CRMsoc v. 0.2

A new foundational perspective

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CIDOC CRM SIG

10 February 2022

Compatible models & Collaborations

In this section you can find all compatible models and collaborations to the CIDOC CRM. Each one of them will navigate you to its corresponding web page.

FRBR$_{oo}$ — Functional Requirements for Bibliographic Records

PRESS$_{oo}$ — Modeling of bibliographic information

CRM$_{inf}$ — Argumentation model

CRM$_{archaeo}$ — Excavation model

CRM$_{sci}$ — Scientific observation model

CRM$_{geo}$ — Spatiotemporal model

CRM$_{dig}$ — Model for provenance metadata

CRM$_{ba}$ — Model for Archaeological Buildings

CRM$_{tex}$ — Model for the study of ancient texts

CRM$_{soc}$ — Model for Social Phenomena

Modelling phenomena of social life

What are we talking about?

The starting point

Issue 359: mental state

« I propose to introduce a class "mental state" as *superclass of intention and belief*.

I argue that "mental state" is neither a relationship nor a "state" in the epistemological sense we have defined, regardless the label. I argue that it is actively maintained, can be witnessed, become weak, fuzzy and depends existentially on the carrier, possibly a group.

As such, it is a **phenomenon** in its own right.

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Martin Doerr, Issue 359: mental state

Modelling principles in CRMbase:
Reality, Knowledge Bases and CIDOC CRM

(Definition of the CIDOC Conceptual Reference Model, Version 7.1.1, April 2021)

"The material reality.

For the purpose of the CIDOC CRM, *material reality* is regarded as whatever has substance that can be perceived with senses or instruments. Examples are […]. It is constrained to space and time.

