ies Paper
Institute for Employment Studies

The Conversational Company

Rediscovering 'Banana Time' in the Knowledge Economy

Stephen Bevan

03 October 2019

Report: 533

Beyond the Water Cooler

For most of us, going to work is not just an economic act motivated by the need to earn money. Increasingly it is also a social act, during which we develop relationships, form bonds, explore opportunities for personal growth and share knowledge. Smart employers recognise that, beyond the need to make workplaces congenial places for employees to enjoy their work and get on with their colleagues, they also benefit from creating cultures and working environments where employees can create value through collaborating and building know-how that can benefit the business. At its most rudimentary, the humble conversation lies at the heart of this complex array of processes and this paper will look at what we know about the evolution of conversations at work and why they have become more important in helping organisations to foster employee engagement and even generate commercially exploitable intellectual capital in the so-called 'knowledge economy'.

If this sounds obvious and uncontroversial, it is worth reminding ourselves that not all employers have always been so enlightened about the value of workplace conversations. At Ford's River Rouge plant in Michigan in 1940, for example, David Collinson reports the following incident:

> *"John Gallo was sacked because he was 'caught in the act of smiling', after having committed an earlier breach of 'laughing with the other fellows', and 'slowing down the line maybe half a minute'. This tight managerial discipline reflected the overall philosophy of Henry Ford, who stated that 'When we are at work we ought to be at work. When we are at play we ought to be at play. There is no use trying to mix the two.'"*
>
> Collinson, 2002

In this perhaps extreme example, social exchange, casual conversation and what we might today call 'banter' was frowned upon because it violated the Tayloristic principles of efficiency and the need to extract as much productive work as possible from employees at the lowest cost. At the time of this incident it was less common to find employers who recognised that employees needed opportunities to have even brief respite from the intensity of their work to connect at a human level and to share information about the ways work processes and procedures could be improved. More enlightened times followed and, during the 1950's the academic discipline of ***industrial sociology*** gained momentum because the idea that workplaces were social communities whose character, rules, norms and effectiveness were worthy of scrutiny had become more embedded in managerial practice.

Studying social exchange, the formal and informal conversations that happen at work, and the functional (and dysfunctional) nature of the web of networks people build and participate in at work does not always lend itself to formal quantitative analysis, however. This gave rise to a growing number of academic studies using so-called observational methods and ethnographic techniques where the interactions and behaviours of workers were examined in real time and in their normal work environments.

This led, in 1960, to a landmark paper – ***Banana Time*** – looking at how those workers engaged in intense and often routine work used conversations, light-hearted exchanges and camaraderie to break up the working day and make their work more tolerable. Donald Roy, a sociologist from Duke University, spent several weeks working long days in a machine shop in Chicago engaging in very routine and repetitive piece work with a small group of industrial workers (Roy, 1960). He documented the strategies the workers used to build relationships, inject humour and develop work-group norms and behaviours which bonded the team together. One ritual Roy observed was the habit of a series of ‘times’ being used to break up the flow of work and to afford an opportunity for the workers, however briefly, to chat, make jokes or to complain about the work or their bosses. In addition to coffee time and lunch time, the Chicago machine shop workers also had ‘Peach Time’, ‘Banana Time’, ‘Fish Time’ and ‘Coke Time’. At ‘Peach Time’ one of the workers (Sammy) would halt the work and distribute half a peach to each of his colleagues. The peaches were consumed quickly – and interrupted work only briefly – but allowed an opportunity for everyone to take a short breather and reconnect with each other. ‘Banana Time’, which usually followed an hour later, involved Sammy again. He routinely brought to work one banana, for his own consumption, which each day would be ‘stolen’ and eaten by his colleague Ike in a daily ritual which would be accompanied by exaggerated remonstrations by Sammy and a few minutes of laughter and respite from the routine of their jobs.

Donald Roy’s focus in this study was to look at the role that micro-interactions, ‘horseplay’ and conversations during work interruptions played in sustaining work group cohesion and job satisfaction in a long-hours, intense and routinised work environments. He concluded that:

> *“The enjoyment of communication for its own sake as mere sociabilities, as free, aimless social intercourse brings job satisfaction, at least job endurance to work situations largely bereft of creative experience.”*
>
> Roy, p166

Interestingly, Roy drew no conclusions about the effect of the work group’s pattern of informal interactions on either their efficiency or productivity as a team. Nor did he look at whether the group was an especially effective forum for improving learning or skill development. In this group the priorities were coping with boredom and getting through the day and Roy’s work shed a revealing light on some of the ways that conversations at work – however bizarrely they may be staged – have been features of workplaces for decades.

Perhaps today we have a more sophisticated view of the role of conversations at work, or at least a more instrumental view. There is more focus, for example, on the nature of performance and development conversations between managers and their direct reports at work. Wendy Hirsh has pointed out, however, that no matter how helpful these conversations might be if conducted skilfully and positively, there remains a sometimes negative preoccupation in some organisations about equipping managers to have ‘difficult’ conversations (Hirsh, 2018). Similarly, the now well-established metaphor of the so-called ‘water cooler’ conversation was never really just about casual conversations on 'what I did at the weekend' or which box-set the family has been watching. The 'water cooler' has come to represent something that can be built deliberately into office design and cultural norms, which can help employees from different departments or functions to forge informal connections which might lead to helpful knowledge exchange through 'engineered' serendipity. What is clear is that the proliferation of academic studies over the last fifty years looking more intensely at the nature of workplace conversations and social networks at work, suggests more than just a sociological interest.

Why Study Social Networks at Work?

The analysis of conversations and social network mapping is the study of who knows who and how. The fact that ethnographers like Donald Roy developed these methodologies from those also used by anthropologists is not that surprising – when trying to understand an entirely alien culture, the formal structures and rules of power and influence may not be easily apparent or comprehensible. Studying social networks in a foreign culture, for example, would prevent an anthropologist from leaping to conclusions or falling victim to prejudices. But why should we wish to understand informal social networks in our own organisations, where we know who the leaders are, how the business model and organisation structure works and who is answerable to whom? There are three main reasons why informal social networks need to be better understood in a business context. Firstly, human and intellectual capital is of growing relative value in the UK economy and for British businesses. Ideas, skills, enthusiasm, compassion and knowledge are intangible business assets widely deemed to be key determinants of competitive advantage and productivity growth. Unlike tangible goods, which can be distributed in an impersonal, fairly asocial way, these human capabilities are all far more embedded in their social circumstances. 'Social capital' is the crucial context for all human capital. Tiny details of things like office layout, friendliness, tacit cultural norms all play a role in affecting the productivity of an organisation, because people – with all the cultural and psychological complexities that they bring with them – are now the most valuable assets around. In a more industrial age where the production of tangible goods drove our economy, informal social networks may not have been especially significant (despite the fact that they were still there). Nowadays, conversations, friendships and chance encounters are a primary means of initiating and sustaining connections and then creating and distributing value.

