TECH3022-18 Social Media Practice

**Lecture Fifteenn: Collective Intelligence**

1   Collective Intelligence

Pierre Levy advocates that the modern business organisation should be thought of as a "knowledge community" (Levy, 2013, p. 104). Explain how wikis can be used to support shared and collaborative project working.

According to Pierre Levy "we need to promote organisational cultures and technical environments conductive to transparency, flexible reorganisation of skill networks and continuous collaborative creation of immediately usable knowledge" (Levy, 2013, p. 104).

"This community develops, shares and uses knowledge in a way that is reflexive, or self-aware, and which is able to think about its own forms of organisation an modelling.

As Levy describes this, "the work of self-modelling that allows the community to synthetically represent itself to itself its own emergent cognitive processes."

This means that an organisation has to think about how it thinks, and what it expects to get from different types of thinking.
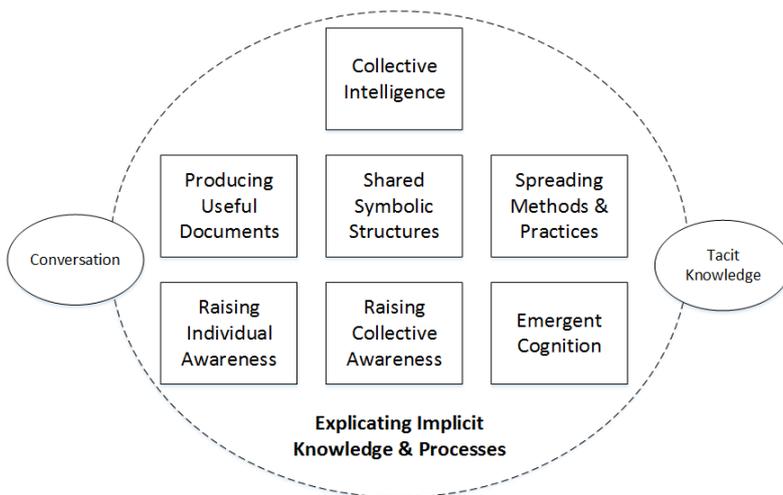
1.1   Effective Methods

Levy explains that "whether we are producing useful documents, clarifying or improving shared symbolic structures, spreading the most effective methods and practices or raising individual and collective awareness of the emergent cognition for the community, we will almost always find our-selves confronted with the problem of explicating implicit knowledge and processes."

What Levy suggests, then, is that an organisation has to look at the way that it supports conversation and the sharing of tacit knowledge, as much as the way that it shares formal and previously established knowledge.
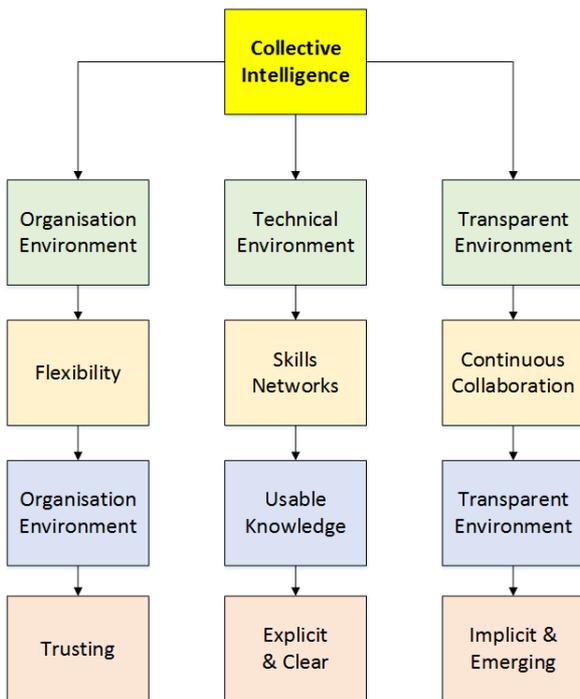
Levy believes that "we need to promote organisational and technical environments conductive to transparency, flexible reorganisation of skill networks and continuous collaborative creation of immediately usable knowledge."