What goes on in our minds or is produced by our minds is also regarded as part of the material reality, as *it becomes materially evident to other people* at least by our utterances, behavior and products. "
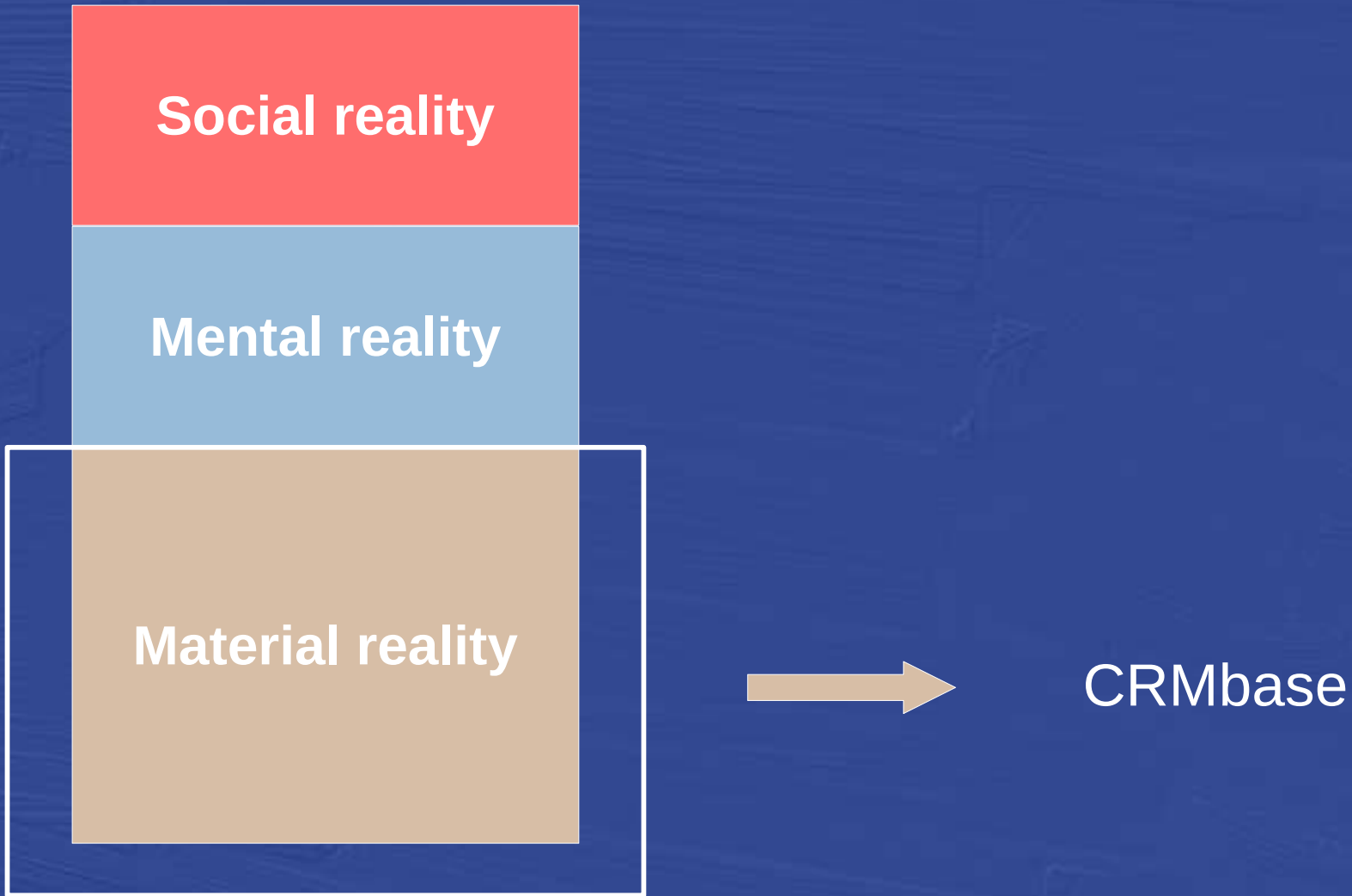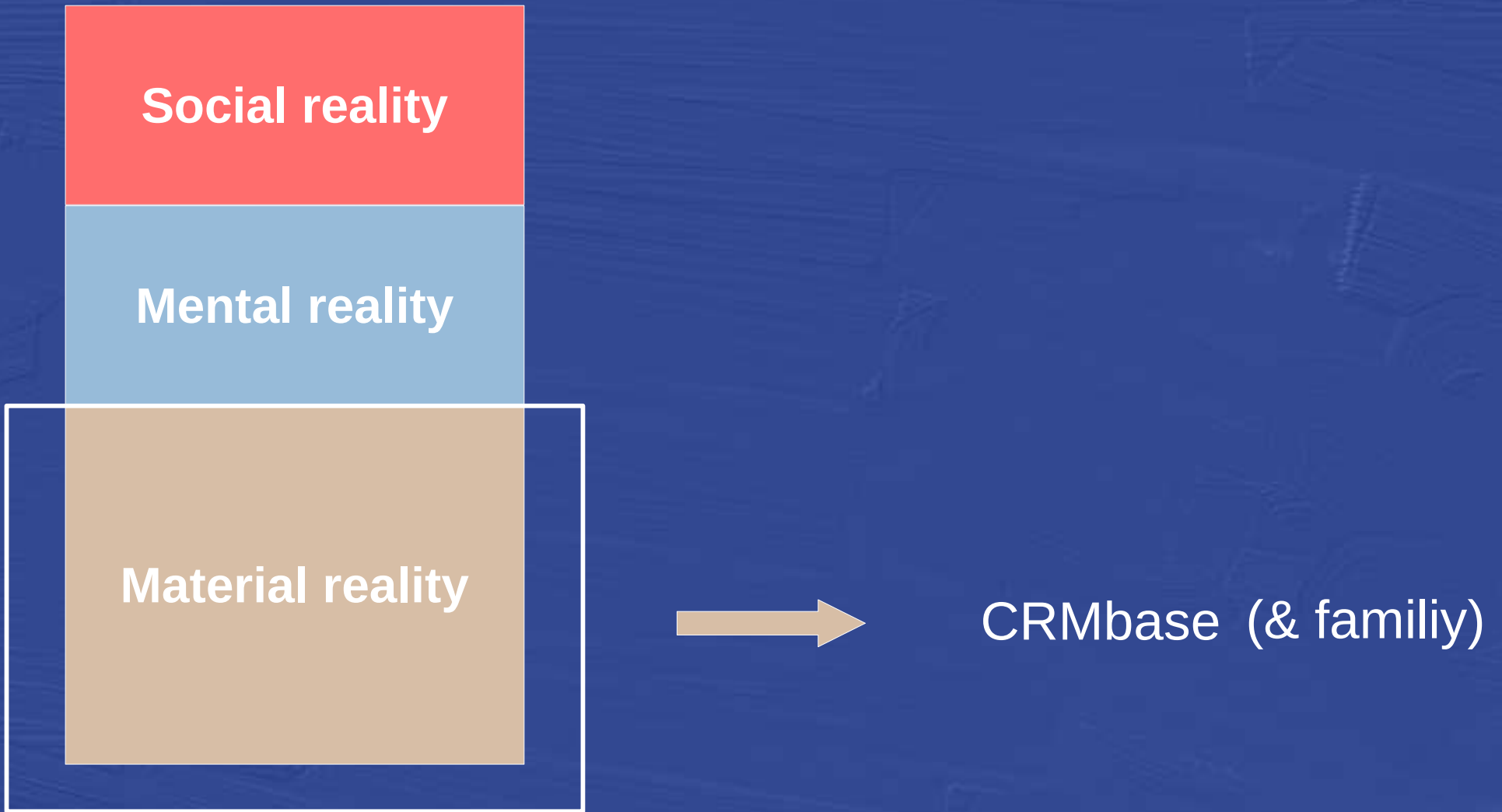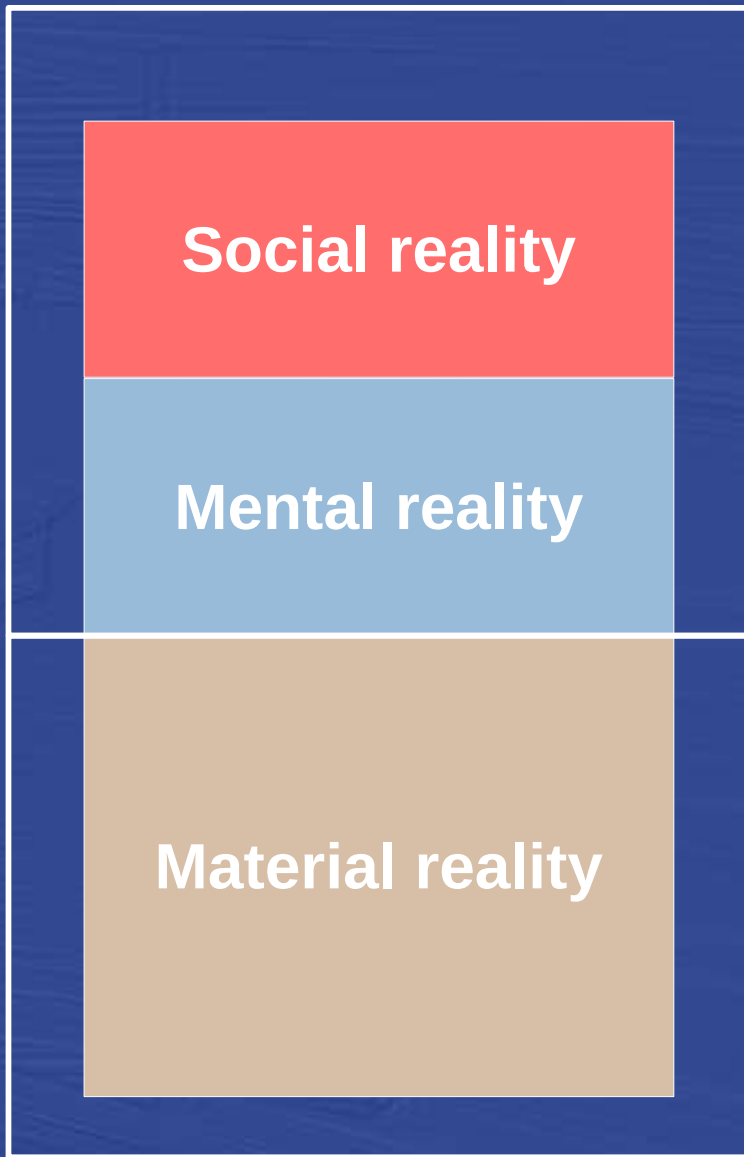
Material reality

