Emerging and disruptive technologies shaping the future

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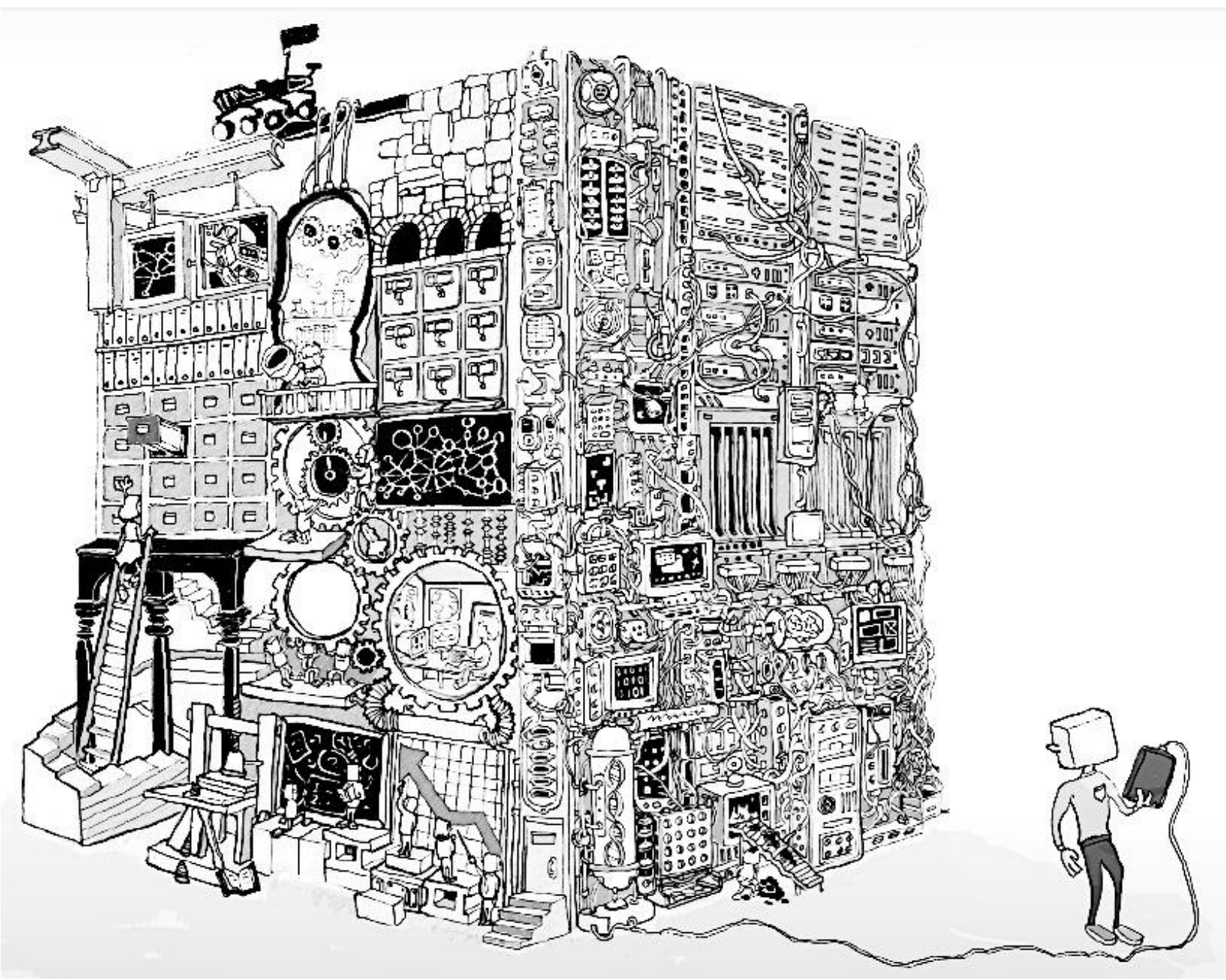
