

Algorithmic Communication

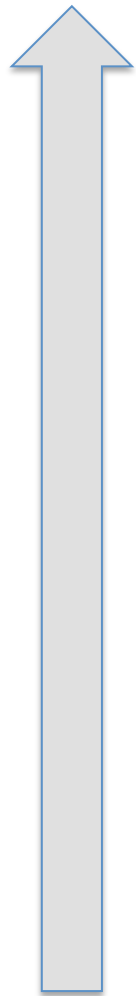
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Evolution of Media



Algorithmic

Ubiquity of data and processors, general interconnection of people and content, automates manipulation

Typographic

Mass media, automates reproduction and diffusion

Literate

Lighter symbols (alphabet, paper), augments manipulation

Scribal

Lasting symbols, augments memory

Oral

Transient symbols, supports thought and symbolic knowledge

The Shift in Communication

Typographic

- Industrial augmentation of message reproduction.
- Short, moving, rare, indispensable information.
- Typographic messages attached to copies, sold.
- Broadcasters tell people what they want to hear (news, fictions) or teach them what they must understand.

Algorithmic

- Industrial augmentation of message transformation.
- Immense data sets.
- Algorithmic messages are ubiquitous and often « open ».
- Automation of social exchange, production, analysis, synthesis and contextualization of data. Empowerment of collective intelligence.

The Speed of Change

Connected world population

1994, Year 0 of the Web: – 1% connected

2014, 20 years later: + 40% connected

+50% very soon

Social empowerment

Free and massive distribution of emission and reception,
rise of social media

Wordpress: 2003, YouTube: 2005, Facebook & Twitter:
2006

Material

Computing: biggest part now in the cloud

Interfaces: domination of smartphones and tablets

iPhone: 2007, iPad: 2010

The Future of Education

Global networks

Knowledge commons

Life-long social learning

Algorithmic communication

The Art of Algorithmic Communication

Collaborative Data Curation

Stigmergic Collective Intelligence

Critical Thinking

Personal Knowledge Management

Social Knowledge Management

Stigmergic Collective Intelligence (1)

Stigmergy

Indirect self-organized communication.

People communicate by modifying their environment / collective memory.

Network awareness

Awareness of situations, contexts, communities, local memories

Don't waste the time of others : ignorance, redundancy, irrelevance

Stigmergic Collective Intelligence (2)

Responsability

Every act sculpts the collective memory: subscribe, buy, comment, record, broadcast, hyperlink, tag, approve/like, participate to a group, communicate, etc.

Empowerment

People are readers, spectators, authors, critiques, editors, publishers, librarians, players, designers, curators of the collective memory.

Autonomy

People help and orient themselves / together. No ultimate authority.

Critical Thinking (1)

Multiply and cross-check the sources

Dissolve objectivity

Orientation: problems, questions, agendas

Frame: breadth and cutting of the context

Narrative: who are the actors, the « victims », the beneficiaries...? The same event can be told in many different ways.

Norms: tacit, explicit

Critical Thinking (2)

Look for transparency

Who? Identify the source (people, institutions, schools of thought...)

Where does the money come from? How many, from who?

Why? What are the questions / problems / agendas (political, economic, theoretical, religious, etc.) of the source?

References? Are the sources of the source clearly identified?

When? Track the transformation of narratives. Identify the temporal lines of ideas and events.

Personal Knowledge Management (1)

Attention management

Define interests, priorities, areas of expertise
(acquired and aimed).

Stay focused, avoid distraction, keep in mind the
big picture.

Choice of sources

Relevant and transparent data from people and
institutions

Gathering and filtering data streams

Manual / automatic

Categorization

Tagging, folksonomies, classifications, ontologies

Personal Knowledge Management (2)

Long-term memory

Bookmarks, notes, articles, books.... : Social content management in the Cloud

Synthesis

E-books, blog posts, articles, wiki entries...

Communication

Posting synthesis on social media.

Replies, creative dialogue...