Mental reality

Material reality

CC 0

Social reality

Mental reality

Material reality

CC 4
MissLunaRose12

CC 0

Social reality

Mental reality

Material reality

CC 0

CC 4
MissLunaRose12

CC 0

Material, mental and social phenomena

Social reality

Mental reality

Material reality

CC 0

CC 4
MissLunaRose12

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Social reality

Mental reality
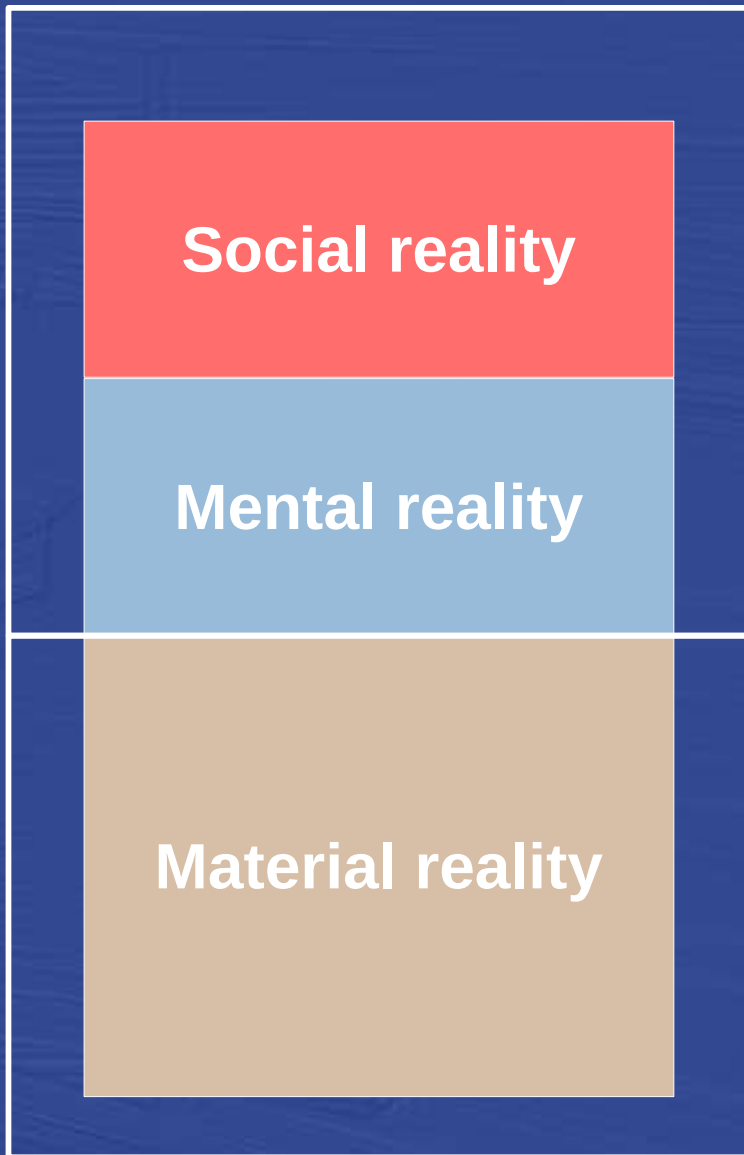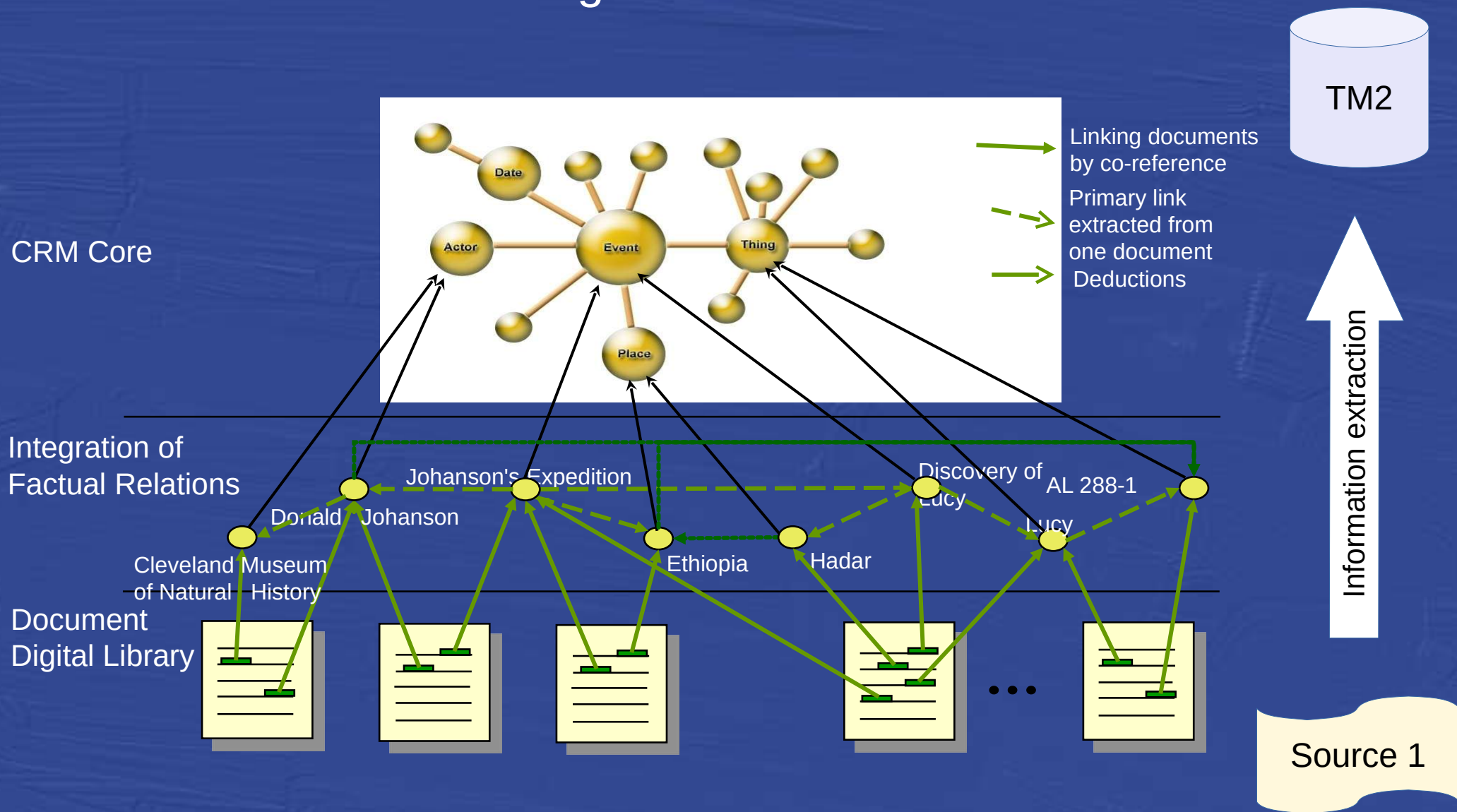
Material reality ⟶ CRMbase (& familiy)

How to model social life ?

