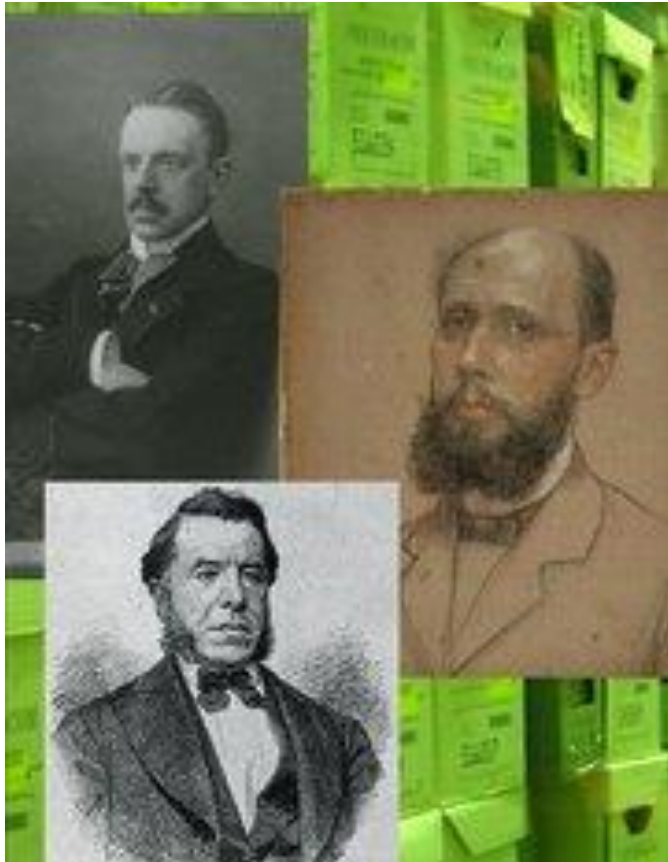# Our Digital Future – Multidisciplinary Perspectives on Long Term Data Preservation and Access