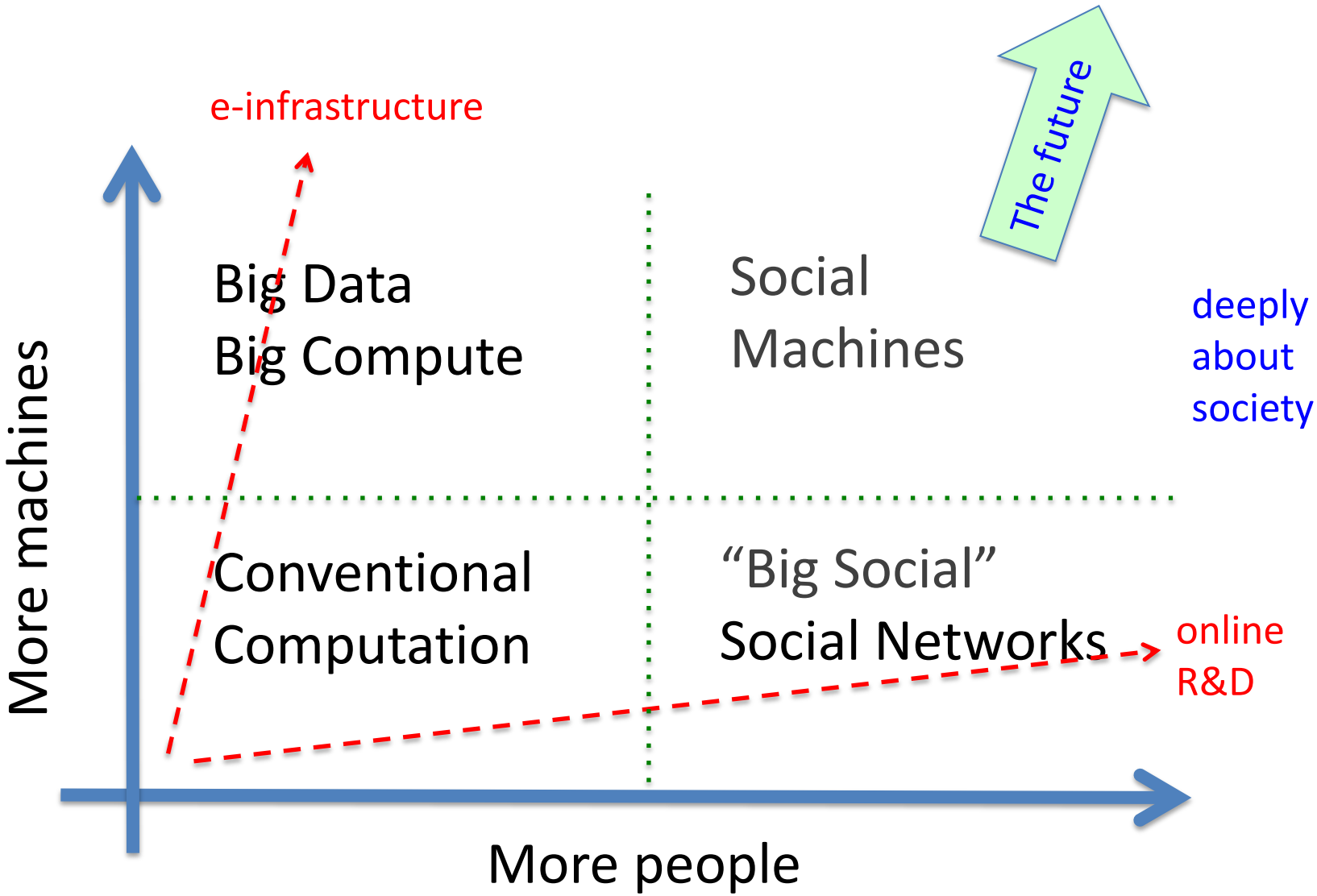
Knowledge Infrastructures: Intellectual Frameworks and Research Challenges



