Mind the Explanatory Gap

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'Paper Minds'

David Huerta, .dh, Papercraft head
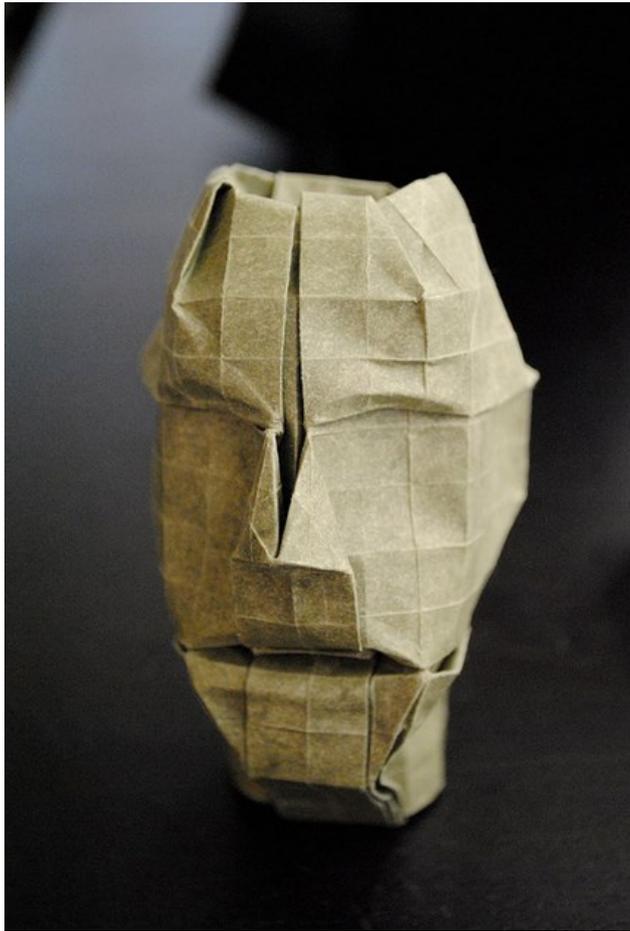
"We have paper minds trying to cope with electronic realities"

Terry Cook

Artificial Intelligence

"Analogy Considered Harmful"

Frank Halasz and Thomas Moran

Philosophy on Consciousness

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Mind the Gap

"Our incomplete understanding of how consciousness might depend upon a nonconscious substrate, especially a physical substrate"

R. Van Gulick, "Consciousness," The Stanford Encyclopedia of Philosophy, Spring 2014 Edition, Edward N. Zalta (ed.),

Archives/Records Management on Consciousness
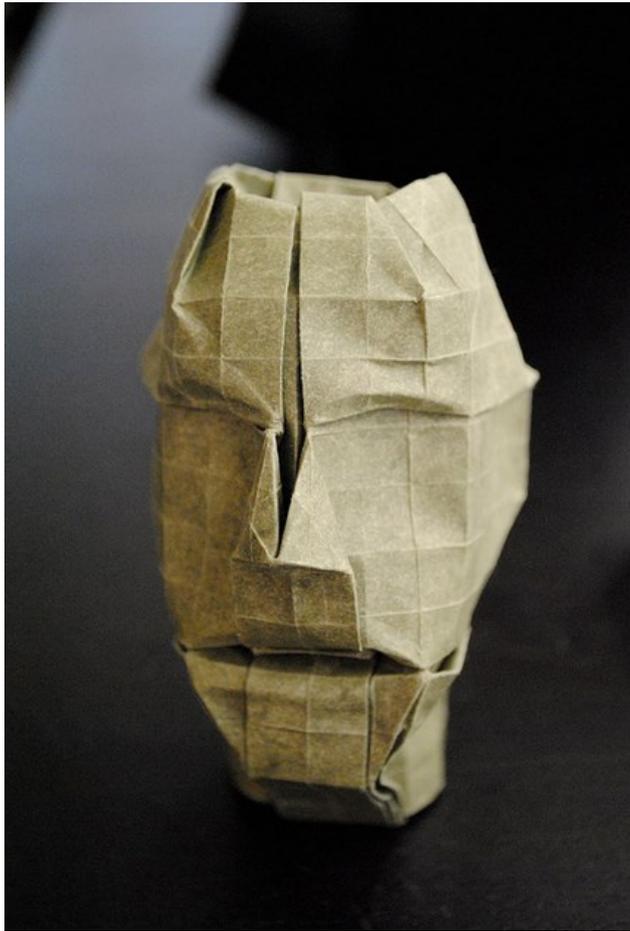
"any aggregation that results from conscious human action is an artificial creation"

"In this tradition [the archival tradition that sees the fonds as 'an organic growth'], organizations and individuals seem to exercise little or no conscious judgement in assembling a fonds"

G. Yeo, "The Conceptual Fonds and the Physical Collection," Archivaria, no. 73, pp. 43-80, 2012.

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Archives/Records Management on the Explanatory Gap

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Accounting for the difficulty in understanding "the regularity of the world we are experiencing at every moment, but without any point of reference independent of ourselves that would give certainty to our descriptions and cognitive assertions"

H. Maturana and F. Varela, The Tree of Knowledge: the Biological Roots of Human Understanding, Boston and London, Shambhala, 1998.

The Question of Perspective

CC BY-NC-ND 2.0, Neville Nel,
Catching a Firefly

"PROV is a specification to express provenance records, which contain descriptions of the entities and activities involved in producing and delivering or otherwise influencing a given object"

W3C Working Group, PROV Model Primer, 2013

What if objects are "always in a state of becoming"?

S. McKemmish, "Are Records Ever Actual?"

Integrating Computational with Archival Thinking

Archival thinking?
Sense making and abductive reasoning

V. Lemieux, "Visual analytics, cognition and archival arrangement and description […]" Archival Science, vol. 15 no. 1, March 2013, pp. 25-49.

Computational thinking?
Decomposition, pattern recognition, abstraction and algorithms

"Introduction to computational thinking," BBC Bitesize

CC BY 2.0, Laszlo Nagy HU, thinking

Archival Representation

"Representations are "things that stand for something else," and are usually assumed to have some kind of correspondence to the thing they represent"

G. Yeo, "Concepts of Record (1): Evidence, Information and Persistent Representations," American Archivist, vol. 70 no. 2, pp. 315-343, 2007.

But what about abstraction?

Integrating Archival Thinking with Computational Methods

Development of "a domain ontology" and "an ontological understanding of the record"

V. Lemieux, "Toward a "Third Order" Archival Interface: Research Notes on Some Theoretical and Practical Implications of Visual Explorations in the Canadian Context of Financial Electronic Records," Archivaria, vol. 78, pp. 53-93, 2014.

Records in Contexts – Conceptual Model and Ontology

http://www.ica.org/en/egad-ric-conceptual-model

Conclusion

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Archival Thinking - Provenance not just in the sense of where a given object has come from, but also in the sense of the grounds on which it becomes an object.

Computational Methods – Abstraction and Ontology Construction.