15th March 2016

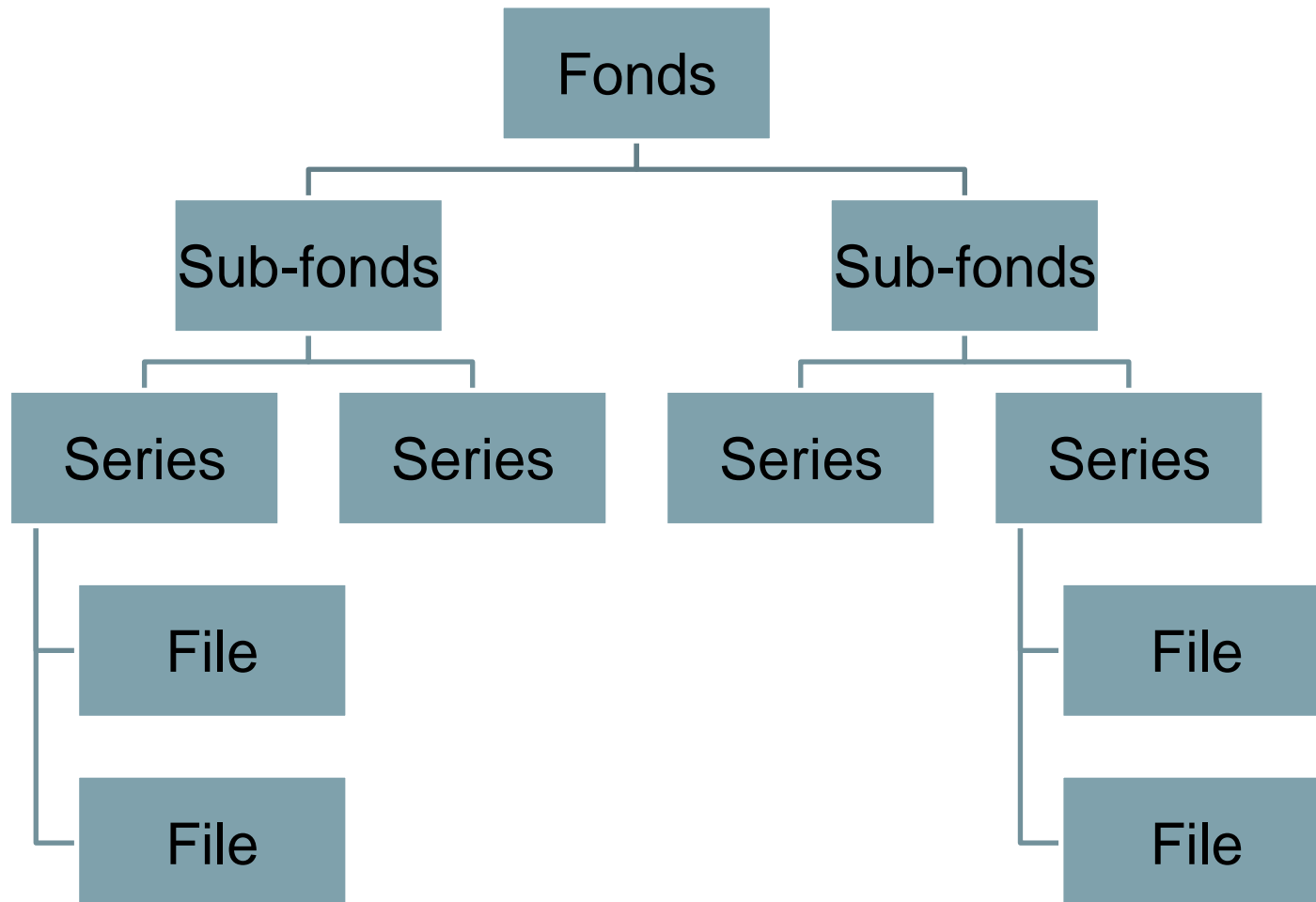## Cambridge

Jenny Bunn, j.bunn@ucl.ac.uk
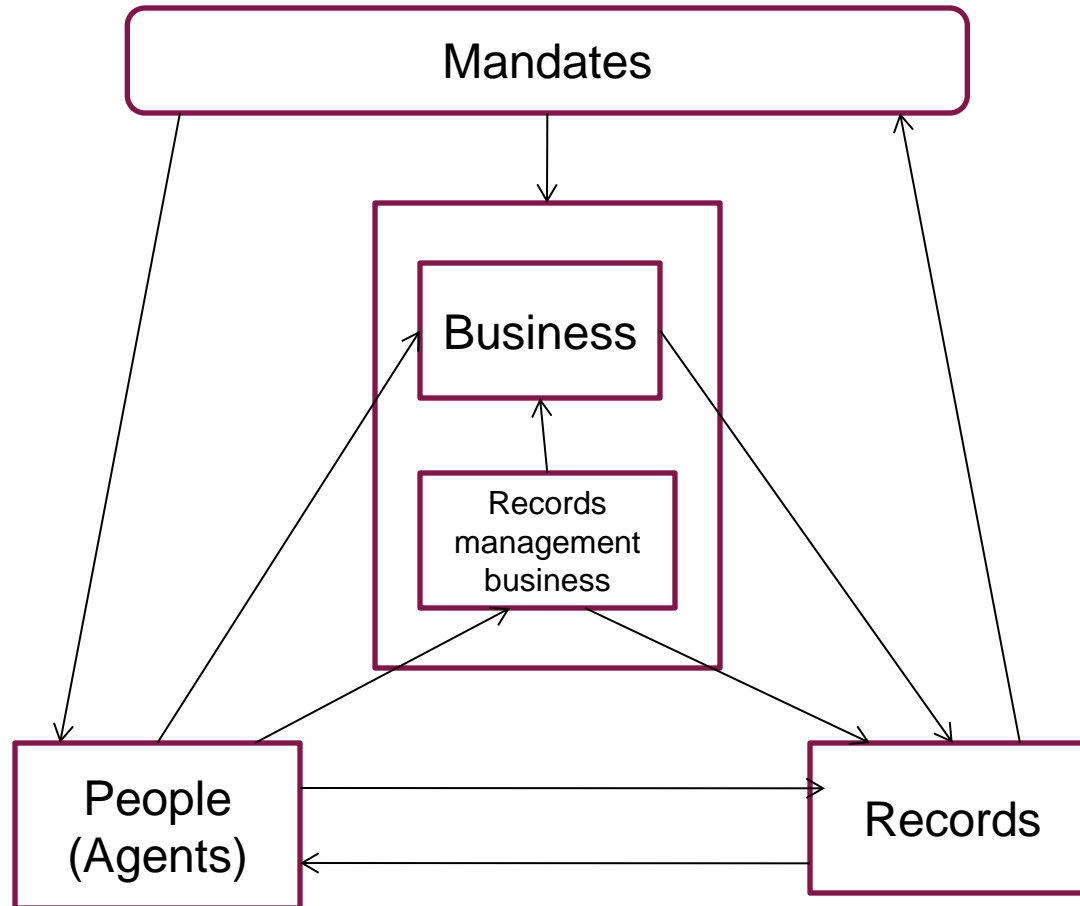
Stand up for the Principle of Provenance

