Report of the Co-reference Working Group to be presented at the CIDOC AGM in Georgia, Tbilisi 29/09/2017

The original context of the term Co-reference is textual linguistics. The purpose of co-reference resolution is disambiguation of a text by determining, what **words** refer to – what their referents are.

Co-reference resolution leads to broader questions about what **any kind of signs**, such as pictorial signs in a work of art, refer to.

All signs do not have an observable referent. They may get their significance within a conceptual system. Even signs that have an observable referent are additionally associated with a conceptual significance.

It has turned out, that working with co-reference requires an understanding about the nature of reality, the constraints of human existence, and the emergence of shared knowledge and understanding. [Figure 1.]

In the CIDOC Conference in Milan 2016 the work of the Co-reference Working Group over the years was summarised as follows:

Work related to co-reference has been a process of exploration an discovery. In different phases of this process, focus has been on:

- persistent identifiers
- enrichment of data in the context of chains and networks of references
- integration of co-reference concepts in the CIDOC CRM
- creating a semiotic theory for cultural heritage integrating three aspects of (1) subjectivity, (2) historical continuity and a (3) systems perspective.

Subjectivity was explored in an article published in the Iranian on-line journal Farhang-e moze (Museum Culture). The article was based on the presentation in Milan and used the poems and paintings of Mihail Lermontov as examples.

Historical continuity was explored in work for this conference, using the Iranian reed flute, the Ney, as an example. An article article will be offered to Farhang-e moze based on this work, too.

The systems perspective has been explored in a presentation for the Semiotic Society of Finland and in the work of a research group affiliated with the Society.
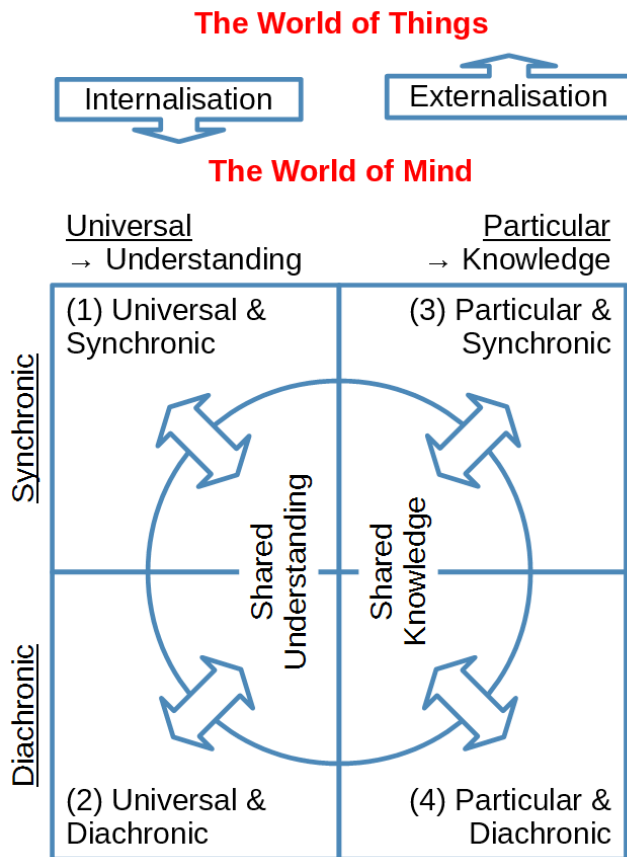
A foundation for a theory of semiotics – **Heritage Semiotics** – is now in place.

The theory of Heritage Semiotics, in turn, is the foundation of an

- information architecture

merging structured data with a narrative layer. The structured data layer forms a **Thematic Virtual Collection** merging materials from archives, libraries, and museums in different institutions and countries. The narrative layer forms a media environment of **Linked Stories**. Chains and networks of references connect these two layers.

A network of partnerships and experts in Iran, Afghanistan and India has been identified to pursue these ideas in the form of symposia, training, and experimentation. The broad support of CIDOC is requested for this.

The World of Things

Internalisation   Externalisation

The World of Mind

Universal → Understanding   Particular → Knowledge

Synchronic

(1) Universal & Synchronic   (3) Particular & Synchronic

Shared Understanding   Shared Knowledge

Diachronic

(2) Universal & Diachronic   (4) Particular & Diachronic

1. Conceptual Dimension

(1) Universal & Synchronic
Modeling Culture as a System

(2) Universal & Diachronic
Modeling Cultural Change

2. Narrative Dimension

(3) Particular & Synchronic
Describing a Cultural Phase

(4) Particular & Diachronic
Describing Cultural Traditions

3. Individual–Shared Dimension

Learning (I/S → I)
Sharing (I → S)
Individual (1), (2), (3), (4)
Shared (1), (2), (3), (4)

FIGURE 1. Relating Signs to the Dynamics of Mind.

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Web Site of the CIDOC Co-reference Working Group:
http://network.icom.museum/cidoc/working-groups/co-reference/