Secondly, a broad shift across our society has forced many people to become less willing to trust and associate with formal authorities and institutions in the way that they once did. For the employee, increasingly fluid career patterns mean that traditional commitments to employers are not as dependable as they may once have been. Union membership in Britain, which used to be considered important, has fallen from over half the workforce to less than a third within a generation. 'Individualism' is now understood to be a dominant feature of many Western societies. This being the case, informal social networks are now arguably a more important source of identity and security for individuals than they were a generation ago. With the perception that job security is lower than it was, trust in managers and business leaders fell quite dramatically through the 1990s, and more people now feel that they can rely more on their contacts, colleagues and friends than their employers. This shift in affiliation, from formal types of association and deference to informal types of association and greater self-reliance, is the second reason why informal social networks now command our attention. Both of these phenomena are relevant to business. In addition, the diffusion of Information and Communication Technologies (ICTs) into working life means that there is a widespread need for a new social template within which organisations can understand themselves. The distinction between insiders and outsiders no longer makes as much sense, hands-on attempts to manage knowledge and social relationships may have undesirable knock-on effects. Cannier organisations are beginning to seek out ways in which tacit, informal networks can be given a greater visibility and prominence. If horizontal, inter-departmental and inter-organisational networks are more creative and productive arrangements for employee relations, then it makes sense that these networks be given recognition and authority to accompany their important role.

Third, most of the conventional ‘cues’ or signals we have about roles, responsibilities, delegated authority, status, hierarchy and power still reside in job descriptions, role profiles and the organisation chart. Yet we know that patterns of interaction, information flows and sharing, collaboration and innovation frequently subvert these formal mechanisms and, in some cases, work effectively despite – rather than because of – organisational rules or conventions. Looking at social networks as they really happen rather than how the organisation hopes they will happen can shed an informative light on how human, social and intellectual capital are formed, developed and sustained organically.

However, whilst many managers accept the latent power of social capital in their organisations, too few feel equipped to investigate inter and intra organisational networks in order to solve business problems or to take advantage of business opportunities. One of the challenges they face is that of preserving the innocence and serendipity of the casual (Banana Time?) conversation at work which makes the experience of working with others pleasant and tolerable, whilst recognising that conversations, knowledge exchange and other forms of social interaction can also be the ‘engine room’ of great ideas and intellectual capital formation which can add real value to an organisation’s performance and sustainability.

So what are the benefits of being an explicitly more ‘conversational’ company in an ever more complex knowledge-based economy? How likely is it that organisations could generate more ‘value’, innovation and competitive advantage if they were more aware of the ways that know-how, ideas, collaboration and creativity were generated and shared across organisational ‘silos’? How good are software and social media-based platforms such as Enterprise Social Networks (ESNs) at taking the hard work out of building rich social capital in businesses? What leadership, organisational, line management and HR competences are needed to prepare the fertile ground needed for social capital to thrive? Let’s start by looking briefly at the so-called ‘knowledge economy’ within which most UK organisations now operate and why it might have created a more benign environment for those who get this right.

The Knowledge Economy & Increasing Returns to Scale

In many ways the 'knowledge economy' has rendered the traditional and binary divide between 'manufacturing' and 'services' sectors redundant and forced us to rethink where value is really created across the economy. Most hi-tech manufacturers in, for example, the aerospace sector have long traded on (and profited from) the knowledge services and expertise which they sell as much as the aero engines or wings which they manufacture. Even the UK public sector, especially the NHS and the higher education sector, generate knowledge, know-how and intellectual property which has been value-creating and often commercially exploitable for many years (Mazzucato, 2019). Although a watertight definition of the knowledge economy has proven to be elusive, the Economic and Social Research Council (ESRC) attempt perhaps has most resonance:

> *"Economic success is increasingly based upon the effective utilisation of intangible assets such as knowledge, skills and innovative potential as the key resource for competitive advantage. The term "knowledge economy" is used to describe this emerging economic structure."*
>
> ESRC, 2005

In a detailed look at the knowledge economy in the UK, Brinkley (2008) estimated that somewhere between 31 and 42 per cent of the UK workforce could be realistically categorised as knowledge workers (depending on whether a qualification-based or occupation-based definition was used). These figures were high relative to other countries and suggested that the knowledge intensity of parts of the UK economy and its labour market were high and that historic investments in technology, skills and in higher education were beginning to bear fruit. At an organisational level, many businesses will recognise that competitive advantage in the knowledge economy is only truly maximised when the alchemy of physical and intellectual capital is combined with a culture which promotes learning, skill formation and high-octane performance. As Brinkley points out, this is not a sudden shift but the natural consequence of several well-established forces in the economy, the education system and in technological development moving and combining them together over several decades.

However, in recent years we have also seen that parts of the knowledge economy, especially those which have been able to build business models based on the collection and use of so-called 'big data', are growing rapidly and overturning some of the long-held 'truths' of economic theory. Economist Will Hutton explains:

> *"One of the laws of economics … used to be that as companies grow, they start to lose control of their capacity to be efficient and unit costs rise. This is called decreasing returns to scale. In this way, or so the theory went, we could trust a free market not to produce corporate goliaths because they become inefficient. But one of the features of data capitalism is exactly the opposite: increasing returns to scale. One of the attractions of Facebook, Spotify, Uber, Amazon or Airbnb is their very size. Their managers don't lose control of their operations as they grow.*

> *Indeed, computerised techniques allow costs, from wages to the organisation of production lines, supply chains and warehouses, to be ever more efficiently managed."*
>
> Hutton, 2017

The key point here is that organisations who find ways to harness their innovative capacity need not be constrained by the decreasing returns to scale orthodoxy because, as some of the global leaders in the world of social media and data-sharing platforms have shown, innovation and value creation are no longer bounded by size-based constraints on efficiency and productivity. A recent report by Nesta (Unger, 2019) emphasises this point:

> *"The more one knows and discovers, the easier it is to make the next discovery. If the process of production can be organised on a model of scientific inquiry and experimentalism, innovation can stop being episodic and become permanent. Continuous innovation undermines the basis for the constraint of diminishing marginal returns."*
>
> Unger et al, 2019

One of the features of social capital is that, in the right circumstances, it can encourage people to collaborate and share with no expectation of reciprocity (Baldoni, 2018). Thus, the very act of collaborating in pursuit of a higher collective goal might be seen as an end in itself rather than a self-interested, transactional act engaged in as part of an exchange. The work of Mark Granovetter (1973), who identified that so-called ‘weak ties’ can have perverse strength in building social bonds, is especially relevant here. His research showed that social networks do not always need to be full of close or intimate personal connections and that, for finding jobs as one example, the weaker the personal connection the more effective a network of loose ties can be. Knowledge-sharing too need not conform to traditional ideas of resource depletion because, unlike physical resources such as oil or iron ore or rare earth metals, knowledge is not necessarily diminished when it is shared. As Thomas Jefferson said in his 1813 letter to Isaac McPherson:

> *"He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me."*
>
> Thomas Jefferson

So it makes sense to believe that, in the context of the knowledge economy, organisations which have strategies to optimise the curation and stewardship of social and intellectual capital stand to gain most from encouraging a sophisticated web of multi-layered ‘conversations’ among employees. Bananas are optional, of course.

Business Benefits of Investing in Social Capital

So if the evolution of the knowledge economy is providing an environment conducive to those organisations best equipped to build upon the intellectual and human capital which they have accumulated and invested in, and which resides in their people, cultures and other intangible assets, what more can be done to make sure that the social capital which can bind all of this together is delivering full value? Let's start by looking at how social capital has been characterised by those looking at how it might be harnessed by organisations.

To understand how social capital as an asset which might benefit businesses it is helpful to see each organisation as what Kogurt and Zander (1996) describe as '*a social community specialising in the speed and efficiency in the creation and transfer of knowledge'*. One of the consequences of this 'social community' aspect of a firm is that social relationships are most frequently strengthened through interaction but die out if not maintained. Also, as Bourdieu (1986) points out social capital, unlike other forms of capital, increases rather than decreases with use, meaning that interaction is a precondition for the development and maintenance of 'dense' social capital.