This means fostering a dialogue within an organisation that is trusting and allows people to comprehend the differences between knowledge that is explicit and clear, and knowledge that is implicit and emergent.

2   Wiki Collaboration

A wiki is a good examples of an electronic tool that allows people to manage knowledge within an organisation because it is based on collaboration, sharing and co-development, rather than delineated expert knowledge that is maintained through internal processes of hierarchal endorsement, such as professional qualifications and roles.
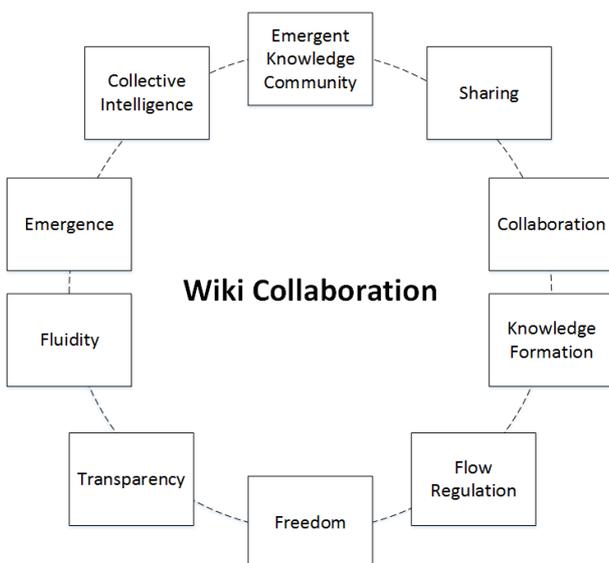
A wiki offers emergent knowledge communities the opportunity to share and to collaborate in the formation of knowledge, and to regulate the flow of personal information as well as the flow of formal information.

Jason Mittell defines the principles of wikis as being characterised by a sense of Freedom, Transparency, Fluidity, Emergence and Collective Intelligence (Mittell, 2013).

2.1 Freedom

- Wikis are therefore open to a wide range of uses beyond traditional forms of knowledge organisation, and they can be used for collaborative authoring, projects, organising documents or sharing information.
- Wikis are non-hierarchical and are open to different contributors to create and post entries.
- Readers of wikis are free to navigate the pages via hyperlinks, key word searches, random pages, and so on, without a defined 'route' through the wiki (i.e. a contents page).

2.2 Transparency

- Wikis show and track what changes have been made to an entry and by who.
- As a community of users this is non-hierarchical and promotes non-hierarchical working based around the discussion components of the wiki that allow contributors to edit, re-edit and compare different versions of an entry while posting.
- Any contributor can make and edit an entry, without a 'hierarchy' enforcing an editorial policy. If there is a dispute then it is discussed in an open manner.
- Wikis trace and show the work that went into producing them.

2.3 Fluidity

- Wikis are easy to display content that can be read on a wide range of browsers.
- Wikis can be edited and updated easily, while linked to different pages, sources of content or external media files.
- Pages in a wiki are always changing and being updated. Contributors then 'watch' a page to see if it is added to or amended by other contributors.

2.4 Emergence

- Wikis are not organised centrally, and they are not planned.
- They rely instead on the posting of entries by participants who decide between themselves which entries should be made.
- The reader is free to navigate a wiki in a similar manner.
- The principles that shape the wiki are decided on by the users who form the community of interest based around the subjects and the topics covered.
- Disputes are managed through a process of resolution and compromise, which looks to other sources of information as a point of expression in an ongoing debate.