Edwards, P. N., et al. (2013) *Knowledge Infrastructures: Intellectual Frameworks and Research Challenges*. Ann Arbor: Deep Blue. http://hdl.handle.net/2027.42/97552

The Big Picture

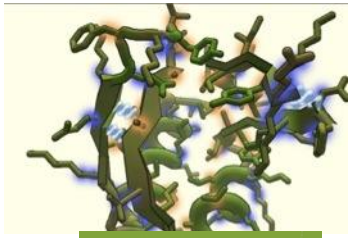


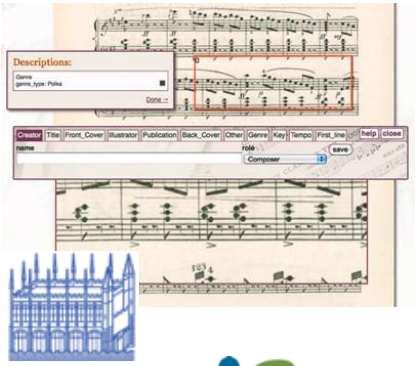
Social Machines

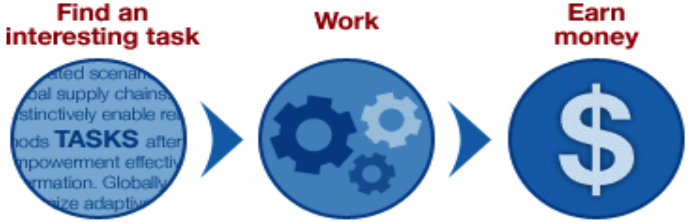
Real life is and must be full of all kinds of social constraint – the very processes from which society arises. Computers can help if we use them to create abstract social machines on the Web: processes in which the people do the creative work and the machine does the administration... The stage is set for an evolutionary growth of new social engines. The ability to create new forms of social process would be given to the world at large, and development would be rapid.

Berners-Lee, *Weaving the Web*, 1999 (pp. 172–175)

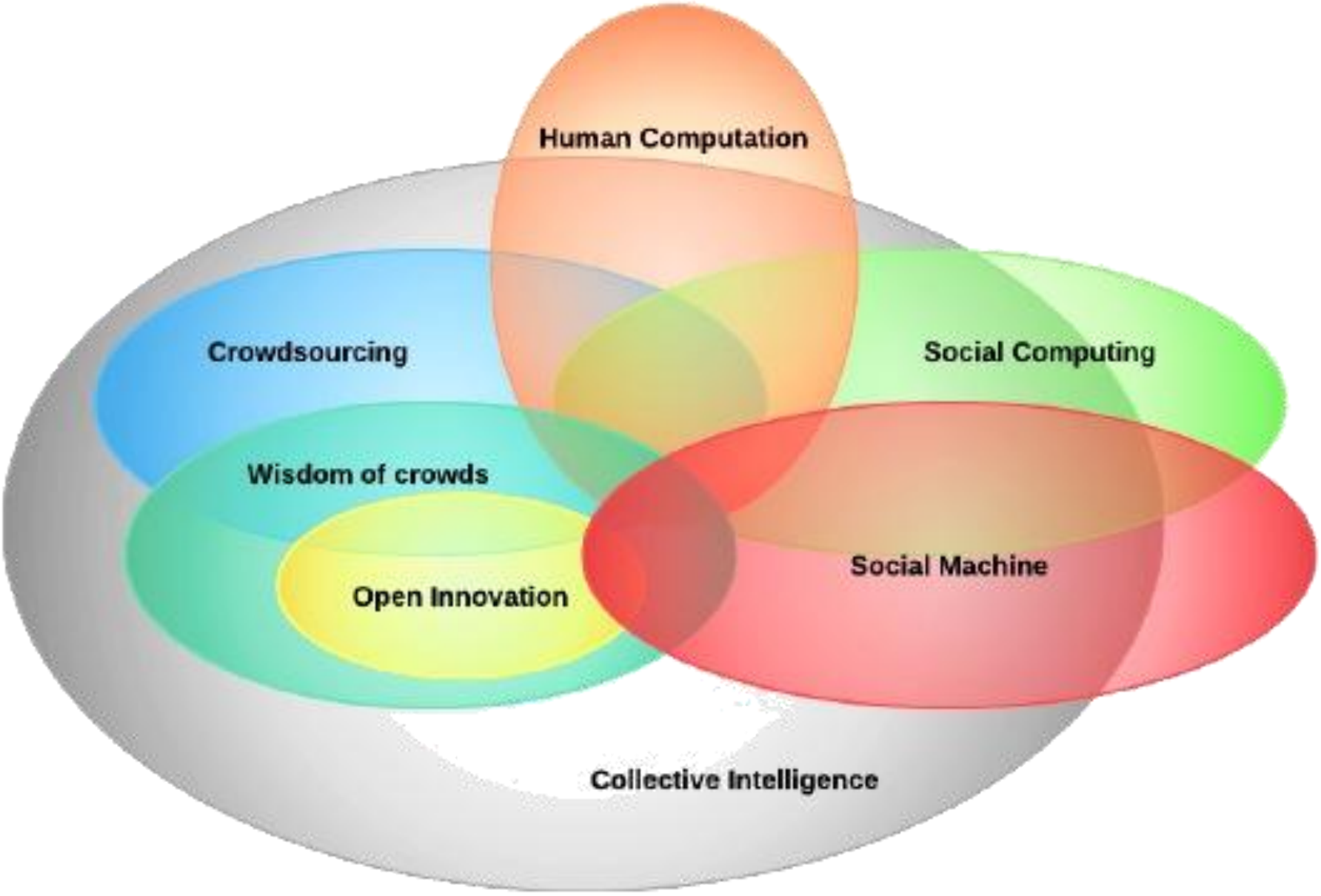
What's the score at the Bodleian?