In a helpful paper looking at organisational advantages of tapping into social and intellectual capital, Janine Nahapiet and Sumantra Ghosal (1998) define social capital in a business context as:

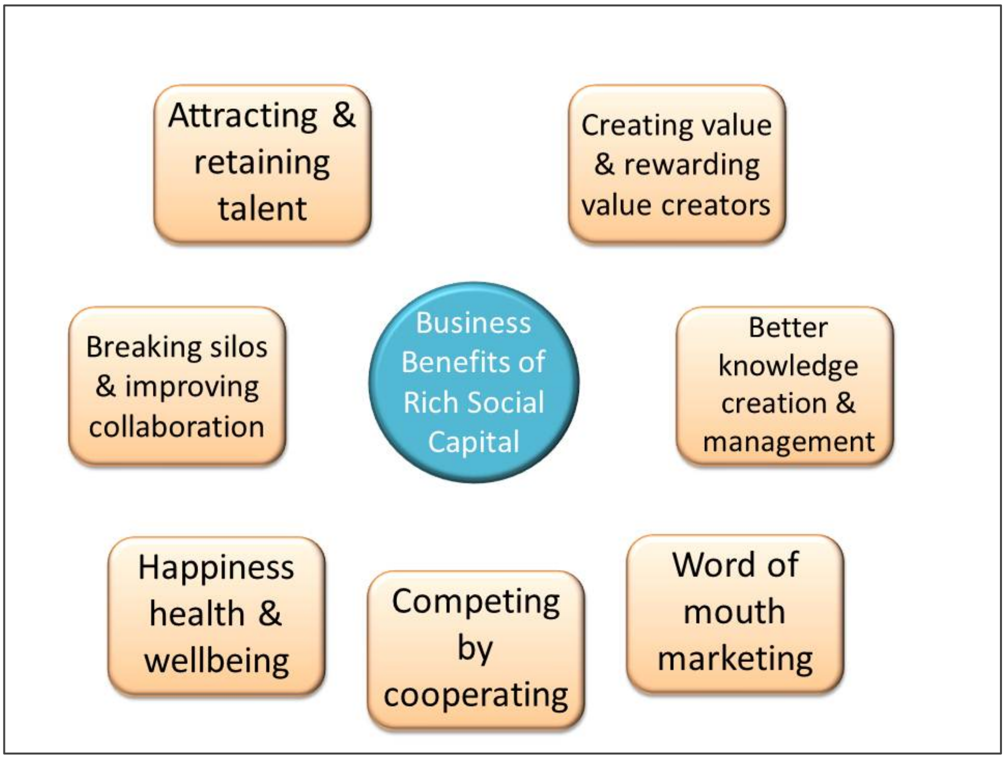
> *"…the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilised through that network."*
>
> Nahapiet and Ghosal, p 243

The authors also point out that there are some (for example, Simon, 1991) who believe that, because knowledge is most commonly vested in individual members of the organisation, social capital is really about finding ways of incentivising these individuals to share and collaborate in an instrumental way and when there is a functional reason for doing so. This approach is widely regarded as too limiting, however, and that a more contemporary characterisation involves accepting the importance of socially and contextually embedded forms of knowledge and knowing as a source of value which is distinct from the simple aggregation of the knowledge of a set of individuals – a more collective endeavour founded on mutuality of purpose, perhaps?

Researchers have, in more recent years, focused on other aspects of social capital and knowledge exchange in organisational settings. Hansen et al (2005) have looked at how multiple and overlapping networks contribute to knowledge sharing. Zarraga and Bonache (2003) have examined the role of work teams in creating a rich environment for knowledge-sharing and social capital. Others have focused on developing analytical methods for measuring and analysis the nature and effectiveness of social networks (Freeman, 2004; Hollenbeck and Jamieson, 2015) while others have assessed the extent to which certain personality characteristics are more closely associated with the effectiveness and impact of social networks in organisations (Fang et al, 2015). It would be a mistake to assume that vibrant and productive social networks in organisations are entirely self-seeding and self-managing. Work by Carter et al (2015) and Groysberg and Slind (2012) has looked at the role of leadership in the nurturing of social capital, with an emphasis on preserving the essence and integrity of a social network without destroying its intangible benefits. Others have investigated the role of differences in cognitive style in linking social networks to innovative performance (Carnabuci and Diosxebi, 2015).

Wayne Baker (2012) of the Ross School of Management at the University of Michigan has carried out extensive work to see how social capital can benefit organisations. He has distilled seven key advantages of investing in rich social capital and these are summarised in Figure 1 below.

Figure 1 Business Benefits of Rich Social Capital



Source: Baker, 2012

In terms of ***attraction and retention***, Baker argues that – despite big investments in e-recruitment technology – job search, the attractiveness of employers to candidates and the way that corporate reputations are shared among job seekers are all strongly influenced by informal networks. Similarly, he argues that employers who are best at retaining talent are also those who are good at fostering internal communities which allow exciting opportunities for collaboration and learning linked to personal development and career growth. In the same vein, Baker also argues that employees with rich social capital (often invested in jointly by the individual and their employer) are paid more, are promoted more rapidly and receive more positive appraisals because they ***create more value***. This is, he suggests, because employees with rich social capital are better informed, more efficient, are more creative, more agile and open to change and are better problem-solvers.

Baker is concerned that organisational silos constrain collaboration and knowledge-exchange. He suggests that silos based on functional or geographical boundaries, while logical from an organisation design perspective, can reinforce knowledge-hoarding and tribalism which ultimately do damage to information exchange and creativity. Investment in social capital can, he argues, ***break down silos*** and create a culture where collaboration, cross-functional collaboration and knowledge management can thrive and create value.

There is a tendency, according to Baker, that the subtle, organic processes underpinning ***knowledge creation and management*** itself become hijacked by technocratic, software-driven solutions. Baker insists that knowledge 'resides in social networks, not in computer systems' and that most of the knowledge in an organisation is 'tacit' rather than 'codified' and that it only surfaces in a meaningful way in the course of social interactions, conversations, storytelling, mentoring, demonstration and observation.

Baker also suggests that the benefits of rich social capital are not limited to the internal workings of the business. He says that many organisations are better able to promote and sell their products and services because of ***word-of-mouth marketing*** strengthened by their investment in social, professional and commercial networks. Strong internal social capital can, he argues, have positive and commercially beneficial 'spill over' effects which can support the diffusion of new offerings into the wider market.

The role of highly developed social and professional networks in facilitating ***inter-organisational collaboration***, even with competitors, is another benefit of rich social capital identified by Baker. He points out that the deep expertise residing in many start-ups is often attractive to larger firms wishing to develop new business streams and that collaborations which generate new, mutually advantageous, business opportunities or product innovations can only be initiated and sustained if both trust and social capital are strong.

Finally, Baker identifies employee ***happiness, health and wellbeing*** as increasingly important benefits of rich social capital. He recognises that, as work intensifies and as the psychological engagement of employees in their work becomes more important to employers, investment in knowledge exchange, communities of practice, opportunities to work across functional boundaries and to learn and develop collaboratively all contribute to the wider wellbeing of the workforce.