2.5 Collective Intelligence

- Wikis allow for the tracking and discussion of ongoing projects.
- In this way wikis open up the possibility that we can manage a project by pooling the collective resources and knowledge of the different user's active in the project.
- So, rather than relying on a centralised management authority to validate the knowledge demonstrated in a wiki, the users and the readers of a wiki are able to discuss and add comments and suggestions for improvements, and to mark instances of information that is yet to be verified for later updates.
- In this way a wiki is said to be able to exceed the capabilities of the individual and produce a wider-ranging model of knowledge that draws on a cognitively diverse range of sources.

3 Open Source Collaboration

According to Pierre Levy, collective Intelligence refers to the 'cognitive capacities of a society, a community or a collection of individuals' (Lévy, 1997).

What does an Open Source approach to collaborative work entails?

3.1 Collective Knowledge
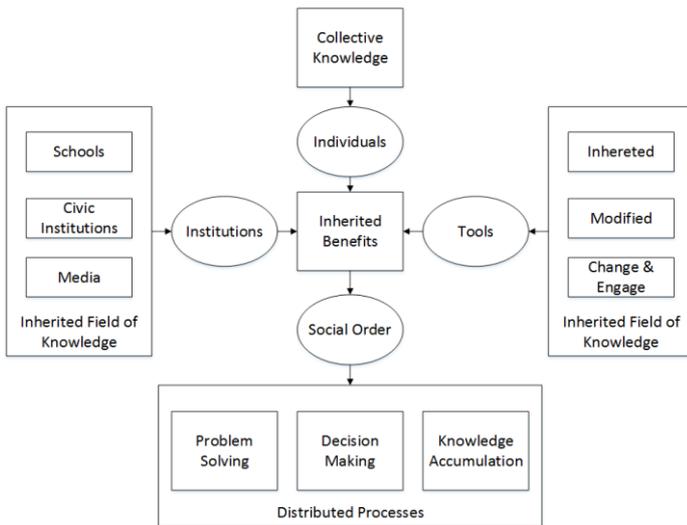
Levy argues that as individuals we inherit the benefits of the collective knowledge of our society, such as the institutions and the tools that are used to give shape and order to social life.

Schools, civic institutions, the media, and so on, are all examples of this inherited field of knowledge, as we do not create them anew, but inherit them and add to them or change them as we engage with them.

Alternatively, according to Levy, we also inherit 'distributed processes of problem solving, decision making and knowledge accumulation.'

3.2   Collective Intelligence
These processes have emerged from the conversations and interactions that take place in society.

Levy suggests that in a democracy, as well as recognising individual forms of intelligence we are also able to recognise collective forms of intelligence as contributors participate in these decision-making process and the collaborative production processes of an open society.

A society that allows people to make a contribution of their own free will, rather than being forced or having a sense of discipline imposed on them.
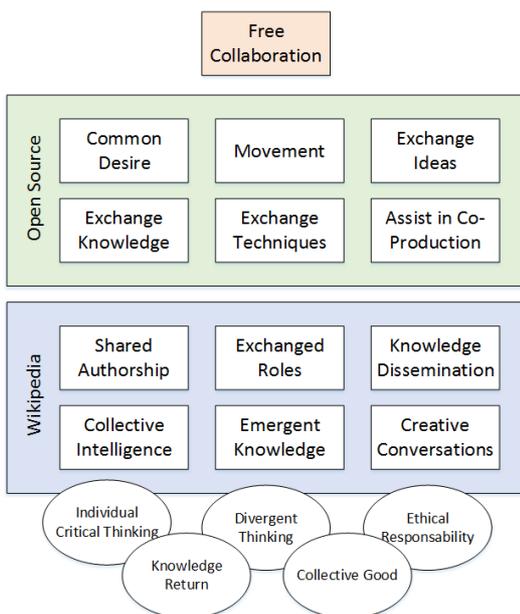
3.3   Free Collaboration

Levy gives the example of the Open Source movement as one in which work is based on free collaboration between programmers and designers who share a common desire to exchange ideas, knowledge and techniques in the production of software.

