

Artifact analysis method

Media design research

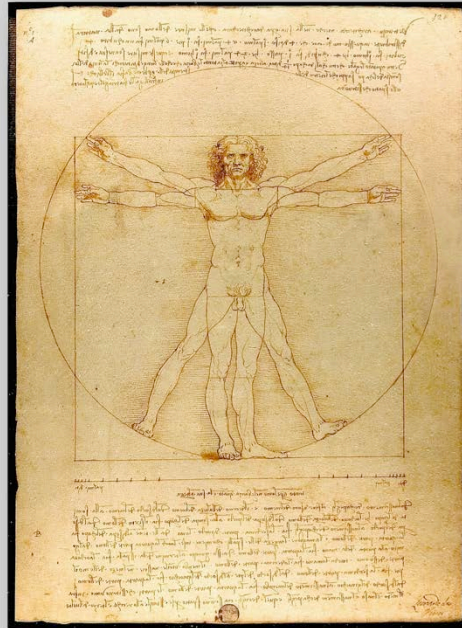
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ARTIFACT

- Human made
- Have an external reality
- Have properties
- Can be classified



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In systems oriented design, one of the first tasks is to define the domain of the system(s) under scrutiny. Artefact comes from the work artefactum (latin: *ars* – skills; *facere* – to make).

In archeology, artifacts are distinguished from other data in the archeological record (context) such as stratigraphic features.

The relationship between the natural vs. the artificial kind is one of the great debates of our time. “Psychological evidence suggests that natural kind and artifactual kind concepts are acquired and comprehended differently.” (Thomasson in Hayles, 5)

Hayles, Katherine, How we became posthuman, University of Chicago Press, 1999. See her website, <http://literature.duke.edu/people?Uil=n.hayles&subpage=profile>

ARTIFACT



Artifacts extend our reach and make us human = human makes artifacts and extends his/her reach through artifacts.

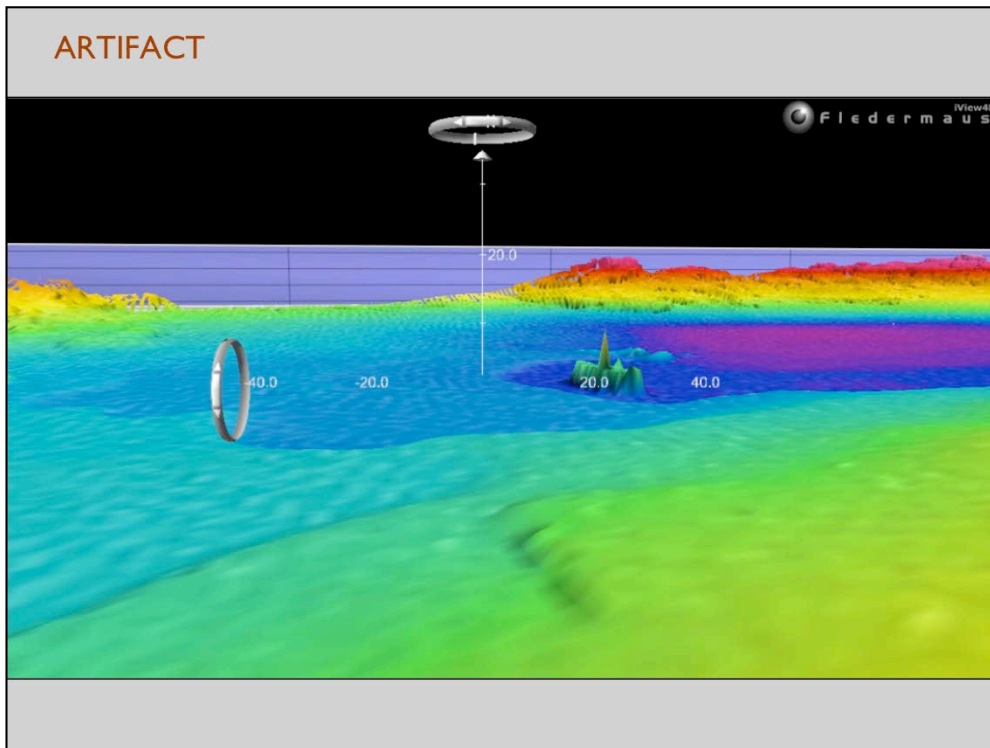
1. The microscope that we we use to look to minuscule phenomena.
(Ebola virus)

ARTIFACT



Artifacts extend our reach and make us human = human makes artifacts and extends her reach through artifacts.