One of the challenges to the work of Baker and others, however, is that most organisations struggle to execute the delivery of the promised benefits of social capital. This critique is highlighted by people such as Jeffrey Pfeffer and his colleague Robert Sutton (1999) who point out, somewhat uncomfortably, that many businesses get caught in what they refer to as the 'Smart-talk trap' – an kind of inertia in which a range of cultural, managerial and psychological barriers inhibit the fulfilment of the potential of social capital. As Pfeffer and Sutton argue:

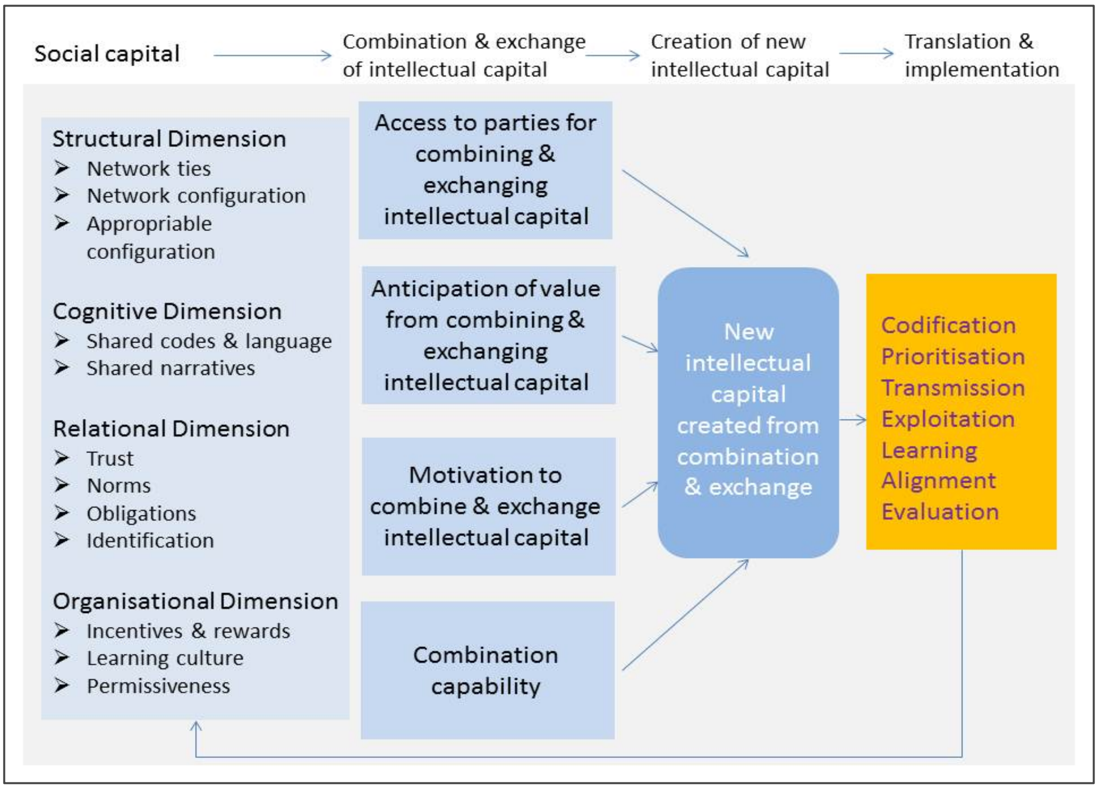
> *"When confronted by a problem, people act as if discussing it, formulating decisions and hashing out plans for action are the same as actually fixing it. It's an understandable response – after all, talk, unlike action, carries little risk. But it can paralyse a company."*
>
> Pfeffer and Sutton

Part of the argument here is that, from business schools to boardrooms, the ability to sound good, to be articulate and make good arguments is sometimes a more highly prized ‘conversational’ attribute than the ability to execute a plan or to lead the successful implementation of change. This implementation ‘gap’ has also been the focus of research among organisational sociologists and, in particular, attention has been paid to the ways that social and intellectual capital can be combined in knowledge-intensive organisations.

Returning to themes identified by Nahapiet and Ghosal (1998), the processes involved in generating value from the judicious amalgamation of social and intellectual capital rely not only on the generation and curation of knowledge but also on creating the culture, climate and leadership style which allows new ideas and innovations to emerge (Nonaka and van Krogh, 2009).

Figure 2 is an adapted version of a model developed by Nahapiet and Ghosal to identify the processes involved in combining social and intellectual capital to create value.

Figure 2 Creating Value from Social & Intellectual Capital



Source: Adapted from Nahapiet & Ghosal, 1998

They identify a number of dimensions of social capital (Structural, Cognitive and Relational with IES adding an Organisational dimension which is explained below) which together are necessary to support the creation of new intellectual capital. The multiple layers of complexity in this model highlight that, compared with Donald Roy’s conception of ‘conversations’ at work, the field of social capital and social exchange at work has very rapidly become an area where our understanding of the organisational benefits of rich networks of connections and their attendant conversations has developed greater sophistication.

The ***structural dimension*** of social capital influences the development of intellectual capital through the ways it facilitates access to those parties who can exchange knowledge. ***Network ties*** concern access to resources embedded in social networks. Information gathering using conventional means can be an expensive and resource-intensive undertaking. But networks, often established for different reasons, can reduce the time and cost of gathering information useful for the development of intellectual capital. Burt (2001), argues that effective network ties improve access, improve the timeliness and value of information exchange and increase the number and diversity of referrals in and out of the network. The nature of the ***network configuration*** relates to the characteristics of the network – density, connectivity and hierarchy, for example – which the organisation can exploit. Burt (2001) suggests, for example, that a relatively sparse network but with few redundant contacts may be better in this context than a very dense network which may deliver less diverse information for the same cost of a more sparse network. It seems that the diversity aspect of network configuration is not just about ensuring a rich mix of information sources but also represents a way of 'democratising' social capital and the creation of new intellectual capital by tapping into all sources of knowledge and talent wherever it resides in the organisation. Finally, Nahapiet and Ghosal (1998) argue that it is important to develop a clear understanding of which aspects of social capital can be ***appropriable*** – that is to say, can be readily accessed and transferred from both within and outside the organisation via the networks of employees. This can mean via network contacts (or 'brokers') which reach into professional, technical or even family networks, for example.

The ***cognitive dimension***, according to Nahapiet and Ghosal (1998), focuses on other aspects of both the organisation's ability, through the social capital of its employees, to both access and combine shared knowledge in ways that allow new intellectual capital to be created. Specifically, they focus on the importance of ***shared codes and languages*** and on ***shared narratives***. At face value, this might appear to contradict the importance placed on diversity, above. However, they argue not for conformity of language but rather compatibility and sufficient transparency as to aid the rapid assimilation and combination of know-how, perspectives and insights which allow for the efficient creation of new intellectual capital. This cognitive dimension to social capital addresses some of the challenges posed by the unintended barriers to collaboration attributable to communication difficulties or the risk of talking at cross-purposes. It also suggests that, while the exchange of information using accepted technical language can be efficient and reduce the risk of ambiguity, the use of stories, examples and metaphors also allow knowledge exchange to be enriched by narratives.

The ***relational dimension*** to the creation of rich social capital (which can be accessed and combined with know-how) refers to aspects of the relationships which exist between network connections and the ways they affect the efficacy, authenticity and reliability of the exchanges between them. ***Trust***, of course, is important partly because when trust is high people are more willing to participate in social exchange in general, but also to engage in exchange with a view to collaboration or co-production in particular. Trust can indicate a willingness to be vulnerable to another party. This might entail a belief in the good intent and integrity of another party, a belief in their competence and capability, a belief in their reliability and a belief in their openness. Burt’s (2005) concept of ‘brokerage’ here can be very important as brokers can perform a critical role in linking, interpreting, sponsoring and endorsing network connectivity and agility in the context of change (Carter and Varney, 2018). Nurturing trust can increase the mutual belief that, as the network ties strengthen, the benefits of continued collaboration are worthwhile and that further investment of time and effort in nurturing these ties will deliver a return in the form of new intellectual capital.