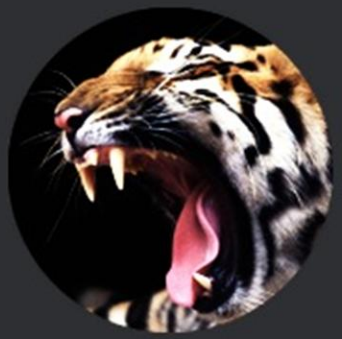


SOCIAM: The Theory and Practice of Social Machines is funded by the UK Engineering and Physical Sciences Research Council (EPSRC) under grant number EPJ017728/1 and comprises the Universities of Southampton, Oxford and Edinburgh. See sociam.org



Nigel Shadbolt et al

Select a rumour to see how unsubstantiated claims are spread on Twitter before being confirmed or denied



Rioters attack London zoo and release animals

Rioters cook their own food in McDonald's

Police 'beat a 16-year-old girl'

London Eye set on fire

Rioters attack a children's hospital in Birmingham

Army deployed in Bank

Miss Selfridge set on fire

@marstonbikepath

Datasets or dataflows?
Pip Willcox

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Printers to the Royal Society.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

An e-Research approach to Web-scale music analysis

David De Roure, Kevin R. Page, Benjamin Fields, Tim Crawford, J. Stephen Downie and Ichiro Fujinaga