A foundational approach

Integration of information extracted from documents using the CIDOC CRM

TM2

CRM Core

Linking documents by co-reference

Primary link extracted from one document

Deductions

Integration of Factual Relations

Johanson's Expedition

Discovery of Lucy

AL 288-1

Donald Johanson

Cleveland Museum of Natural History

Ethiopia

Hadar

Lucy

Document Digital Library

Information extraction

Source 1

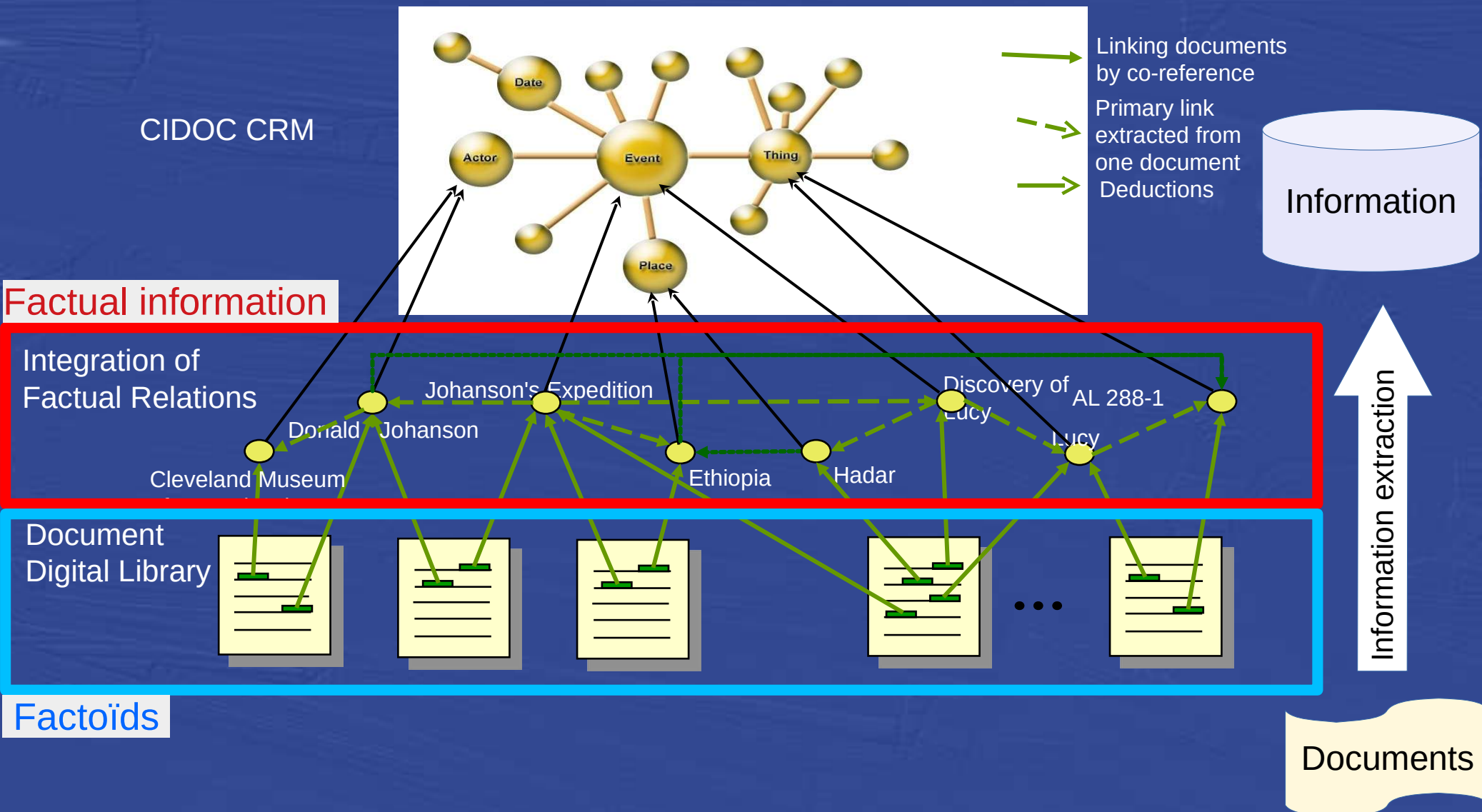Stephen Stead (2008). Cf. Doerr M. (2003), fig. 4, p. 81