Levy cites Wikipedia as an example in which 'authors, readers and editors exchange roles to further the dissemination of knowledge,' and are therefore a 'striking example of the power of collective intelligence emerging from a civilised creative conversation'.

Levy believes that collective thinking opens-up more space for individual critical thinking, rather than imposing a form of standardisation and conformity because we have a moral obligation to enrich and return knowledge back to our community for the common good.

As Levy argues, 'collective intelligence can only be productive by combining or coordinating unique elements and facilitating dialogue, and not by levelling differences or silencing dissenters'.

4   Knowledge Producers
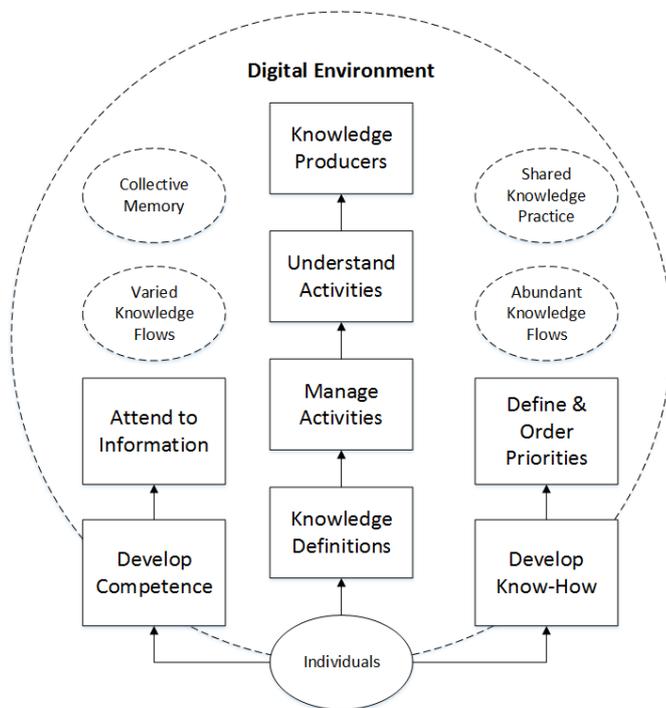
Knowledge producers are therefore required to understand and to manage their activities in the digital environment in ways that cope with the varied and abundant flows of knowledge that are around us.

All that can be known can't be learnt by any single person, so according to Levy, we have to learn ways to control how we attend to information, how we define and order our priorities and how we develop an effective level of competence in the know-how that we think we will need.

A wiki is therefore a useful place for us to develop our skills as knowledge producers in that we can use a wiki to organise, share, technically support, reorganise and collaborate with others who are interested in similar forms of knowledge.

Wikis can be thought of as a 'collective memory' in which the implicit and local know-how that is embedded in our conversations is transformed.
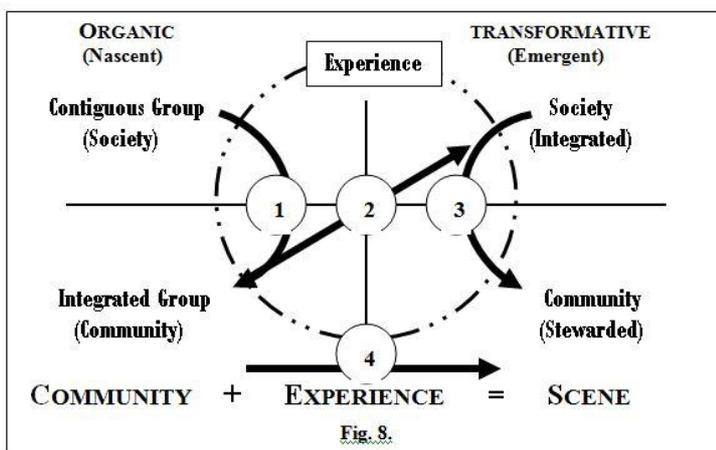
5 Communities of Practice

According to Etienne Wenger "communities of practice are everywhere."