On a related theme, trust can be reinforced if the ***norms*** of collaboration and exchange are established, explicit, agreed and sustained in the way that network connections engage with each other. In this context, norms can develop into ‘expectations that bind’ and which allow the parties to hold each other to account if behaviour strays too far from them. In this way, trust and norms of exchange will, in the right circumstances, evolve into a series of ***obligations*** which start to deepen and enrich social capital across the network in ways that increase the motivation to collaborate, reinforce joint expectations that continued collaboration and exchange will add value and, in turn, increase the shared capacity of members of the network to collaborate with greater competence. As Fairtlough (1984) identified from his work looking at the collaboration of experts across organisational boundaries:

> *“People in two companies could rely on each other…This was cooperation which certainly went beyond contractual obligations. It might also have gone beyond enlightened self interest and beyond good professional behaviour, because the scientists liked working together, felt committed to the overall project and felt a personal obligation to help others involved.”*
>
> Fairlough, *p119*

Finally in the relational dimension, the notion of ***identification*** becomes a reliable way of binding members of the network together with a strong sense of collective purpose which reinforces both membership and a willingness to share high-value knowledge and know-how and to sustain cooperation even if setbacks occur, disagreements arise or dead-ends are encountered.

Finally, there may be some overarching ***organisational*** dimensions of social capital formation and use. There may be a variety of ***incentives and rewards*** associated with individuals being prepared to engage in the exchanges needed to develop and use social capital to the benefit of the organisation. These will only rarely involve financial rewards and are more akin to status, recognition, exposure, authority, development, progression and potential. If an individual is investing successfully in the production and sharing of social and intellectual capital which has high utility or even competitive value for the organisation then a rational organisation would also identify that this individual had enhanced their own value and seek to recognise this and bind them ever more closely to it. Much of modern talent management efforts target such employees. In addition, organisations which have open and intellectually curious ***learning cultures*** are more likely to create and nurture an environment where individuals feel safe to bring forward knowledge, ideas, innovations and suggestions which are unusual, uncomfortable or even subversive. In addition, it is clear that leadership plays a part here too. ***Permissiveness*** among leaders which gives freedom and authority to key people with access to rich social capital, can deliver paybacks in many but not all cases. Leaders who are prepared to give employees their backing, even though they know that not all collaborations will work or generate the outcomes they hope for, will preside over teams or functions which feel trusted to suggest new ideas or ways of doing things, which are more engaged and committed to the organisation as a whole and which are enthused both by the prospect of delivering value and better outcomes and by the processes they engage in on the journey.

None of this multi-faceted picture will deliver satisfactorily unless organisations nurture the capacity and resources to translate, implement or exploit the new intellectual capital which results into value-added products, services or insights. Some of the key considerations here are:

1. The capacity of the organisation to capture and ***codify*** both the new intellectual capital it creates through collaboration and the processes it went through to do so. It is very unlikely that these processes will have been either linear or have avoided errors or blind alleys and being able to capture this can help organisational learning and enrich the language and narrative the organisation chooses to ascribe to its collective experiences of collaboration.
2. A clear and strategic sense of how to ***prioritise*** which collaborative enterprises the organisation wishes to invest in. This may not be a straightforward or permanent choice because projects or collaborations based on social capital and knowledge exchange with might be regarded as 'long-shots' early on may quickly emerge as being closer to 'market' later on. So, while prioritisation is important, and should not prevent some projects being terminated if they fail to deliver, it should also be a dynamic part of the process which allows resources to be shifted and reallocated quickly.
3. If collaborative, innovative or niche projects to develop new intellectual capital are to be successful it must also be clear how the organisation is to avoid the outcomes being regarded as being obscure, elitist, esoteric or hard to implement. Thus, early thought about how the know-how developed during the collaboration is to be diffused and ***transmitted*** to the rest of the organisation must be given. Taking time to explain and engage those employees not directly involved in the collaboration, but whose goodwill and expertise might shape how well it is operationalised, is always worthwhile and should start as soon as the new intellectual capital which is being developed appears to be of value.
4. Similarly, it is inevitable that, once it is clear that new ideas are ready to be put into practice a clear approach to ***exploitation*** of this new intellectual capital will be needed. This may mean trialling, prototyping or piloting new products or services which will require a distinctive competence within the organisation to set up and assess the effectiveness and utility of these innovations.
5. The dissemination and embedding of the ***learning*** derived from the process of collaboration will need to be given priority if the organisation wishes to build capability in this area.

6. While it might be tempting to allow 'a thousand flowers to bloom' when nurturing a climate of innovation, it is important for organisations to make sure that collaborations are strategically ***aligned*** within business plans and product development priorities. While this should not reduce the willingness of the organisation to invest in and embrace some of the more subversive or counterintuitive ideas which emerge, an unresolved lack of alignment might act as a barrier to acceptance, diffusion or implementation.
7. A key to the internalisation of the learning from these collaborations and innovations is the capacity to ***evaluate*** both their outcomes and the processes involved in achieving them. This will be important if success is to be replicated, generalised or transferred to other contexts. Strictly, this will mean having at least some tentative 'success criteria' for each initiative so that progress can be monitored or the case for additional resources justified.

So, even organisations full of well-connected, open-minded and sharing people will not necessarily create value if the organisational context – alongside the other 'dimensions' of rich social capital set out in this model – does not 'nurture' the development and use of its intellectual and network resources. One of the ways that businesses have tried to operationalise the sometimes intangible promise of connectedness, goodwill and network capital that resides in their employees is to invest in software 'solutions' which can 'codify', operationalise and deliver outputs which can be commercially exploited. These have come to be known as 'Enterprise Social Networks' and they represent one of the most sophisticated ways that the humble and serendipitous 'conversation' can provide the raw material for a sophisticated knowledge management ecosystem.

Enterprise Social Networking (ESN)

Facilitating conversations at work through technology has a long history. It is perhaps unsurprising that some of the technology companies themselves have used their own products to engage employees. In 2002, Sam Palmisano, CEO of IBM initiated a company-wide project to review its values and to assess the cultural readiness to innovate. In 2003 he invited all IBM employees to join what was called a 'ValuesJam' to engage with these issues on the corporate intranet. About 50,000 of them did so and collectively contributed more than 10,000 comments as part of the 72 hour online debate. Detailed analysis of the comments (via the specially tailored 'Jamalyzer' tool) led to follow-up surveys and focus groups among staff and a meeting of 300 senior executives. Among other outputs, the ValuesJam resulted in a re-statement of what it meant to be an 'IBMer'. It suggested that IBMers:

- are forward thinkers. We believe that the application of intelligence, reason and science can improve business, society and the human condition;
- love grand challenges, as well as everyday improvements. Whatever the problem or the context, every IBMer seeks ways to tackle it creatively — to be an innovator;
- strive to be first — in technology, in business, in responsible policy; and
- take informed risks and champion new (sometimes unpopular) ideas.