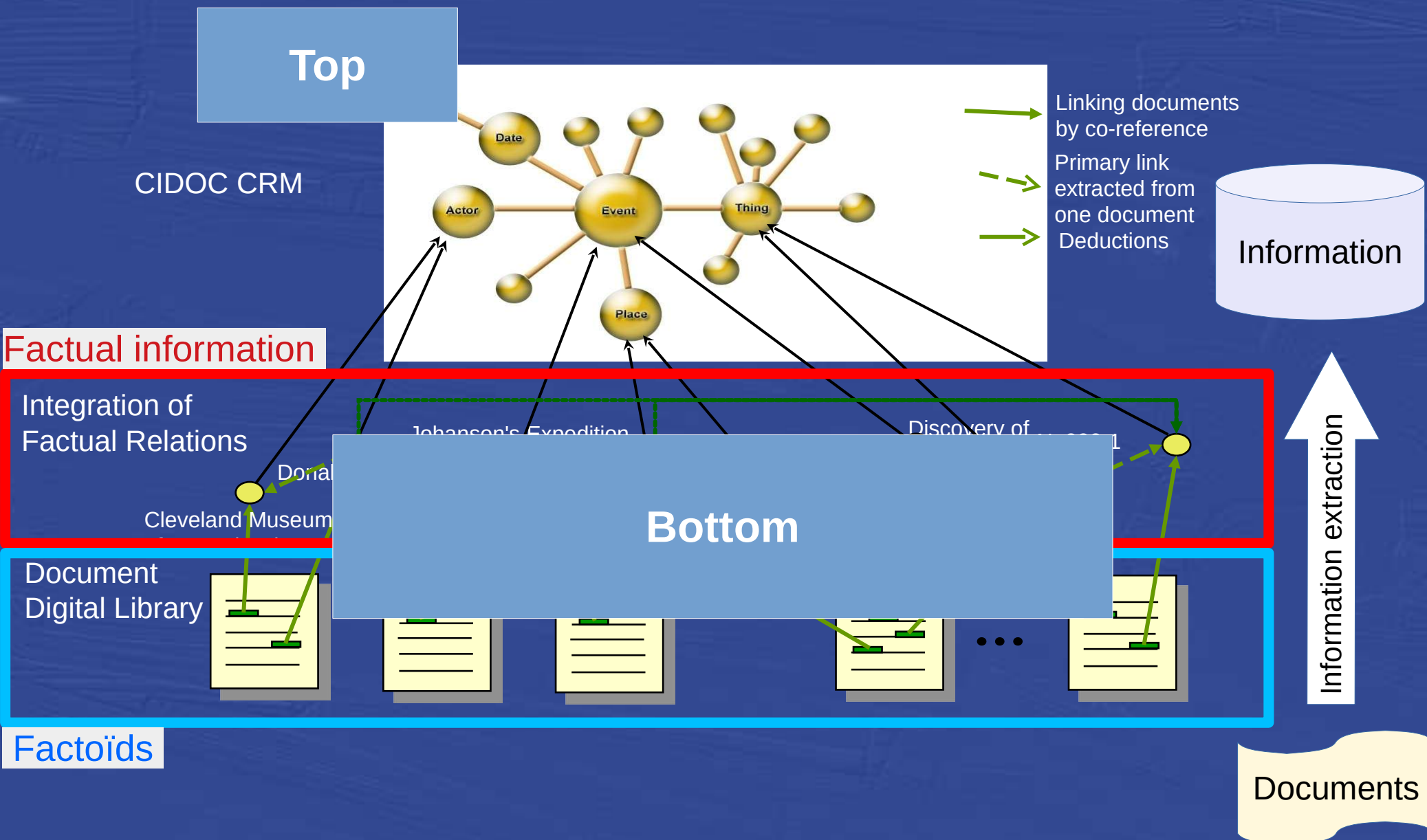# Factual information as a representation of states of affairs in the world
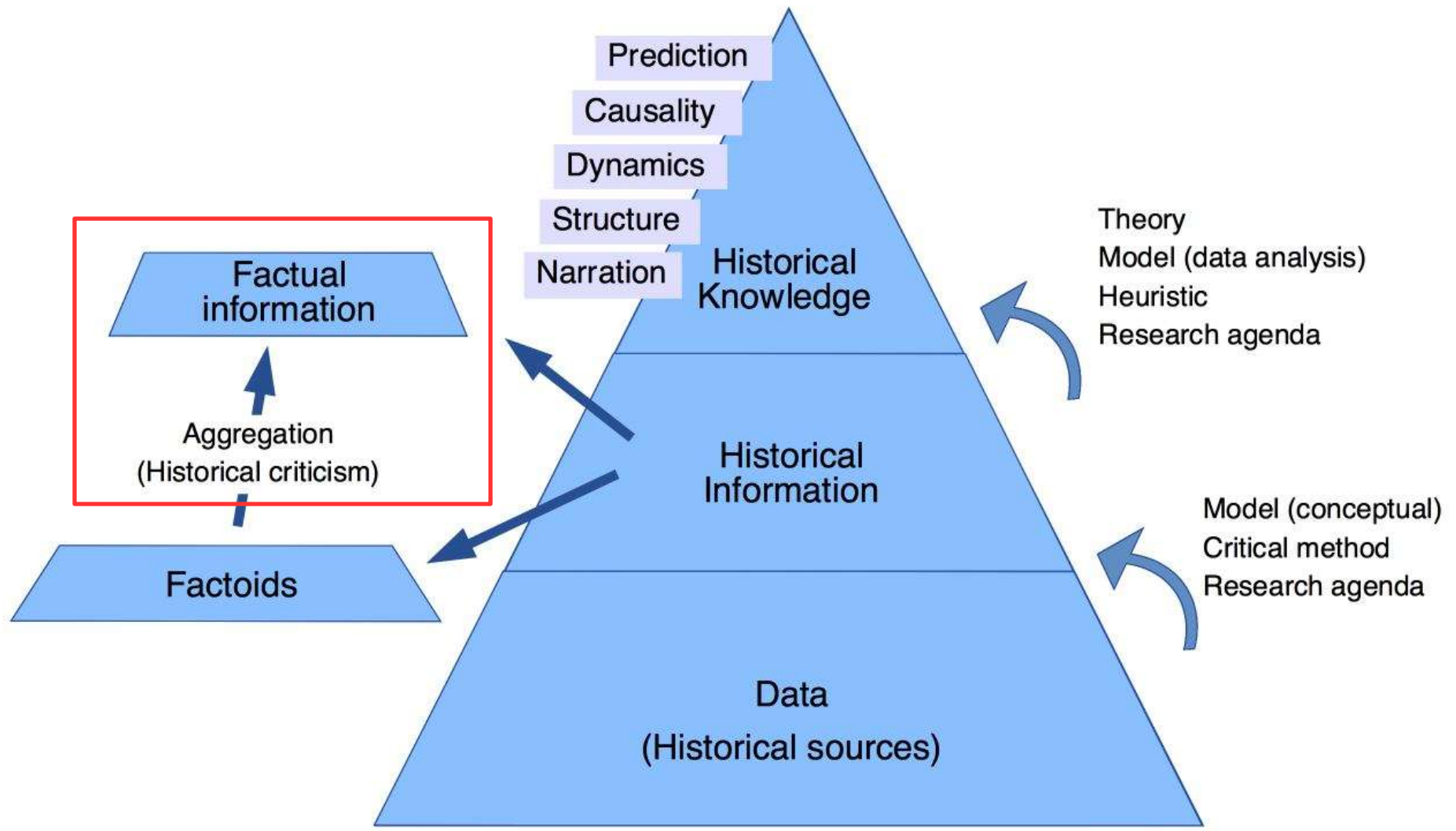
Francesco Beretta (CNRS/Université de Lyon), 7 July 2020 CC BY-NC-SA 4.0

Integration of information extracted from documents using the CIDOC CRM

CIDOC CRM

Linking documents by co-reference

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Lucy

Cleveland Museum

Ethiopia

Hadar

Document Digital Library

Information extraction

Factoïds

Documents

Integration of information extracted from documents using the CIDOC CRM

Top

CIDOC CRM

Date
Actor
Event
Thing
Place

Linking documents by co-reference

Primary link extracted from one document

Deductions

Information

Factual information

Integration of Factual Relations

Johanson's Expedition

Discovery of ...

Donal

Cleveland Museum

Bottom

Document Digital Library

· · ·

Information extraction

Factoïds

Documents

How to conceptualize
observable mental and social phenomena ?

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observable mental and social phenomena ?

« In philosophy, *intentionality* is the *power of minds and mental states to be about, to represent, or to stand for, things*, properties and states of affairs. To say of an individual's mental states that they have intentionality is to say that they are mental representations or that they have contents. »

https://plato.stanford.edu/entries/intentionality/

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« *Collective intentionality* is the *power of minds to be jointly directed at objects*, matters of fact, states of affairs, goals, or values. [...] Collective intentional attitudes permeate our everyday lives, for instance when two or more agents look after or raise a child, grieve the loss of a loved one, campaign for a political party, or cheer for a sports team.

They are relevant for philosophers and social scientists because they play crucial roles in the constitution of the social world.