Hanleiding voor het Ordenen en Beschrijven van Archieven by Muller, Feith and Fruin, 1898.

Manual for the Arrangement and Description of Archives
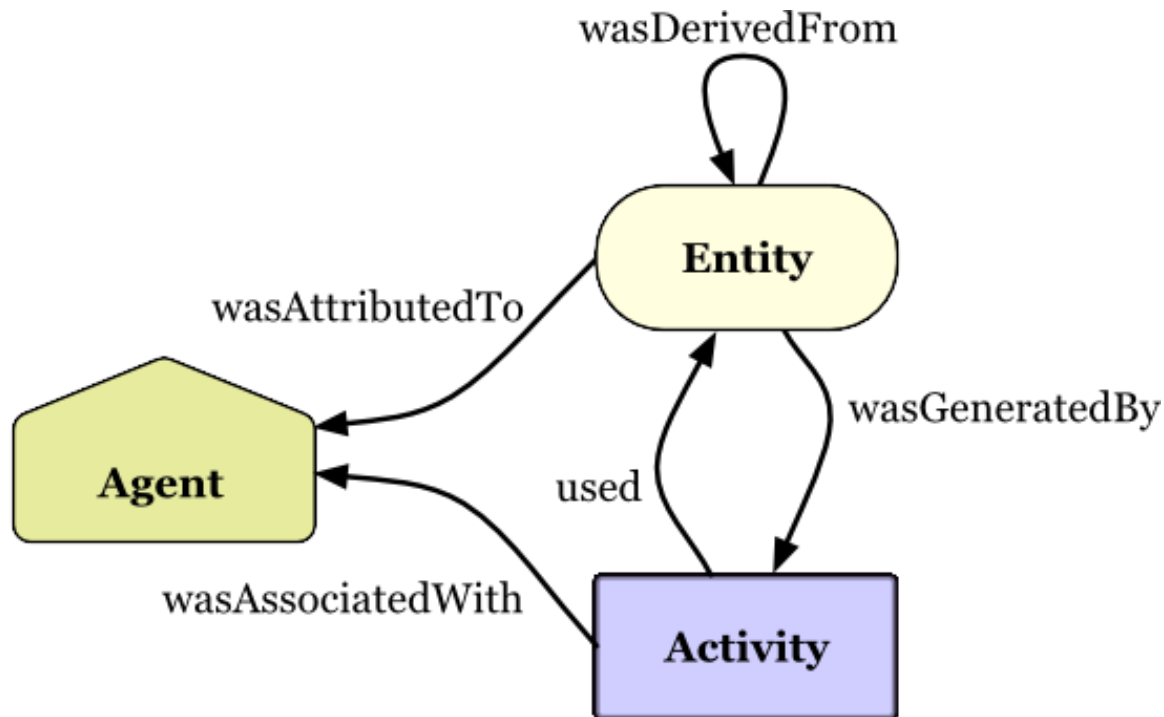
I'll know it when I see it

An alternative architecture

ISO 23081-2:2007, Figure 1.

An architecture for provenance

https://www.w3.org/TR/2013/NOTE-prov-primer-20130430/

A fairly futile conversation

Me: But, but you can't do that

IT person: Why?

