51 Taken from http://geourl.org/ and used with permission of Joshua Schachter.

52 http://www.movabletype.org and http://www.blogger.com

53 'Blogs Make the Headlines', Wired News, December 23rd 2002.

54 For details on this, see http://www.redhat.com/software/ccm/collaboration/RealizingTheROIPromiseOfEcm.html

55 http://www.amazon.com

56 http://www.ebay.com

57 **P. RESNICK** et al (2000a) *Reputation Systems. Communications of the ACM*, 43 (12), pp. 45-48.

58 **P. RESNICK & R. ZECKHAUSER** (2001) 'Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System' available at http://www.si.umich.edu/~presnick/papers/ebayNBER/RZNBERBodegaBay.pdf. The authors identify what they term the 'pollyanna effect'- the strong trend eBay users exhibit towards rating one another favourably.

59 http://slashdot.org/

60 See http://www.all-species.org/

61 **R. PUTNAM** (2000), p. 178.

62 See 'The Daily We: Is the Internet Really a Blessing for Democracy?', *Boston Review*, http://bostonreview.mit.edu/BR26.3/sunstein.html

63 See **D. DAVIDSON** (1974) 'On the Very Idea of a Conceptual Scheme.' (Published in A. Nye (1998), *Philosophy of Language: The Big Questions,* Blackwell, 271-283.)

64 **J. MADISON** et al (1987), *The Federalist Papers,* Penguin, p. 123.

65 **C. SHIRKY** (2003b).

66 See http://web.media.mit.edu/~fviegas/CC2/, image used with permission of Fernanda Viegas.

67 See Judith Donath's doctoral thesis, 'Inhabiting the Virtual City: The Design of Social Environments for Electronic Communities', available on her web site at http://smg.media.mit.edu/people/Judith/Thesis/

68 See http://web.media.mit.edu/~fviegas/CC2/ from where the software can be downloaded.

69 An emoticon is a depicted face made out of punctuation, such as :-), but since developed into graphics that can be used in messenger systems.

70 See http://www.3degrees.com

71 **J. CRABTREE** et al (2002). p. 61.

72 **J. CRABTREE** et al (2002). p. 62.

73 'Digital Living: The Impact (or Otherwise) of the Internet on Everyday British Life', by B. Anderson & K. Tracey in B. Wellman & C. Haythornwaite (eds.) (2002), *The Internet and Everyday Life,* Blackwell, p. 160.

74 For a decent study of how this occurs and what problems are encountered, see E.Bradner (1999) 'The Adoption and Use of Babble: A Field Study of Chat in the Workplace', University of California. Available at http://www.pliant.org/personal/Tom_Erickson/AdoptionOfBabble.html

75 See http://www.research.ibm.com/SocialComputing/babble.htm image used with permission of Tom Erickson.

76 **R. PUTNAM** (2000).

77 **R. LING** et al (2002), 'e-Living D7.4: Age, Gender and Social Capital – A Cross Sectional Analysis', at http://www.eurescom.de/e-living/ . See also C. Keser et al (2002), 'Trust, the Internet, and the Digital Divide', IBM for evidence of how pre-existing social capital improves the economic usage of the internet.

78 See M. Perks, 'Social Software – Get Real', *Spiked Online*, 20th March 2003, at http://www.spiked-online.com/articles/00000006DCF1.htm

79 See http://www.whothat.org

80 K. Hampton (2000) 'Grieving for a Lost Network: Collective Action in a Wired Suburb', MIT

81 See http://www.upmystreet.com

82 Taken from http://www.whitelabel.org/archives/000338.html#000338 and used with permission of Stefan Magdalinski.

83 **R. SENNETT,** (1977) *The Fall of Public Man,* Faber & Faber.

84 **P. RESNICK** (2000b), 'Beyond Bowling Together: SocioTechnical Capital', University of Michigan School of Information.

85 See 'Putting a Price on Love', Wired, December 2002 (available at http://www.wired.com/news/business/0,1367,56940,00.html)

86 **C. LEVI-STRAUSS,** (1992) *The Elementary Structures of Kinship,* Beacon Press.

87 See http://www.ecademy.com ; http://www.ryze.com

88 See http://www.spotme.info for details on a new wireless device that exists for this very purpose. The device transmits key bits of information about the owner to others who also have their own devices; this way, certain key facts are used as the basis for an introduction at the reception, rather than idle chit-chat, making the networking process more efficient, and saving networkers from the awkward conversations.

89 See **M. MCPHERSON** et al (2001) 'Birds of a Feather: Homophily in Social Networks', *Annual Review of Sociology* 2001 27:415-444.

90 **R. FERNANDEZ** et al (2000), 'Social Capital at Work: Networks and employment at a Phone Center' by Roberto M. Fernandez, Emilio J. Castilla and Paul Moore, *American Journal of Sociology* Volume 105 number 5, March 2000.

91 See 'Higgs's Boardroom Revolution', *The Guardian,* 21st January 2003.

92 'Wall Street Faces $1bn dotcom fine', *The Guardian,* 23rd November 2002.

93 See **R. BURT** (2000) for the best explanation of why this is.

94 **C. SHIRKY** (2003a) 'Power Laws Weblogs and Inequality' available at http://shirky.com/writings/powerlaw_weblog.html

95 **H.RHEINGOLD** (1994) *The Virtual Community: Surfing the Internet,* Secker & Warburg.

96 See **M. CASTELLS** (1996).

97 For some interesting examples, see S. Turnbull (2002) *A New Way to Govern: Organisations and Society after Enron,* New Economics Foundation.

AUTHORS NOTES

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You Don't Know Me, but… Social Capital & Social Software

Social capital analysts have debated the implications of the Internet for some years now. But this debate has recently been joined from the opposite side, as software experts and developers are showing an increased desire to understand and improve social networks, both offline and online. This report introduces some of the core ideas of this new unified debate, and outlines possible directions for the future.

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