Phil. Trans. R. Soc. A 2011 **369**, 3300-3317
doi: 10.1098/rsta.2011.0171

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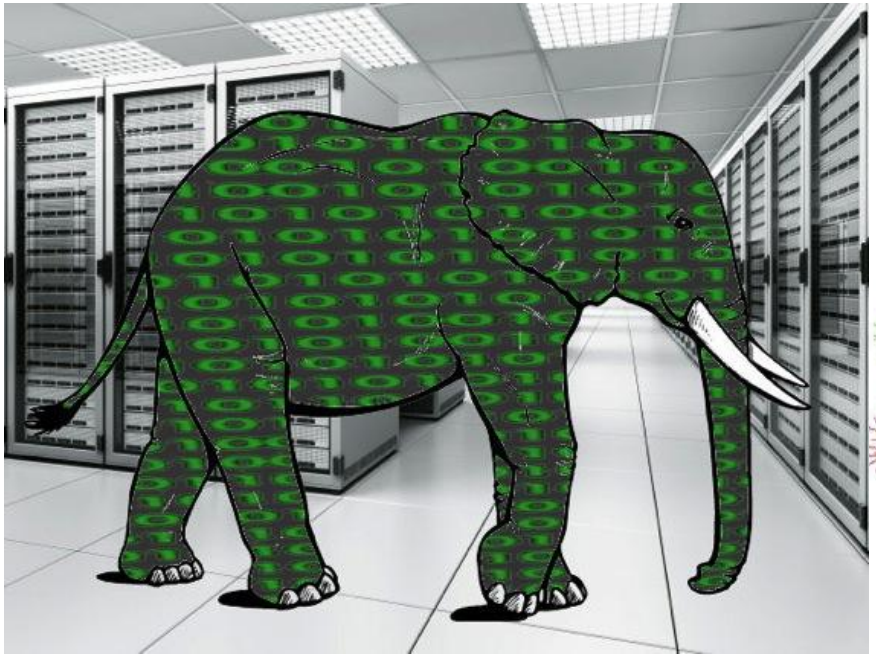
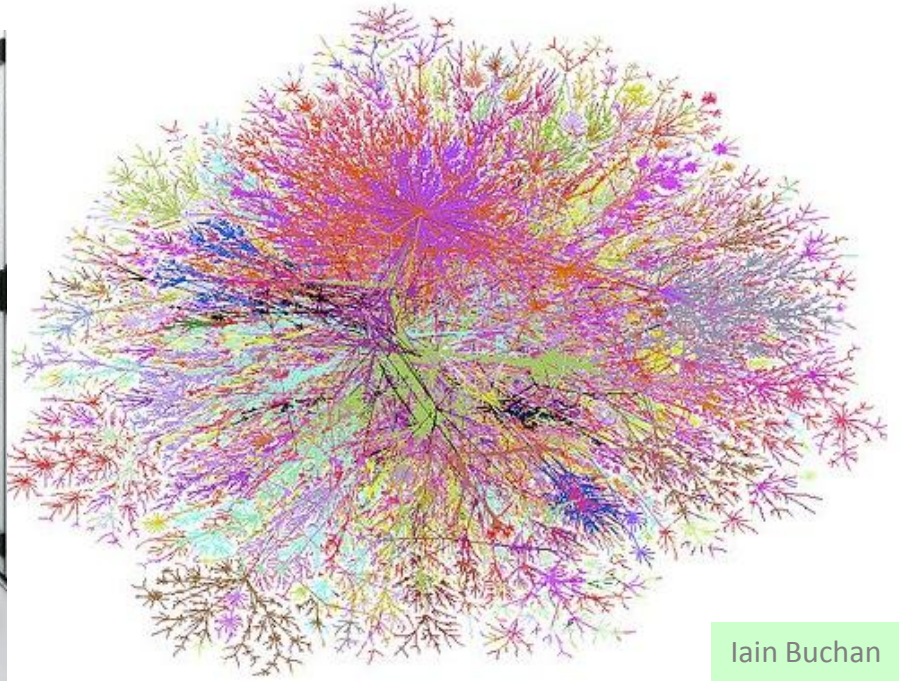
Big data elephant versus sense-making network?





The challenge is to foster the co-constituted socio-technical system on the right i.e. a computationally-enabled sense-making network of expertise, data, models, software, visualisations and narratives

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SOCIAM: The Theory and Practice of Social Machines is funded by the UK Engineering and Physical Sciences Research Council (EPSRC) under grant number EPJ017728/1 and comprises the Universities of Southampton, Oxford and Edinburgh. See sociam.org

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