Me: Because it goes against the principle of
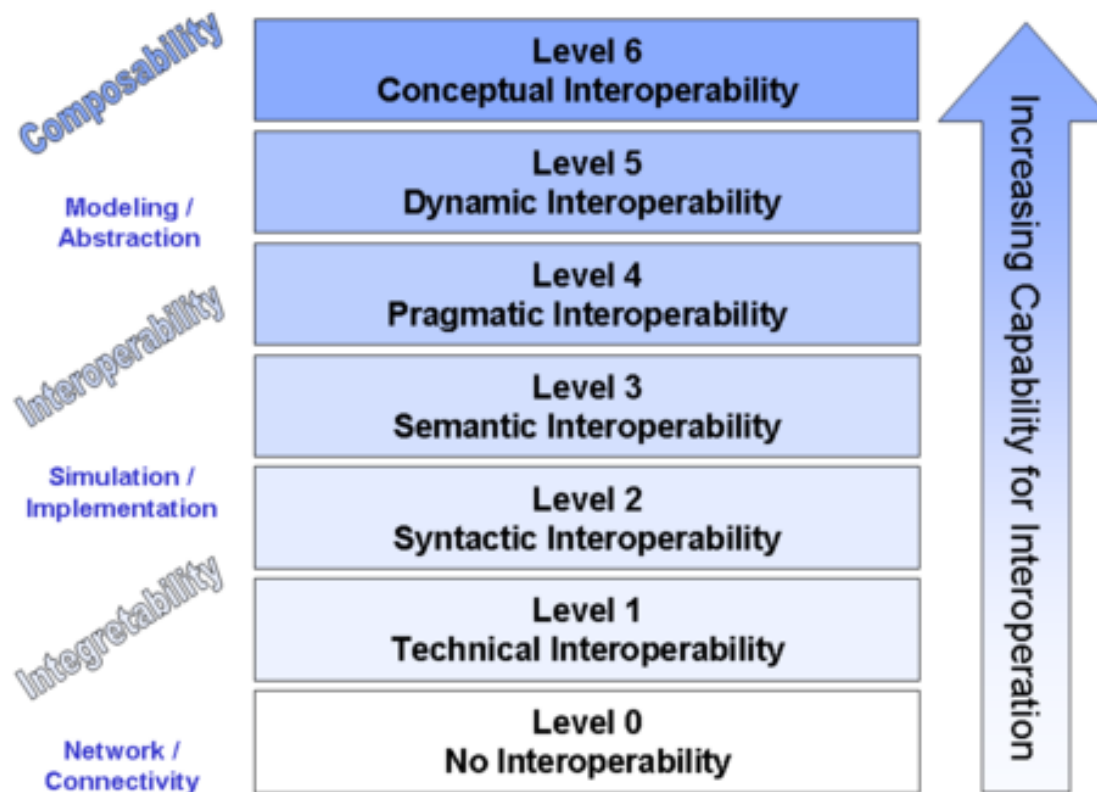   provenance

IT person: What's that anyway?

Me: Well, I can't really explain it….

Autopoeisis

"Poiesis is a Greek term that means production. Autopoiesis means autoproduction. […] In Maturana's viewpoint, the term "autopoiesis" expresses what he called "the center of the constitutive dynamics of living systems". To live this dynamics in an autonomous way, living systems need to obtain resources from the environment in which they live. In other words, they are simultaneously autonomic and dependent systems. So, this condition is clearly a paradox. This self-contradictory condition cannot be adequately understood by linear thinking, according to which everything must be reduced to the binary model *yes/no*, *or/or*. When dealing with living beings, things, and events, linear thinking begins by dividing them. The next step is the analysis of the separate parts. No attempts are made to look for the dynamic relationships that exists between them."

Humberto Mariotti, http://www.oikos.org/mariotti.htm

Conceptual Interoperability

Wenguang Wang, Andreas Tolk, and Weiping Wang. 2009. The levels of conceptual interoperability model: applying systems engineering principles to M&S. In Proceedings of the 2009 Spring Simulation Multiconference (SpringSim '09). Society for Computer Simulation International, San Diego, CA, USA.

Preserving stuff in the era of Big Data:

is it the same as or different from preserving stuff in older eras?

Long term data preservation and access (in any era) is both nothing more and so much more than

preserving stuff

Or, you say stuff, I (and the Principle of Provenance) say the fabric of reality