https://plato.stanford.edu/entries/collective-intentionality/

The observed phenomenon :
different mental and social representations
of the same material reality
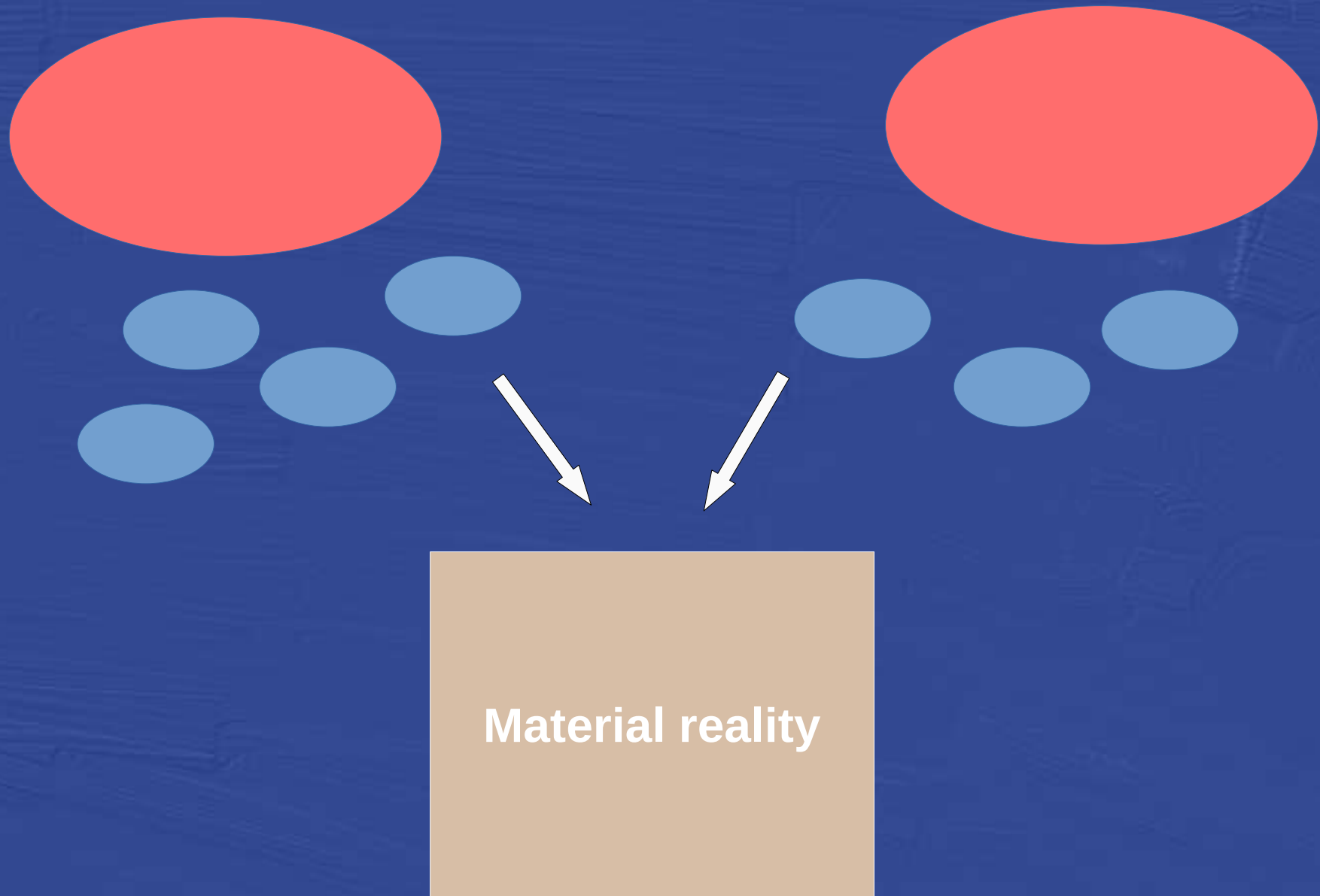
Material reality

How to conceptualize
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* Social representations : Social psychology → social sciences

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« social identity emerges based on social representations … Identity is a way of organizing meanings, of being constructed as a social subject »

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* Collective intentionality : Social philosophy

« Consciousness and intentionality are caused by and realized in neurobiology. Collective intentionality is a type of intentionality, and society is created by collective intentionality. …   language enables the creation and continued existence of status functions that do not require any physical existence beyond the linguistic representations themselves. »

John Searle. Making the Social World: The Structure of Human Civilization. Oxford University Press, 2010.

Refer to standard conceptualizations of
observable mental and social phenomena
and align them with CRMbase

Reference literature (selection):

* Gallotti Mattia and Michael John (éds.), Perspectives on Social Ontology and Social Cognition, Dordrecht, Springer Netherlands, 2014.

* Sammut Gordon et al. (éds.), The Cambridge Handbook of Social Representations, Cambridge, University Press, 2015.

* The Stanford Encyclopedia of Philosophy (Fall 2021 Edition), Edward N. Zalta (ed.) (online) (especially entries: Collective Intentionality, Mental Representation, Consciousness and Intentionality, Social Norms, etc.)

* Thomas T. (ed.), Encyclopedia of critical psychology (New York: Springer Reference, 2014) (especially entries: Interobjectivity; Social Constructionism; Social Representations; Socialisation).

