



For to say that, assuming the earth moves and the sun stands still, all the appearances are saved better than with eccentrics and epicycles, is to speak well; there is no danger in this, and it is sufficient for mathematicians. But to want to affirm that the sun really is fixed in the center of the heavens and only revolves around itself (i. e., turns upon its axis) without travelling from east to west, and that the earth is situated in the third sphere and revolves with great speed around the sun, is a very dangerous thing

Cardinal Bellarmine Letter to Foscarini April 12th 1615

Narrative & Sense-making

A naturalistic approach to
Knowledge Management

KMAP Hong Kong

December 2006

KM: a brief history

- ◆ first generation, focused on decision support systems and massive (for the time) information processing. Reliable technology, email and 4GLs
- ◆ second generation: the Nonaka SECI period, attempts to codify knowledge & the rise of collaborative technology. Lotus Notes, the web.
- ◆ third generation: a return to decision support as *sense-making*, use of *narrative* & the generation of *social networks*. Social computing & Web 2.0

The wisdom of the crowd
or a test of your ability to
concentrate on a task

Human perception

- ◆ We only see 1% of our visual range in sharp focus at any one time
- ◆ If we really concentrate we see between 5% and 10% of the data
- ◆ We make decisions based on searching against patterns in our long term memory that arise from experience & story
- ◆ Negative experience & stories imprint

Naturalistic approaches

- ◆ We always know more than we can tell, we will always tell more than we can write
(focus on writing things down is a limited - day:year ratio)
- ◆ We only know what we know when we need to know it
(human knowledge is contextual & needs to be triggered)
- ◆ Knowledge can only ever be volunteered it cannot be conscripted.
(models based on process/formalism will necessarily fail)

Idealistic approaches

- ◆ Victoria Climbié case
- ◆ Frustration with cross silo & best practice issues
- ◆ Right information, right place, right time
- ◆ retrospective coherence means we codify what we understand about the past: creating recipes
- ◆ Accountability & order
- ◆ Categories & taxonomy not relationships
- ◆ Scarcity economics
 - ◆ BPR & 6-stigma
 - ◆ LO & systems
 - ◆ KM “BP” “T→E” (IC?)
- ◆ Why not?
 - ◆ people learn from failure not success
 - ◆ beyond the limits of enlightenment science
 - ◆ flow & “things”
 - ◆ we evolved for MESS

Why KM?

- ◆ To facilitate effective decision making
 - ◆ hindsight does not lead to foresight
 - ◆ probe-sense-respond
 - ◆ safe-fail not fail safe
- ◆ To create the conditions for innovation
 - ◆ creativity ~ outcome not cause
 - ◆ starvation, pressure & perspective shift: necessary but not sufficient



The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think and act anew.

Abraham Lincoln

Quoted by Lazaroff & Snowden "Anticipatory Models for Counter Terrorism" in Popp, R & Yen, J Emergent Information Technologies and Enabling Policies for Counter-Terrorism Wiley-IEEE Press 2006

Sense-making

- ◆ Defined as "how do we make sense of the world so that we can act in it"
- ◆ Taking over the strategic aspects of KM
- ◆ Naturalising sense-making
 - ◆ revert to the natural sciences
 - ◆ Work with humans as they evolved to be
 - ◆ bounded diversity: most things are right, but within boundaries

Aspects of sense-making

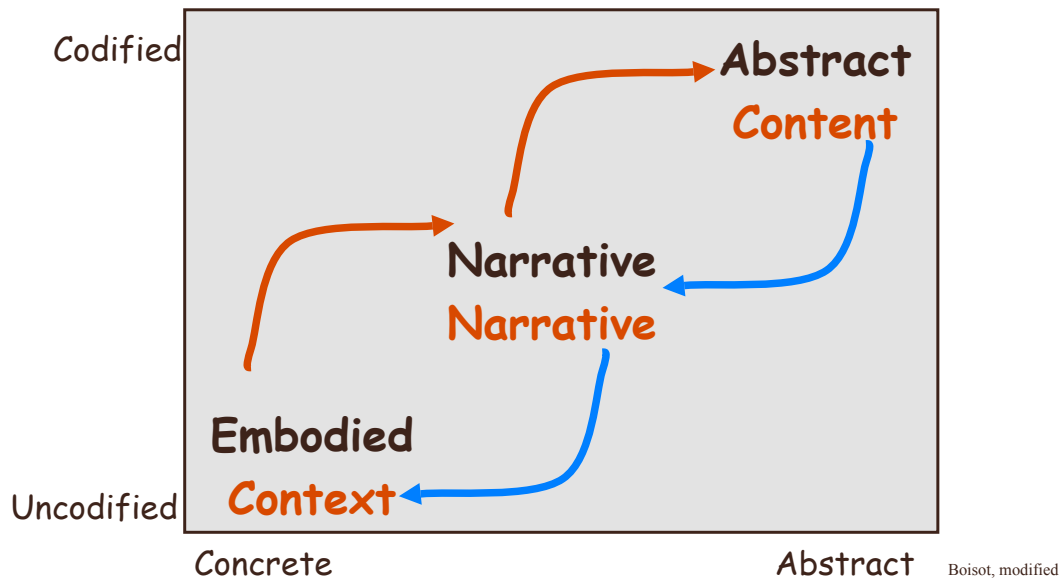
- ◆ Do we see the data
(typically 5-10%)
- ◆ Do we attend to what we see
(only if there are past patterns)
- ◆ Do we act on that we see/attend to?
(only if the context is right)