Of course, high-profile initiatives like this can represent landmarks on a journey towards more open, inclusive and conversational approaches to engaging employees but they also risk being too monolithic and static to create a sense that such conversations should be continuous, more local and dynamic. There was also a challenge for IBM in that well over a third of the contributions to the ValuesJam contained direct criticisms and complaints which challenged the CEO to make more fundamental challenges. Here is one example:

> *"You can say you're innovative, you can write stories about what you think are examples of innovation in your organization, but unless you actually give employees the tools and resources they need to innovate, you are not going to have a culture of innovation."*

As we have seen, creating a climate where social capital, rich conversations and the creation of new intellectual capital on a sustainable basis requires considerable, multi-layered and continuous efforts. Technology can be a helpful and even democratising tool but should not be seen as a panacea. At about the same time as the ValuesJam, Thomas Davenport and Laurence Prusak (2000) were issuing warnings to employers about being seduced by the appeal of technological solutions to the challenge of delivering the conversational benefits of enhanced connectivity and social capital:

> *"The availability of Lotus Notes does not change a knowledge-hoarding culture into a knowledge-sharing one, alas. The medium turns out not to be the message and does not even guarantee that there will be a message."*
>
> Davenport and Prusak

If we want our organisations to become more 'conversational' we will, inevitably, need to confront the challenge of harnessing technology and its role in bringing people, data and know-how together. In the age of social media, it is increasingly clear that many employees are looking to their employers to echo their private experiences of the immediacy and dynamism of their non-work social connectivity in the ways they connect with colleagues. Offering an employee experience which permits sharing, gives a 'voice' and allows online communication and 'chat' is increasingly part of the set of expectations which members of the millennial workforce has of their employers (Bevan, 2016). For some this means using tools to connect employees which are either the 'enterprise' versions of platforms such as Facebook or LinkedIn, or which mirror or build on some of their functionality. There are now a number of commercially available tools which have multi-layered features which can connect individuals and groups, stream live video, conduct 'pulse' surveys, convene *ad hoc* teams or help multi-functional groups access real-time data about projects, budgets and campaigns. Indeed, the use of such platforms has started to come under recent academic scrutiny (Mäntymäki and Riemer, 2016; Wehner, Ritter and Leist, 2017).

ESN platforms typically combine multiple social technologies with the goal to support collaboration among business users and can be defined at a technical level as:

> *“...web-based platforms that allow workers to (1) communicate messages with specific co-workers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular co-workers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing.”*
>
> Wehner, Ritter and Leist, 2017

Mäntymäki and Riemer (2016) carried out a study of 233 users of the ESN platform Yammer in 5 companies. They developed four measures of different uses of the ESM platform:

- Problem solving – ‘ESN use to obtain solutions for work problems’.
- Ideas and work discussion – ‘ESN use to obtain ideas and participate in work-related discussions’.
- Events and updates- ‘ESN use to give and receive updates on events and topical issues in one’s work environment’.
- Task management – ‘ESN use to manage and co-ordinate tasks with colleagues’.

In addition, they carried out qualitative analysis of the extent to what they called ‘informal talk’ or casual non-work interaction with colleagues influenced the frequency and quality of the four measures and, ultimately, whether increases in the positive linkages between ‘informal talk’ and these four measures resulted in distinctive increases in the ‘value’ derived from using the ESN. Informal talk was defined as ‘ESN use for discussions related to matters of general interest that are not related to work, such as sports, news, and politics.’ The definition of ‘value’ in this context was ‘The evaluation of the benefits of using an ESN for obtaining, processing and distributing work-related information when compared against the respective costs’.

Analysis of the use of the ESN by these users and their responses to evaluative questionnaires identified that rich and frequent ‘informal talk’ contributed to positive scores on the four main measures and that, within these, all but ‘events and updates’ contributed positively to the overall measure of ‘value’. The authors concluded that, using Yammer in these ways yielded positive results through its ability to convert informal interactions into knowledge creation.

> *“In addition to improving connective knowledge sharing by making people’s interactions and connections visible to others our results suggest that ESN can become valuable for communal knowledge sharing by offering a space for crowdsourcing ideas and insights. In other words, ESN facilitates continuous sharing of information formally and informally. These ‘knowledge conversations’ in turn are essential for knowledge creation.”*
>
> Mäntymäki and Riemer, p1050

Despite everything, ESNs remain tools which can be used to connect people only if they feel empowered and motivated to be connected. There are several studies which show that, despite the allure of platforms such as Workplace by Facebook, Scoro, Yammer or

Asana, barriers still remain which suggest that they may frequently struggle to deliver what they promise. These include their focus on the quantity of connections rather their quality or richness, their strength as informal connectors of individuals versus their weaknesses in more sophisticated knowledge-management, document and resource curation and the way some lack searchability by expertise. The challenge remains to find ways for technology to avoid 'over-engineering' knowledge exchange to play a more organic part in connecting people without impeding the serendipity and richness of conversations which naturally occur in organisations.

The Conversational Company – The Role of Leaders and HR Professionals

In an increasingly knowledge-based economy, organisations are coming to realise that they are the custodians of a set of intangible assets whose potential often goes unrealised. In this paper we have established that conversations between colleagues – whether random or engineered - can be the raw material of social capital, knowledge exchange and the creation of new intellectual capital. We have tracked the place of conversations in organisational life from being a way of coping with routine, long-hours and alienating work to being the currency of rich and sophisticated webs of influence, communities of interest and value creation. So how do businesses 'unlock' these conversational assets by building on their richness, their spontaneity and the fact that part of their value lies in their randomness and serendipity?

Getting the balance right between nurturing a social capital 'ecosystem' and forcing a 'factory farming' approach to new ideas and innovation is principally down to leaders (Arena and Uhl-Bien, 2016), and HR professionals and to the quality and implementation of people processes. So, what should the agenda be for those organisations which wish to tap into the potential of conversations among their employees?

We think that there are ***eight*** dimensions of leadership and HR practice which might be critical here, and they are set out in Table 1 below.

Table 1 Leadership & HR Enablers of Productive Social Exchange

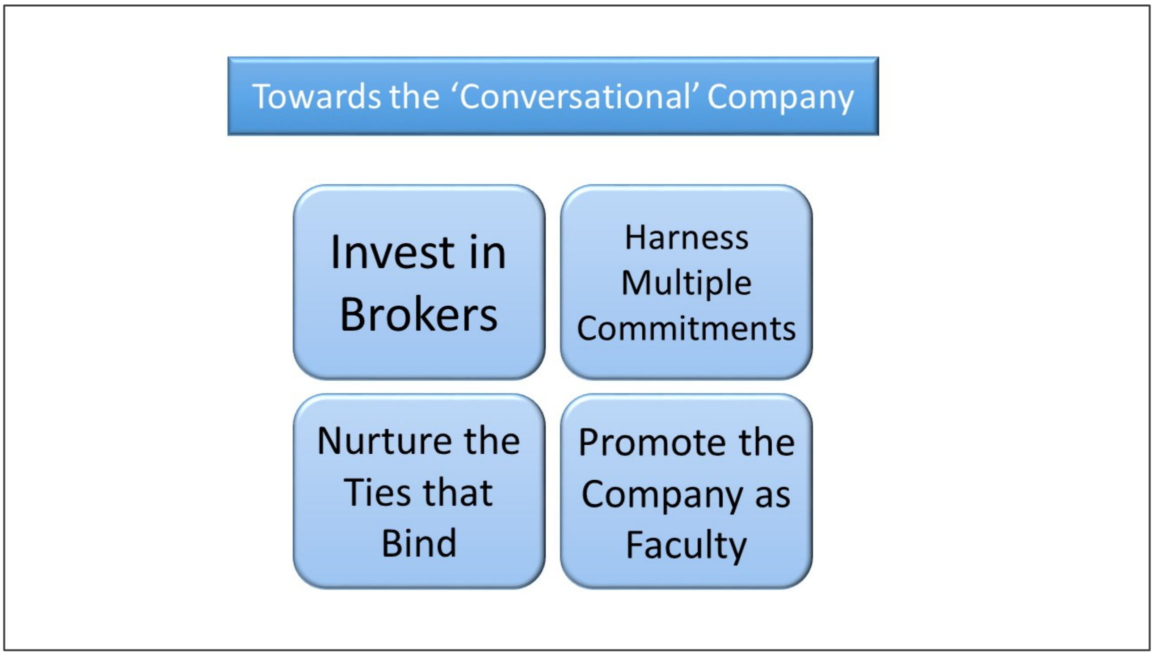
Dimension of HR	Impact on Social & Intellectual Capital Value Creation
Rewards & Incentives	Employees see rewards & incentives in much broader terms than cash alone and the 'soft' signals they get from leaders about the behaviours which are valued can be very powerful. This means that messages about knowledge-sharing, collaboration, developing expertise, working across 'silos' and acting in the collective interest can be reinforced by what they think is valued and rewarded. Conflicting messages are worth avoiding – expecting collective endeavour but paying people according to their individual outputs can be confusing and damaging.
Performance Management	An often under-emphasised aspect of performance management is the opportunity these conversations give to discuss the roles people are expected to perform and how these fit into the wider picture of organisational 'purpose'. Employees may have specific strengths – beyond the confines of their core jobs – as knowledge curators, network brokers, subject-matter experts, disseminators or conveners in the process