They exist within, across and through different organisations as a set of informally constituted practices that can be thought of as "self-organising systems," through which we share our "capacity to create and use organisational knowledge through informal learning and mutual engagement" (Etienne Wenger in Lesser, Fontaine, & Slusher, 2000, p. 3).

Explain how you might improve the digital literacies of a collaborative project group?

Wenger suggests that "since the beginning of history, human beings have formed communities that accumulate collective learning into social practices – communities of practice" (Etienne Wenger in Lesser et al., 2000, p. 4).

5.1 Knowledge Strategies

Fig. 8.

Wenger asks, however, "if communities of practice are the natural stewards of knowledge in an organisation," then we might need to figure out what a "knowledge strategy" looks like that "takes this as its foundation?"
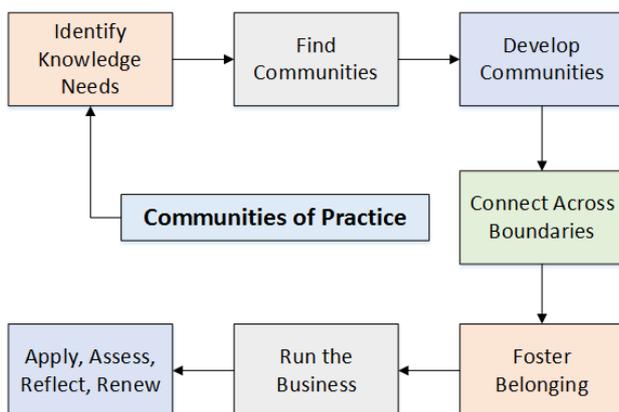
5.2 Knowledge Communities
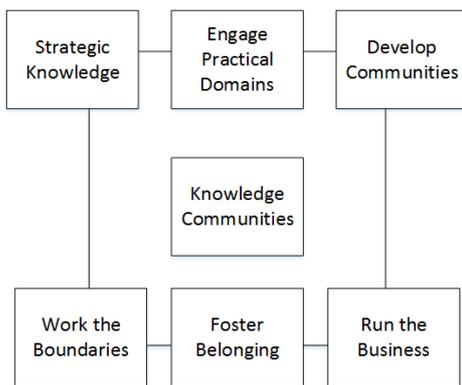
Wenger suggests that we try to identify its overall shape of the knowledge community, and pay attention to "seven basic steps grouped into four streams of activity:

- Understood strategic knowledge needs: what knowledge is critical to success?
- Engage practice domains (find communities): where will people form communities around practice they can engage in and identify with?
- Develop communities: how to help key communities reach their full potential?
- Work the boundaries: how to link communities into broader learning systems?
- Foster belonging: how to engage people's identities and sense of meaning?
- Run the business: how to integrate communities of practice into running the business of the organisation?

Apply, assess, reflect, and renew; how to deploy a knowledge strategy through waves of organisational transformation" (Etienne Wenger in Lesser et al., 2000, p. 5).

In attending to these steps, then, Wenger argues that we "will need to nurture communities of practice that grow and maintain these capabilities" (Etienne Wenger in Lesser et al., 2000, p. 7).

5.3 Communities of Practice

Wenger Lists the steps that need to be undertaken (Etienne Wenger in Lesser et al., 2000, p. 8):

- **Step 1: Identify the Knowledge Needs** and figure out what is critical and what does not make a difference.

- **Step 2: Find Communities** by looking for instances of personal engagement and passion for a topic within a group or social situation.

- **Step 3: Develop Communities** by supporting the "ongoing mutual engagement" therefore making the "community real as an experience," and weaving it into "the social fabric necessary to support joint learning" (Etienne Wenger in Lesser et al., 2000, p. 10).

- **Step 4: Connect Across Boundaries**, because "communities of practice do not exist in isolation.

Their effectiveness is not a matter of their internal development alone, but also a matter of how well they connect with other communities and constituencies inside and outside the organisation" (Etienne Wenger in Lesser et al., 2000, p. 11).