1. The telescope that we use to listen to the universe (Arecibo Radiotelescope)



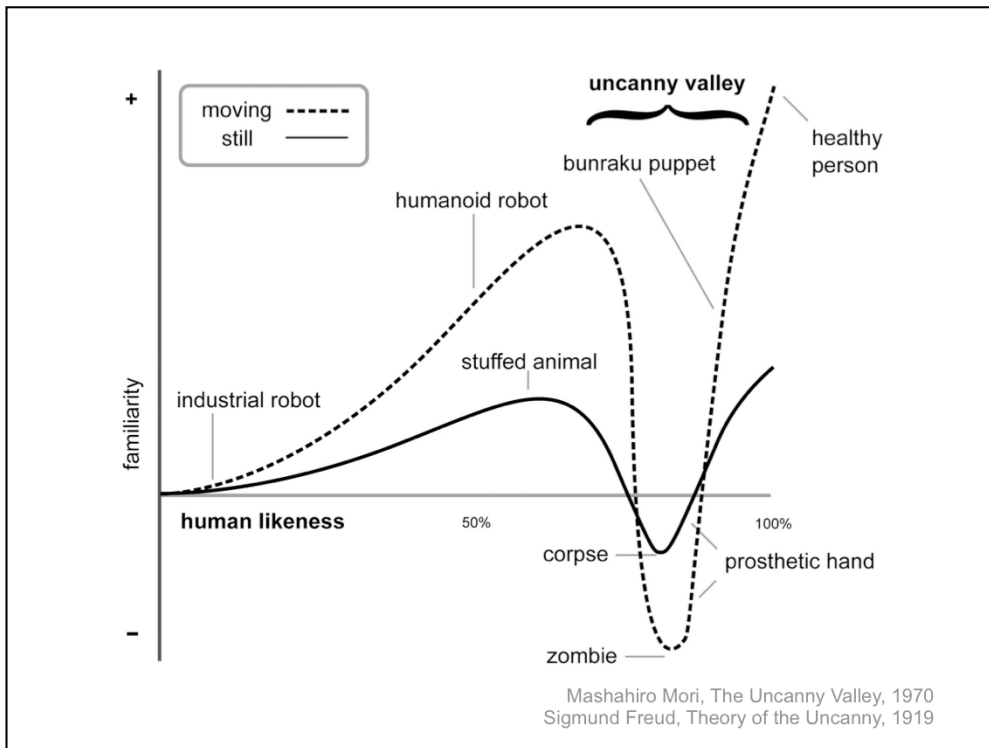
1. The software that we use to visualize spaces and artifacts that we cannot access.

Vrouw Maria: sonar data visualization using Fledermaus software.

Fledermaus is a 3D visualization and analysis software used for topographic and bathymetric data. This software suite allows you to create and interact with full-resolution terrain and bathymetric surface models, and then integrate those surfaces with a variety of other data types to make a "scene."

"Forming a 41-meter-deep bowl-like basin around the wreck [23] and reaching up to 3 meters below the sea surface, the valley-like topography of the area creates an appealing underwater landscape to explore. The landscape is generated from xyz tables provided by the multi-beam sonar scans of the site."

The visualization only contains information of the location and overall shape of the artifact.



The Uncanny Valley: A note about the tension between the natural and the artificial.

ARTIFACT – Risto Hilpinen

Self-referential

Accurate

Scientific

Ontological

Authorship

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Self-referentiality: For an object to be a chair it must itself be intended to be a chair.

Accuracy: There should be a substantially 'correct' concept of what a K is. Requires an understanding of what sort of properties are K relevant and the intention to realize many of them in the object created.

Scientific: Intentionally manufactured items.

Ontology: A singular, concrete (non-separable?) object: Eiffel tower; a tunnel.

Authorship: Dependent on an author's intention to make an object of a certain kind (Hilpinen). "Because of this dependence on the author's intentions, artifacts can be said to be creations of the mind" (Thomasson, 2007, 52. See, <http://www.amithomasson.org/papers%20to%20link/artifacts%20vermaas%20volume.doc.>)

BONK'S PARANORMAL CANNON – Alvar Gulichsen



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Bonk: Alvar Gulichsen's absurd machines that have no apparent use.

<http://www.bonkcentre.fi>

http://www.bonkcentre.fi/p2_eng.htm

ARTIFACT – Marx Wartofsky

Primary artifacts	Secondary artifacts	Tertiary artifacts
Pencil	Alphabets	Artworks
Hammer	Symbol systems	Models
Mouse	Musical notation systems	Scientific paradigm

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Artifacts can be classified in different ways.