	of converting social capital into intellectual capital. Using performance management to clarify and agree these roles can be both beneficial to the business and motivational to the employee.
Career & Talent Management	Developing the 'connective' capacity of all employees – not just the mega-talented – can be an energising and enriching process. Using career and talent management conversations to look at the developmental opportunities inside (or outside) the organisation which can nurture this experience and expertise will allow more opportunities for cross-functional or lateral job movement, give employees the confidence to volunteer for company-wide projects and help everyone see further opportunities to enhance and broaden their contributions. This may also unlock new insights into effective talent retention strategies.
Employee Voice	The development of rich social capital inside a business can only go so far if everybody just obeys the rules or sticks to an explicit knowledge-sharing protocol. But sometimes true innovation and sharing comes from local collaborative acts based on curiosity, a hunger to resolve a persistent problem or an opportunistic effort to take advantage of a gap in knowledge or practice. Leaders must create an environment where taking individual initiatives, from the bottom up (even if many fail) is regarded as a community obligation rather than an unforgivable risk.
Line Manager Capability	The creation of social and intellectual capital in the ways discussed in this paper cannot be encouraged or delivered through a directive, 'command & control' or Tayloristic line management philosophy or style. Managers need to communicate why knowledge-sharing and connected conversations are important activities, then set a 'permissive' tone, secure time and resources for their teams and then get out of the way. Of course, encouragement, mentoring, coaching and creating a sense that innovation and connectivity are essential components of agility are also important parts of the line managers' role – as is admitting that you don't have all of the answers.
Work Organisation & Job Design	Social capital, knowledge-sharing, collaborations and co-production all work better if the structure of the organisation, the boundaries between functions, geographies and job roles are relatively fluid, flexible and porous. Organisation charts and job descriptions often emphasise hierarchy, delegated authority, financial responsibility and accountability for risk and governance. While each of these is important, if they stifle or inhibit the free flow of ideas or the creation of value through the subversion of bureaucracy, then it may be time to review what is really important.
Culture & Climate	Permissiveness, trust, mutuality, a balanced approach to 'risk', a willingness to embrace novelty, a recognition that casual conversational exchange – even on non-work issues – can generate useful connections or ideas, all play a part in creating a climate within which social capital can thrive in a business. Thinking about what this means in terms of promoting autonomy, teamworking, a learning culture and a willingness to contribute your best ideas must be part of the way organisations align their cultures to the get the added value they need to survive, perform and – ultimately – compete.
Agility & Change Readiness	The journey between rich social connectivity in organisations and new intellectual capital is rarely linear and nor is it ever neatly planned. The development of core capabilities in the realms of social networks, information-sharing, collaboration and joint problem-solving are essential to both value creation and agility. Being able to harness these capabilities swiftly and opportunistically can often be more important than always getting the right answer. As businesses recognise that their collective agility and change-readiness can make all the difference between being first to spot and exploit an opportunity and coming a worthy second place, those which are best at nurturing a conversational climate are going to be in the best place to succeed.

When Donald Roy adopted his immersive, ethnographic techniques to observe conversations among manufacturing workers in the late 1950's his focus was on informal exchanges as an antidote to routine and intense work conditions. Today, we are much more likely to see conversations at work as the way that social capital is nurtured, knowledge assets are exchanged, and new intellectual capital is created. To some extent this has meant going way beyond the innocence and immediacy of the casual work conversation and towards a more deliberate fostering of conversations and social capital which help serve the wider interests of businesses who are seeking to compete in the knowledge economy. While for Roy, something as quirky as 'Banana Time' represented an example of conversations which make the routine of work more bearable, today we are trying to find a modern equivalent which does not squeeze out the spontaneity and humanity of casual social interactions at work.

In essence, we think there are four primary 'pillars' of developing a modern 'conversational' company which can do this, and these are set out in Figure 3, below.

Figure 3 Four Pillars of the Conversational Company



The four pillars require a distinctive new approach from organisations, their leaders and their employees:

- ***Invest in Brokers***: either because they are natural 'connectors' or because they are encouraged to develop into these roles, some employees need to occupy a 'brokerage' position in the organisation if social capital is to develop and is to be an asset which the business can exploit. Brokers can be very influential, yet their role can be hard to prescribe. Their strengths lie not just in their connective capability but also in their entrepreneurial disposition. Organisations which recognise, nurture and empower their 'brokers' will have an advantage in developing their conversational capabilities;

- ***Harnessing Multiple Commitments:*** employees are increasingly aware of the power of their networks, both within and beyond the boundaries of the organisation. Research is now telling us that they regard know-how and connectivity as commodities which transcend these boundaries. As such, leaders should seek to harness the multiple commitments which their employees have and make it easier for them to link into their work, social, political, professional, sporting and leisure contacts to enrich the conversations they have at work. This can represent a challenge to those leaders who have been drilled into thinking that engagement with, and commitment to, the business is the only thing that matters;
- ***Nurture the Ties that Bind***: Being a conversational company means looking at connectivity, knowledge-sharing and social capital through a different lens. It is no longer enough to make a binary judgement about whether a connection is ‘functional’ or dysfunctional’ using traditional criteria. Social network analysis – a set of tools which are increasingly being used by businesses to analyse the patterns of social connection which employees have with colleagues, collaborators, suppliers, customers etc – can shed light on the ‘ties that bind’ people together and how they may be used to advance the goals of the business. This, perhaps more than other examples, illustrates why some of the 20th century conceptions of ‘human capital’ management have been superseded by the idea of social capital. The challenge now is to reduce our reliance on human capital techniques which emphasise the ‘sweating of assets’ and ensure that ‘social capital management’ becomes a competence with which the next generation of leaders and line managers are increasingly familiar;
- ***Promote the Company as ‘Faculty’***: the ‘learning organisation’ was always an aspiration for businesses which recognised that skills, competence and know how needed to be invested in and to be refreshed. There are, of course, many businesses which have an impressive record of investment in learning and development, especially those for whom technology is developing rapidly and where being ‘ahead of the curve’ is an essential component of competitiveness rather than a ‘nice to have’ indulgence. A truly conversational company, however, must go beyond this state of affairs and must strive to attain something akin to what might be called ‘Faculty’ status. By this we mean that learning, sharing, curiosity and inquiry are woven into the fabric of the way the organisation does business. It means that all internal and external stakeholders become active participants in learning, knowledge-sharing and the creation of new intellectual capital. It means that the hoarding of knowledge and the narrow pursuit of individual initiatives to the detriment of the wider community are discouraged. It means creating a networked, knowledge-sharing and learning ‘ecology’ and it means exercising ‘stewardship’ over knowledge and the networks which generate them. Once again, leaders must set the tone here and set good examples through their own behaviour by supporting and enabling their colleagues to play a full part in the ‘faculty’ model.