Whose collective intentionality is to be modelled?
Scientific knowledge and social representations
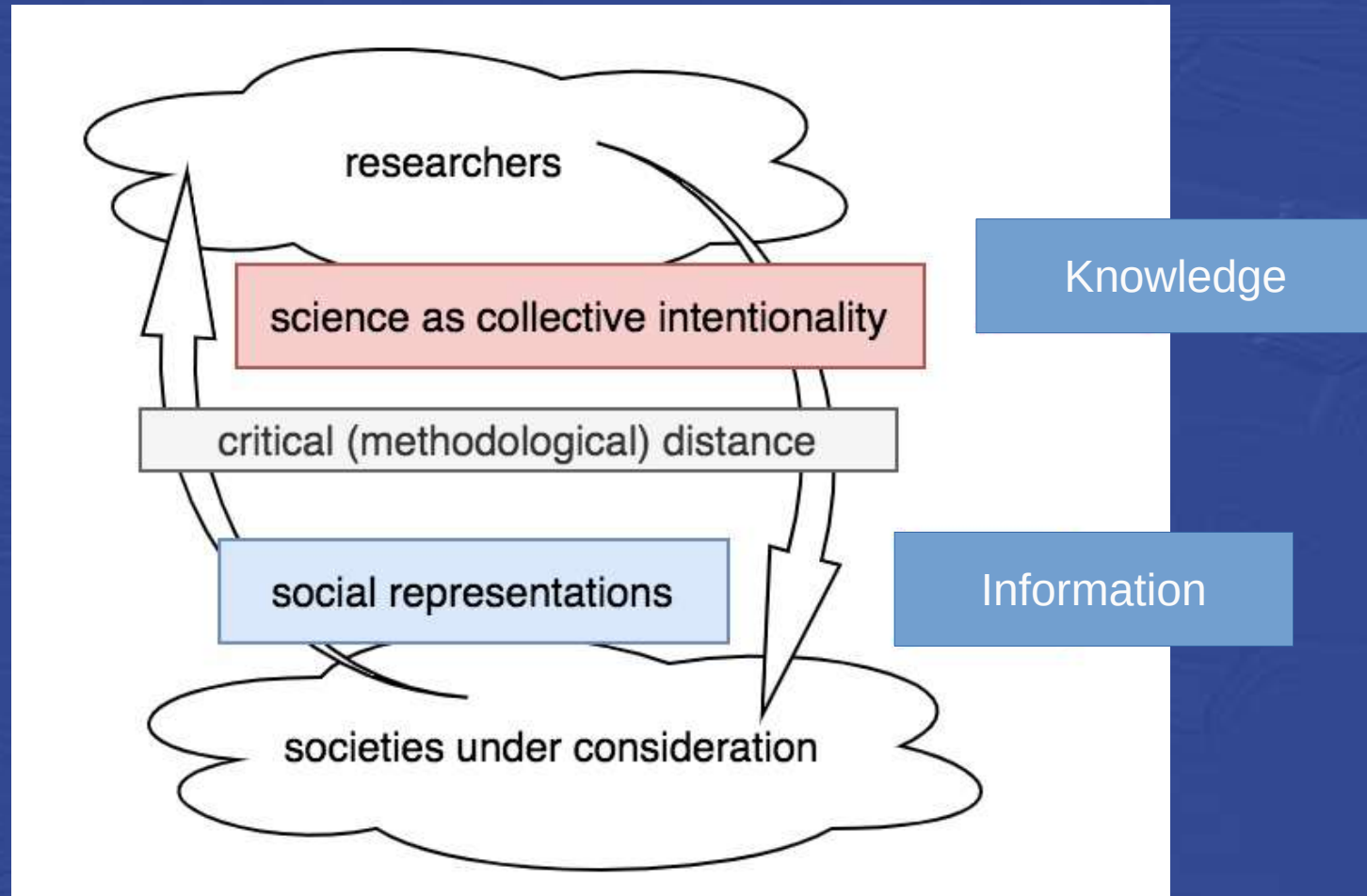
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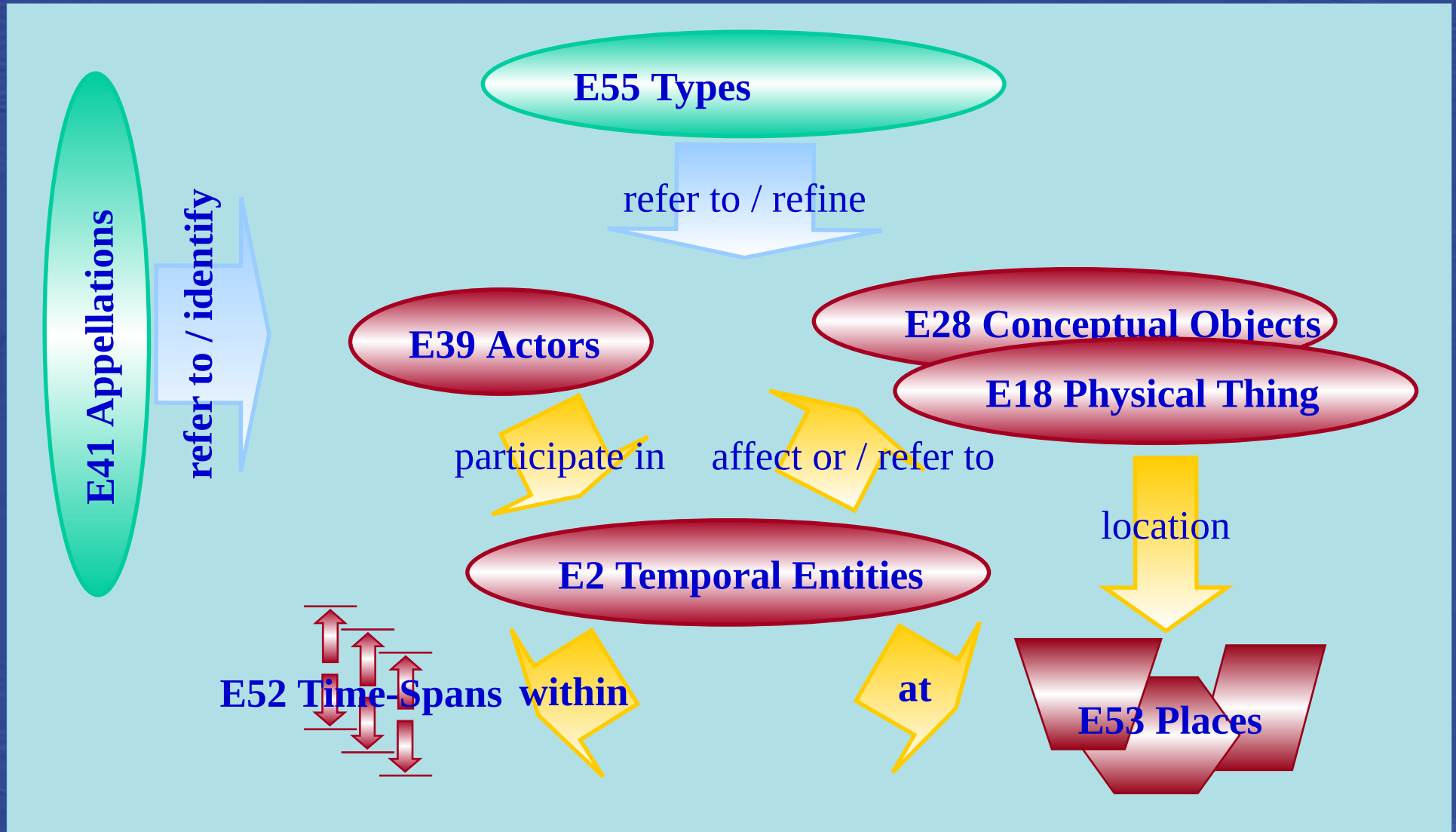
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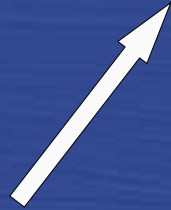
Martin Doerr, Issue 359: mental state