Each of these is a distinct problem
& one does not follow from the other

Tools for sense-making

- ◆ Open source & social computing
- ◆ Multi-causal decision making models such as the Cynefin framework
- ◆ Social network stimulation - reducing the degrees of separation
- ◆ Narrative tools
 - ◆ Knowledge repositories/lessons learnt
 - ◆ Cultural patterns: markets and staff
 - ◆ Strategy, weak signal detection

The role of narrative



Background to narrative

- ◆ Started in IBM's Institute for KM around tacit knowledge issues
- ◆ Decade of research into weak signal detection in anti-terrorism & risk
- ◆ Cognitive science, complex adaptive systems theory & anthropology
- ◆ A quantitative approach to areas addressed by qualitative techniques
- ◆ Need to manage multiple parallel and possibly co-evolving initiatives and measure their impact
- ◆ Need to distribute interpretation; reduce expert bias

Pre-hypothesis research

- ◆ Large volume capture of narrative which can be anecdotal or pictorial
- ◆ Material is captured either in context or prompted, can be web based or digital media
- ◆ Material tagged by those who originate (and therefore understand) it
- ◆ Semi-structured tags to create interpretable meaning between users
- ◆ Used to allow ambiguous queries based on encountering & blending narratives
- ◆ Visualisation of complex patterns in tags to avoid pattern entrainment

Current Applications

- ◆ **Museum**
measuring the impact of the museum on children, real time monitoring for management & creating a knowledge repository
- ◆ **Bank**
Understanding cultural differences between customers from the townships & their marketing departments
- ◆ **Agro-chemical**
Suicide amongst farm workers & consequent regulatory & communication issues to inform strategy & focus communication
- ◆ **Ministry of Education**
Managing roll of multiple initiatives & teacher stress to inform and policy priorities and achieve “pre-test”
- ◆ **RAHS**
Weak signal detection & analyst productivity in fields of high uncertainty: anti-terrorism, disease, technology etc. etc.
- ◆ **Tax authorities (x2)**
Understanding complex issues relating to compliance arising from culture and practice through disclosure & monitoring

New applications

- ◆ **Customers & Staff**
Replacing customer satisfaction & mystery shopper scores, also for employee satisfaction and impact of policy initiatives
- ◆ **Knowledge transitions**
Demographic issues with the ageing workforce and high turnover environments: harvesting & getting takeup
- ◆ **Auditing values**
Benchmarking staff attitudes to issues such as integrity, trust etc. by comparing their indexing of narrative material & creating a knowledge base on ethics
- ◆ **Battlefield lessons learnt**
Creating a computer based memory based on fragments of learning from various perspectives as text & pictures based on serendipitous encounter
- ◆ **Academic Research**
UCL project on massive infrastructure projects failure world wide & lessons learnt
- ◆ **Call Centre KM**
Linking dynamic narrative to content management & process maps and scripts

Antonyms

Efficiency	Effectiveness
Stability	Resilience
Exploitation	Exploration
Rules	Heuristics
Categorisation	Relationships
Taxonomic	Serendipitous



In the idealistic approach, the leaders of an organisation set out an ideal future state that they wish to achieve, identify the gap between the ideal and their perception of the present, and seek to close it. This is common not only to process-based theory but also to practice that follows the general heading of the “learning organisation”. **Naturalistic approaches, by contrast, seek to understand a sufficiency of the present in order to act to stimulate evolution of the system.** Once such stimulation is made, monitoring of emergent patterns becomes a critical activity so that desired patterns can be supported and undesired patterns disrupted. The organisation thus evolves to a future that was unknowable in advance, but is more contextually appropriate when discovered

Kurtz & Snowden “Bramble Bushes in a Thicket”

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