Primary artifacts or first-level artifacts are artificial entities created by humans, such as axes and clubs, and which allow them to alter directly the nature of their environment. Secondary, or secondary-level artifacts consist of representations of primary artifacts and of the modes of action using them. Examples of second-level artifacts are pictures, representations and the different modes of action that enable humans to transmit skill and information and to reflect upon their activities. Tertiary artifacts resulting from imaginative praxis in which mimetic re-enactment does not operate as a direct imitation. Representation, according to Wartofsky, becomes “a receptacle for the expression and re-enactment of a wider range of cognitive and affective needs, intentions, and values.” As an imaginative praxis, art produces artifacts that operate as autonomous worlds.

Wartofsky, M. Perception, Representation, and the Forms of Action: Towards a Historical Epistemology, p. 207-209.

ARTIFACT

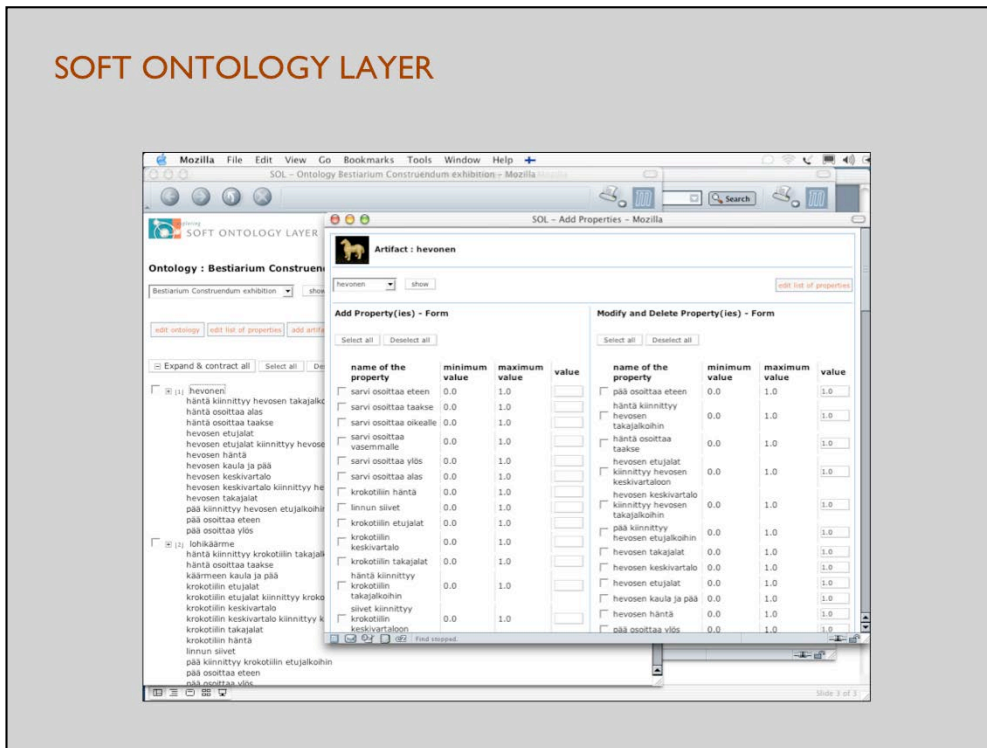
“An artifact is any item, conceptual or material, created by a human being. An artifact can be described by a large, and virtually infinite number of descriptive features. These properties, which can be depicted as vectors, also define the position of the artifact in a multidimensional space.”
(Díaz-Kommonen & Kaipainen, 2002)

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From our work on the CIPHER project