Reflexion

On all of the PKM above

Social Knowledge Management

THREE
MOVEMENTS

1) Centripetal

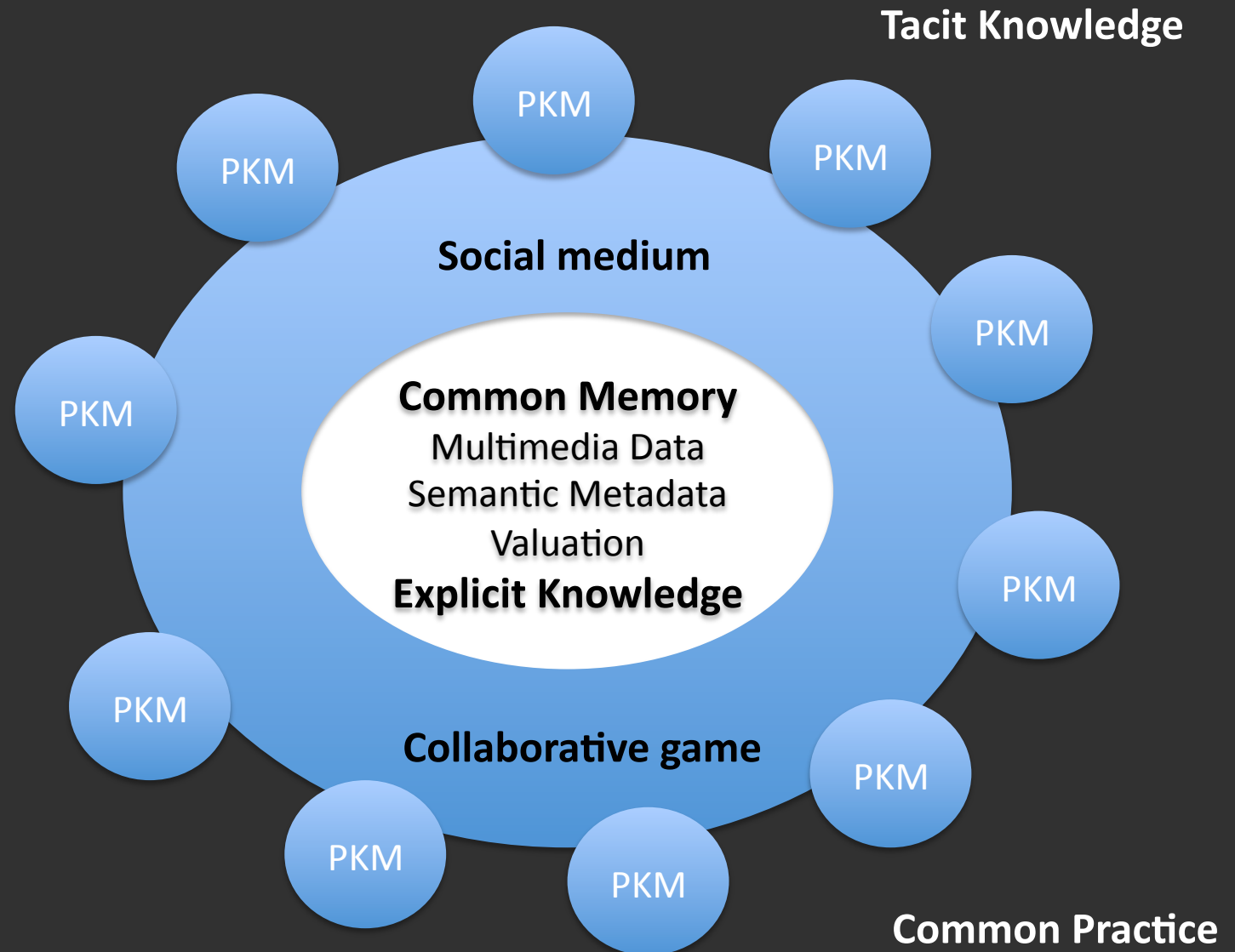
Transforms
tacit into
explicit

2) Centrifugal

Transform
explicit
into tacit

3) Circular

Enhance PKM
implied in SKM



Reflexive Collective Intelligence

Ecosystems of ideas emerging from algorithmic communication in the next generation of social media

Displayed around each people, community, thing, place, work of the mind...

Interaction through holograms in VR or AR, by Google glasses, smartphones or tablets

Embedded powerful tools for selection, exploration, analysis, synthesis, semantic distances measurement

Symbiosis communities / ecosystems of ideas

Symbiosis individual / collective learning

Evolution of the Algorithmic Medium

Semantic Sphere

Reflexive collective intelligence

Universal address for concepts

World Wide Web

Global hypermedia public sphere

Universal address for data

Internet

Networks of computers

Universal address for operators

Automatic computers

Electronic circuits

Local address for data and operators