The CIDOC CRM (ISO21127:2006)
A semantic framework that provides *interoperability*
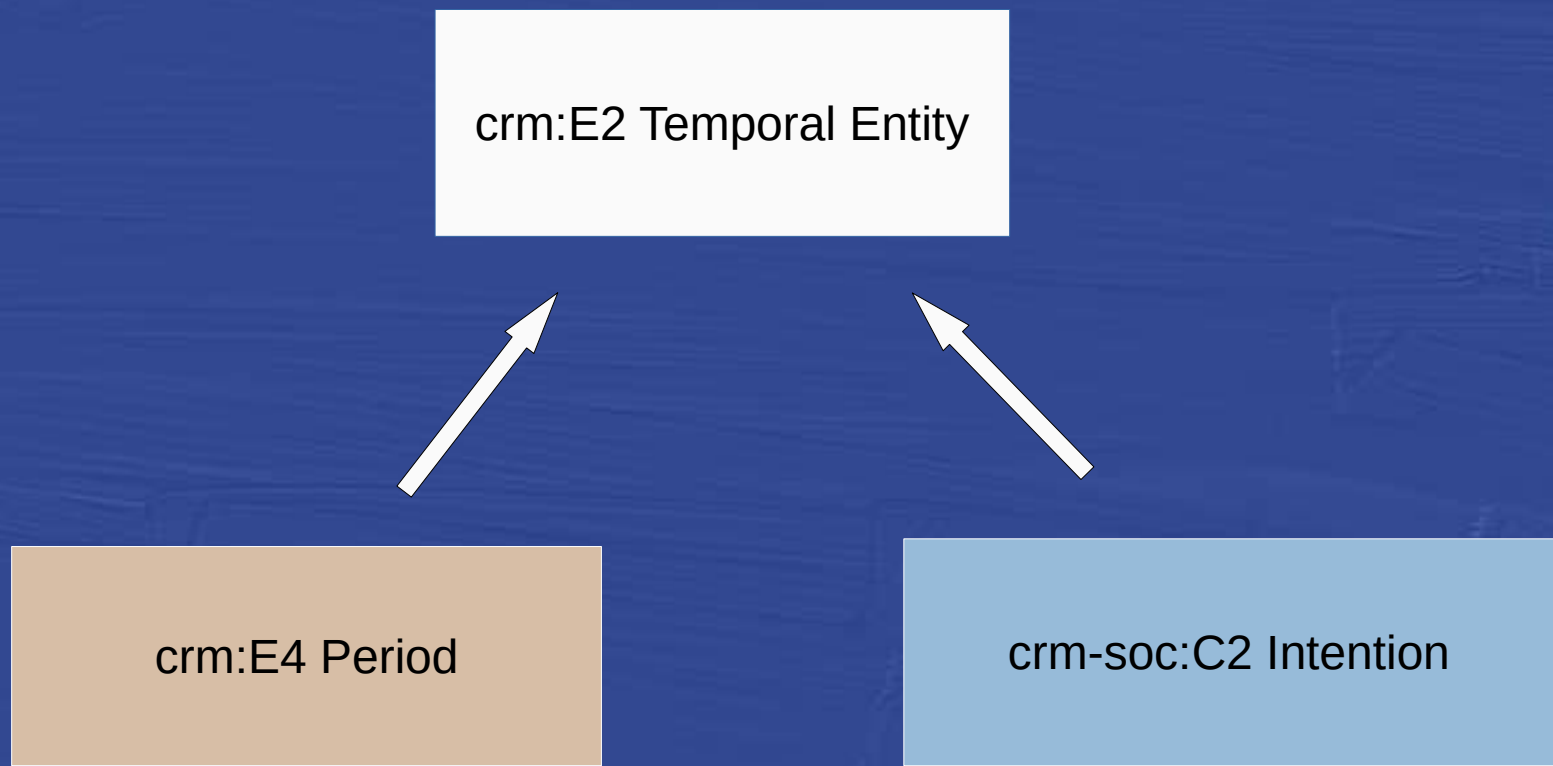between different sources of cultural heritage information

E55 Types

refer to / refine

E41 Appellations

refer to / identify

E39 Actors

E28 Conceptual Objects

E18 Physical Thing

participate in   affect or / refer to

location

E2 Temporal Entities

E52 Time-Spans within

at

E53 Places

Stephen Stead (2008)

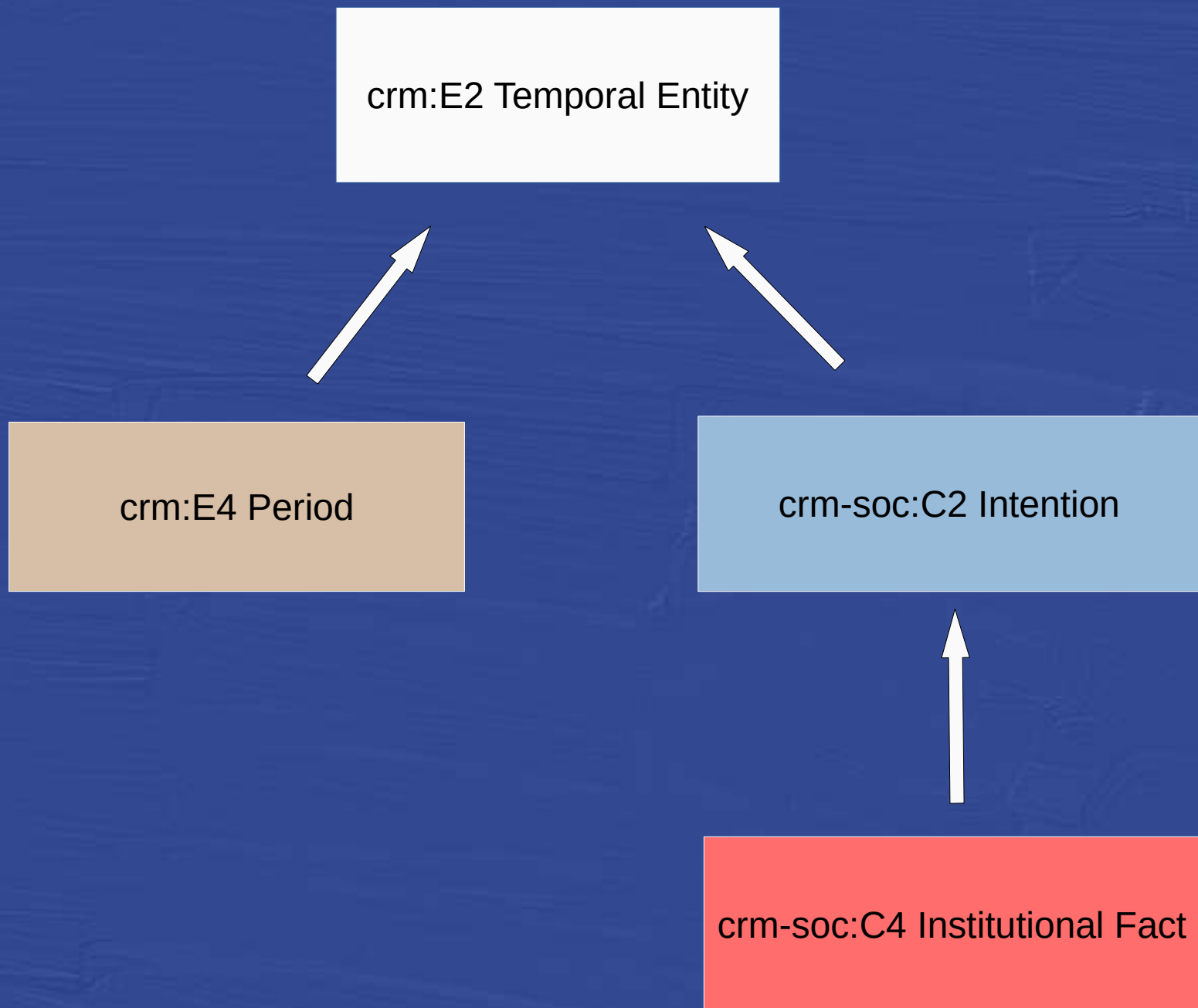crm:E2 Temporal Entity

crm:E4 Period

The advantages of this concepualization
of observable mental and social phenomena

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* Avoid taking a position on the « Central Problem »:

   Collective intentionality is no simple summation of individual intentionality (the Irreducibility Claim);
   Collective intentionality is had by the participating individuals, and all the intentionality an individual has is their own (the Individual Ownership Claim).

   (Stanford Encyclopedia of Philosophy)

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A foundational approach