The ’knowledge economy’ is both an elusive and compelling idea which demands that all organisations think hard about what really differentiates them from their competitors or makes them a sought-after collaborator. In many cases the answers lie in the embedded, tacit and intangible knowledge, expertise, experience, connections and know-how of their people. Conversations – whether spontaneous or engineered, whether mediated via a water cooler or Yammer – are almost always the building blocks of valuable innovation and knowledge exchanges. They are assets which need to be curated with care and with purpose.

References

Arena M J and Uhl-Bien M (2016), Complexity Leadership Theory: Shifting from Human Capital to Social Capital, *People and Strategy*, 39(2), pp 22-27.

Baker W (2012), *Achieving success through social capital: tapping the hidden resources in your personal and business networks*, San Francisco: Jossey-Bass.

Baldoni J (2018), The reciprocity ring: when giving at work becomes an act not a check, *Forbes Magazine*, March 29.

Bevan S (2016), What can we learn from HR's emerging talent? *HR Magazine*, 13 July https://www.hrmagazine.co.uk/article-details/what-can-we-learn-from-hrs-emerging-talent (accessed 4 June).

Bourdieu P (1986), The forms of capital. In J G Richardson (Ed) *Handbook of theory and research for the sociology of education*, pp 241-258, New York: Greenwood.

Brinkley I (2008), *The Knowledge Economy: How knowledge is reshaping the economic life of nations*, London: The Work Foundation.

Burt R S (2001), *Structural Holes: The Social Structure of Competition*, Cambridge MA: Harvard University Press.

Burt R, (2005), Brokerage and Closure: An Introduction to Social Capital, *Administrative Science Quarterly*, 52(3), 482–485.

Carnabuci G and Dioszegi B (2015), Social networks, cognitive style and innovative performance: a contingency perspective, *Academy of Management Journal, 58*(3), pp 881-905.

Carter A and Varney S (2018), *Change capability in the agile organisation*, Brighton: Institute for Employment Studies.

Carter D R, DeChurch L A, Braun M T and Contractor N S (2015), Social Network Approaches to Leadership: An Integrative Conceptual Review, *Journal of Applied Psychology*, 100(3), pp 597–622.

Cohen D and Prusak L (2001), *In Good Company: How Social Capital Makes Organizations Work*, Harvard Business School Press.

Collinson D (2002), Managing Humour. *Journal of Management Studies, 39(3)*, pp 269-288.

Davenport T and Prusak L, (2000), Working Knowledge: How organizations manage what they know, *Ubiquity Magazine*, August, Article 6.

Economic and Social Research Council (2005), *Knowledge economy fact sheet*, Swindon: ESRC.

Fairtlough G (1994), *Creative compartments: A design for future organisations*, London: Adamantine Press.

Fang R, Landis B, Zhang Z, Anderson M H, Shaw J D and Kilduff M (2015), Integrating Personality and Social Networks: A Meta-Analysis of Personality, Network Position, and Work Outcomes in Organizations, *Organization Science,* 26(4): pp 1243-1260.

Fleming L, Mingo S, and Chen D, (2007), Collaborative Brokerage, Generative Creativity, and Creative Success, *Administrative Science Quarterly*, 52 (Sep.), 443–475.

Freeman L C, (2004). *The development of social network analysis: A study in the sociology of science*. Vancouver, BC: Empirical Press.

Granovetter M, (1973), The strength of weak ties, *American Journal of Sociology,* 78(6), pp 1360-1380.

Groysberg B and Slind M, (2012), Talk, Inc.: *How Trusted Leaders Use Conversation to Power their Organizations*, Harvard Business Review Press.

Hansen M T, Mors M L and Lovas B, (2005). Knowledge sharing in organizations: Multiple networks, multiple phases. *Academy of Management Journal*, 48(5), pp 776–793.

Hirsh W, (2018), *Effective performance, development and career conversations at work*, HR Network Paper 138, Brighton: Institute for Employment Studies.

Hollenbeck J R and Jamieson B B, (2015). Human capital, social capital and social network analysis: implications for strategic human resource management, *Academy of Management Perspectives*, 29(3), pp 379-385.

Hutton W, (2017). As corporate goliaths grow ever larger, Britain looks increasingly exposed, *The Observer*, 10th December, https://www.theguardian.com/commentisfree/2017/dec/10/corporate-goliaths-grow-ever-larger-britain-increasingly-exposed (accessed 2 June 2019).

Jefferson T (1905), *The writings of Thomas Jefferson*, in A A Lipscomb and A E Bergh (Eds), 20 volumes, Washington: Thomas Jefferson Memorial Association.

Kogurt B and Zander U (1996), What do firms do? Coordination, identity and learning, *Organisation Science*, 7, pp 502-518.

Mäntymäki M and Riemer K, (2016),_Enterprise social networking: A knowledge management perspective, *International Journal of Information Management*, 36(6) Part A, pp 1042-1052.

Mazzucato M (2019), *The value of everything: making and taking in the global economy*, London: Penguin Books.

Nahapiet J and Ghosal S (1998), Social capital, intellectual capital and organisational advantage, *Academy of Management Review*, 23(2) pp 242-266.

Nonaka I and von Krogh G, (2009). Tacit knowledge and knowledge conversion: Controversy and advancement in organizational knowledge creation theory. *Organization Science*, 20(3), pp 635–652.

Pfeffer J and Sutton R I (1999), The Smart-Talk Trap, *Harvard Business Review*, May_june.

Quinn J B (1992), *Intelligent enterprise*, New York: Free Press.

Roy D F (1960), Banana time: job satisfaction and internal interaction, *Human Organisation*, 18, pp 90-118.

Simon, H A (1991), Bounded rationality and organisational learning, *Organisation Science*, 2, pp 125-134.

Turco C L (2016), *The Conversational Firm: Rethinking Bureaucracy in the Age of Social Media*, Columbia University Press.

Unger R M, Stanley I, Gabriel M and Mulgan G (2019), *Imagination unleashed: Democratising the knowledge economy*, London: NESTA.

Wehner B, Ritter C and Leist S (2017), Enterprise social networks: A literature review and research agenda, *Computer Networks*, 114, pp 125-142.

Zarraga C and Bonache J, (2003). Assessing the team environment for knowledge sharing: An empirical analysis. *International Journal of Human Resource Management*, 14(7), pp 1227–1245.

About IES

IES is widely respected for its knowledge, insight and practical support in HR, OD, L&D and people management issues. The Institute combines expertise in research with its practical application through our consultancy work. Our approach is based on:

- building, exploiting and sharing the evidence base
- independence, objectivity and rigour
- considering the whole people system, not just the individual parts
- delivering practical, sustainable business benefits
- building our clients’ capabilities rather than their dependence.

Whatever your professional and HR needs, get in touch:

T: 01273 763400
E: askIES@employment-studies.co.uk