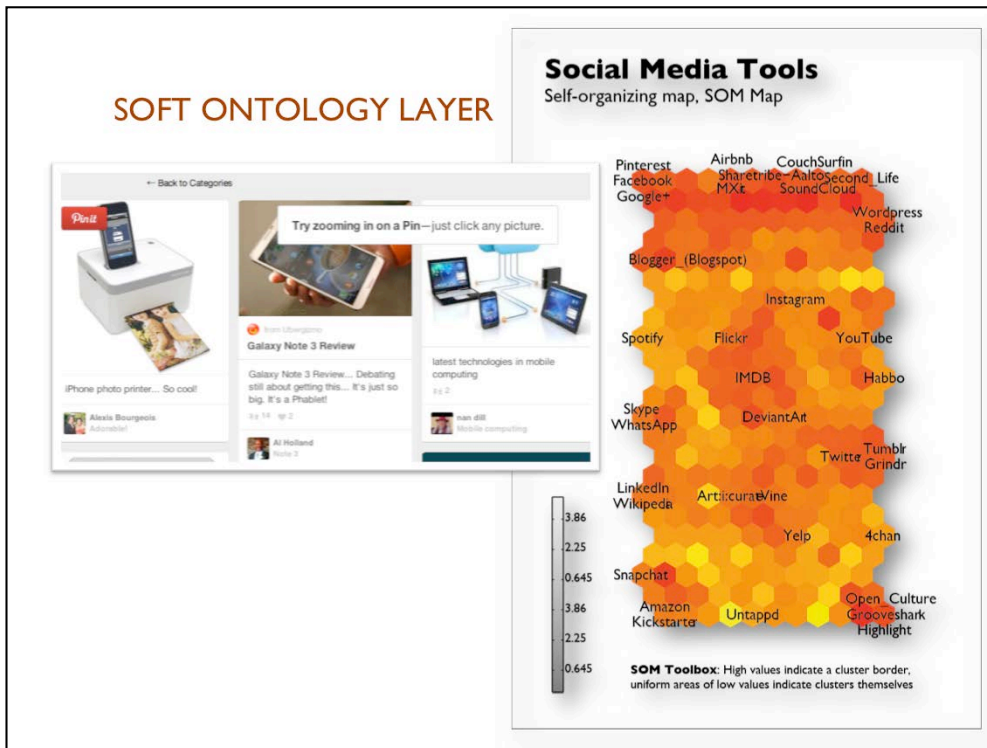
<http://cipher.uiah.fi>

SOFT ONTOLOGY LAYER



Describing the properties (features) or artifacts using the Soft Ontology Layer tool.

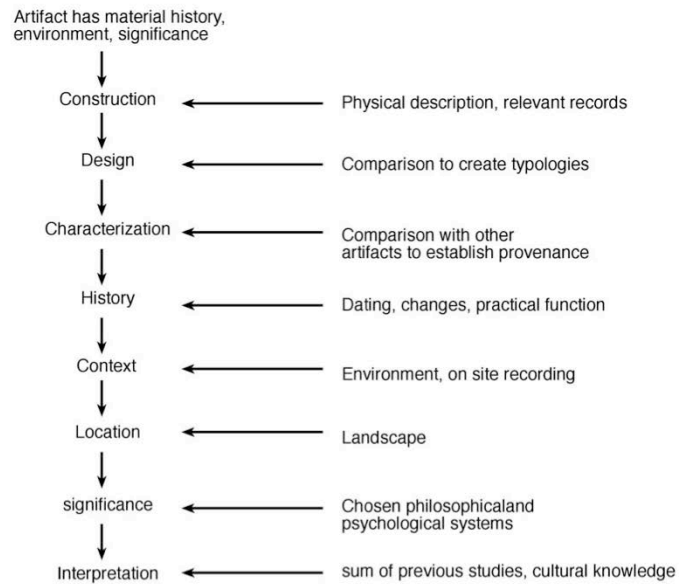
<http://cgi.mlab.uiah.fi/cgi-bin/cipher-sol-2011/sol>



Describing the properties (features) or artifacts using the Soft Ontology Layer tool.

New version: sysrep.aalto.fi/sol/

ARTIFACT ANALYSIS – Susan Pearce



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Knowledge about the artifact is embedded in the artifact itself. Above is an illustration of the basic process of Artifact Analysis by Prof. Susane Pearce. The method is being modified by Diaz for use as part of design research.

ARTIFACT ANALYSIS

Teasing out ways of 'meaning in use' of artifacts:

1. Recognition – Correctly identifying what something is and what it can be used for. (Ready-to-hand)
2. Exploration – Figuring out how something works and what to do to achieve a particular effect. (Present-at-hand)
3. Reliance – Natural handling of something so that attention can be focused on the consequence of its use. (An understanding of the artifacts that we are surrounded with, where they are, how to access and make use of them.)

From Klaus Krippendorff, *The Semantic Turn*, p.89.

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Recognition- Distinguishing an artifact by function, name, appropriate use, places where they are kept. Features... (89)

Exploration- Orienting oneself to the artifacts face, determining what it could do, how it might be held or handled.

Reliance- Depends a lot on previous history of interaction with similar artifacts.

DESIGN ACTIVITY

The bringing -to-be of an artifact, its components and their organization, which interfaces in the desired manner with its outer environment, is the design activity.

Design can be thought of as a mapping from function space--functional requirement constituting a point in multidimensional space--to attribute space, where an artifact satisfying the mapping constitutes a point in that space. OR Knowledge in the form of techniques and methods performing this mapping. The know-how for implementing an artifact that satisfies a set of functional requirements.