

# Risk & uncertainty in knowledge management

UCL 22nd January 2007



# from KM to sense-making

- ◆ A naturalising approach
  - ◆ linking back to sciences (CAS, Cognitive Science & Anthropology)
  - ◆ Avoiding idealistic design approaches
- ◆ The three issues of sense-making
  - ◆ do we see the data?
  - ◆ do we pay attention to the data?
  - ◆ Do we, or will others, take action on the data?



# 3 schools, 3 aspects

	Techno-fabulists	Naturalistic evolutionary	Art-Luddites
Nature of the system	Ordered	Complex	Chaotic
How we perceive	Information processors	Pattern processing	Ideology & power
The way we know	Explicit	Narrative	Experiential



# Antonyms for sense-making

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



# Consequences

- ◆ Knowledge is the means by which we create information from data - managing knowledge is therefore about creating shared context
- ◆ Narrative is the dominant form of knowledge exchange, particularly in engineering communities (forget SECI)
- ◆ “Naturally” humans aim for serendipitous not taxonomic search.

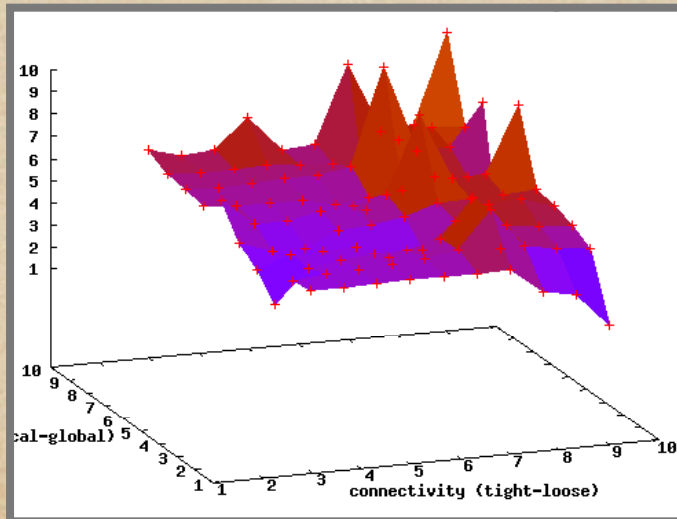


# Therefore ....

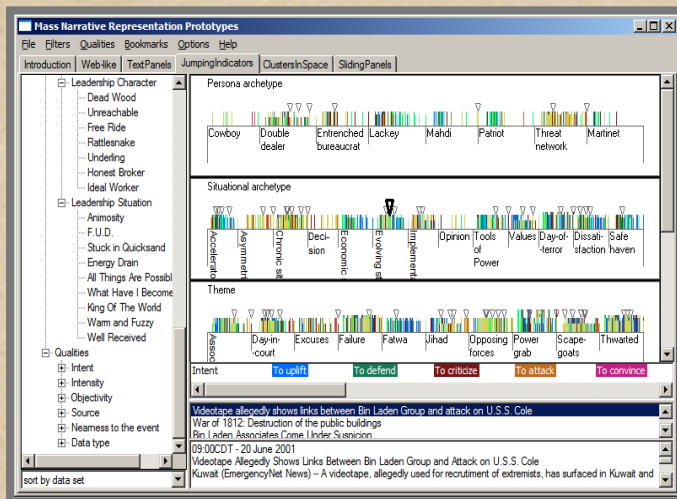
- ◆ Understand the patterns first
  - ◆ mass narrative capture
  - ◆ semi-structured self indexed tags
  - ◆ visual representation of metadata
- ◆ Weak signal detection is key
  - ◆ changes in boundaries & attractors
  - ◆ identity shifts change patterns



# RAHS



- ◆ Narrative based DSS
- ◆ Visualisation of anomalies & patterns in metadata
- ◆ Detecting shifts in ontology before epistemology
- ◆ wisdom of crowds & network modelling
- ◆ Statistical measures of impact not outcome





# The landscape of management

Complex Output	Computational Complexity a simulation	Naturalistic Sense making an ecology
Simple Output	Process Engineering a machine	Systems Dynamics an organism
	Simple Input	Complex Input



“ 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