- **Step 5: Foster Belonging**, because "without personal engagement and passion for the topic, communities of practice will not thrive" (Etienne Wenger in Lesser et al., 2000, p. 8).

- **Step 6: Run the Business**, however, "unlike task-oriented teams, which can be pulled together and charted with a predefined goal, communities of practice must grow organically as their leaning unfolds.

They are dynamic by definition. They will only work if people identify with the enterprise and the learning agenda that the community pursues.

Only then will members keep coming together and investing themselves in pushing the community and its practice forward" (Etienne Wenger in Lesser et al., 2000, p. 9).

- Step 7: Apply, Assess, Reflect, and Renew – Build Momentum by learning from experience.

And as the process spreads, communities are able to set up a practices that support community development.

"It includes community leaders, knowledge managers, and members of the support team.

It collects stories and publicises them. It creates connections between initiatives.

It reflects on the whole process, accumulates insights about how to base a knowledge strategy on communities of practice and builds its own knowledge base" (Etienne Wenger in Lesser et al., 2000, p. 17).


6 Bridge Building

According to Wenger, "when it is not so clear what the domains of competence are, it is important to let communities of practice emerge in less predictable ways" (Etienne Wenger in Lesser et al., 2000, p. 9).

This is different from formal and bounded sets of practice, and requires a sense of bridge-building in which members of the community of practice "translate or suspend judgement," and suspend who they are and instead open their identity" (Etienne Wenger in Lesser et al., 2000, p. 12).

Wenger suggests that "communities of practice truly become knowledge assets when their core and boundaries are active in complimentary ways.

Knowledge organisations must understand the processes by which these communities interact.

6.1 Boundary Objects
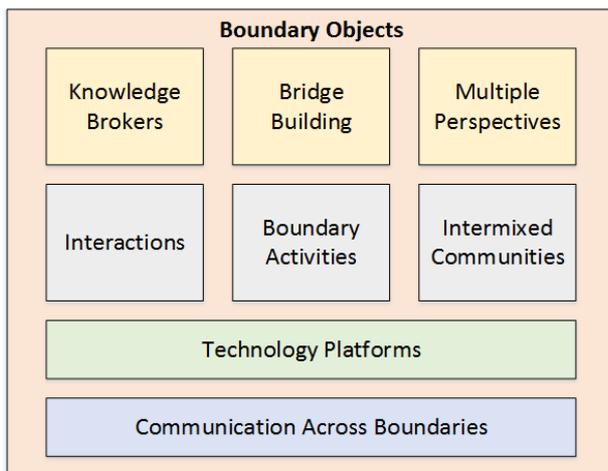
Bridges across practices can take many forms:

- People whose multi-membership allows them to act as 'knowledge brokers' across boundaries (this is often the tacit role of first-line managers).
- Boundary objects that can accommodate multiple perspectives (e.g., a well-written contract or design proposal).
- Boundary activities, interactions, and even practices that force people of various communities to rub their experiences and perspectives.
- Technology platforms that make communication across boundaries easier.

7 Leverage

Therefore, as Wenger points out, "we need to build organisational and technological infrastructures that do not dismiss or impede these processes, but rather recognise, support, and leverage them.

Communities must connect with each other and with other groups to create broader learning systems both inside and across organisations" (Etienne Wenger in Lesser et al., 2000, p. 13).

"The real opportunity presented by communities of practice," according to Wenger, "lies in connecting professional identities directly with the actual functioning of the organisation: that it lets those who own the knowledge steward it, and integrates the stewarding of knowledge into the running of the business" (Etienne Wenger in Lesser et al., 2000, p. 15).

And so, "organisations should count on communities of practice to produce or gather the knowledge necessary to run the business and involve them in decisions that have to do with their domain of expertise" (Etienne Wenger in Lesser et al., 2000, p. 16).

8 References

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