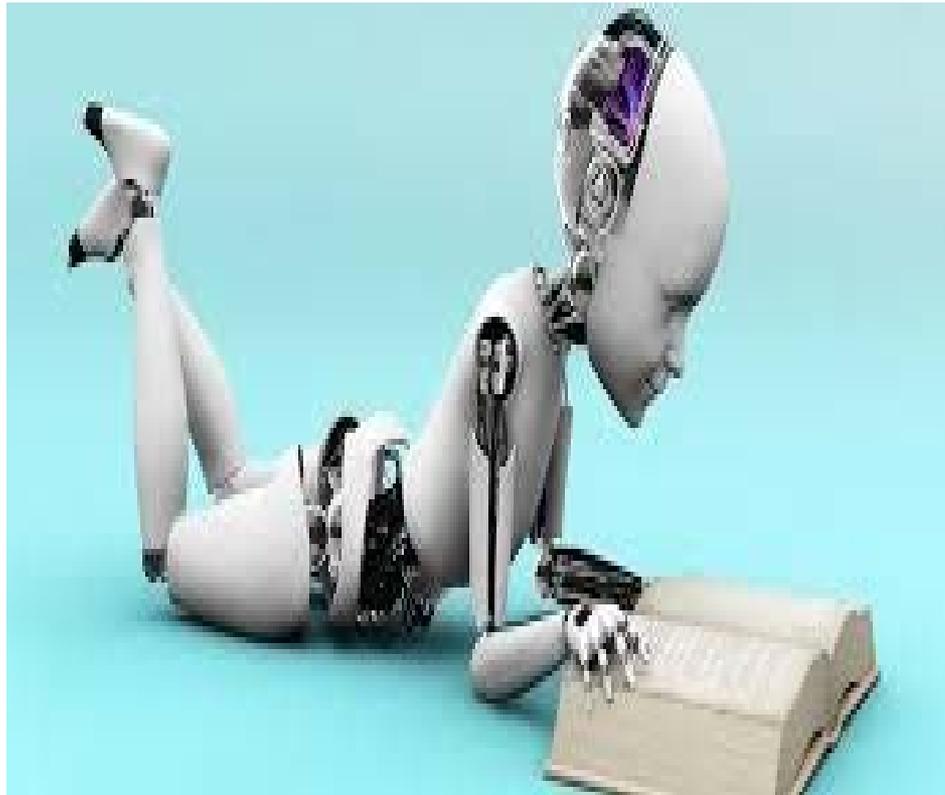


*Interconnecting knowledge and information
in Digital Humanities
The case of the Backbone Thesaurus*

DARIAH-Annual Event 2018, 22-24 May Paris





- *Integration of new technologies and the traditional research.*

Facilitating collaboration across different scientific fields.



.... we have developed an
***coherent overarching
thesaurus***



Our aims in building the BBT



Epistemological and methodological background of the BBT.

Interdisciplinary character of our goals.

Need for study of the epistemological principles and methodological preconditions.

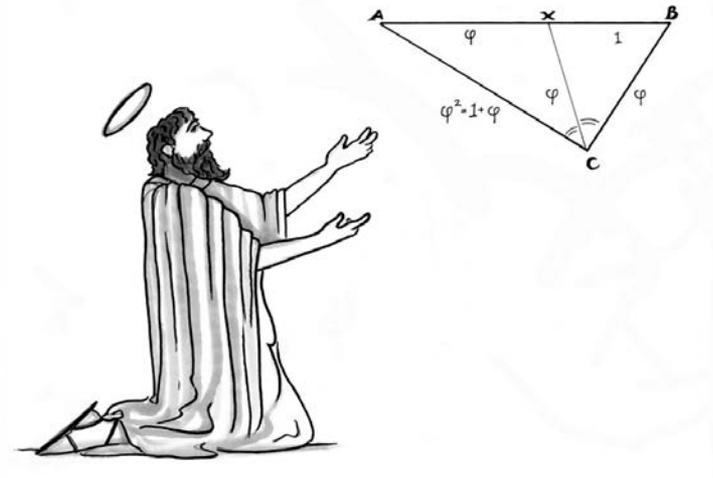


*content-oriented classification leads
to inconsistencies
and frequently to contradictions*

*Example: which is the common
ground between the terms “wedding
dress” and “wedding reception”?*

*Could it be “wedding” as a top-level
category?*

Important clarification: The intersubjective character of the properties does not entail their ontological existence independently of the sphere of perception!



- 
- The extension of a term is defined as the set of items for which it is true. It denotes the reference of a term, the range of its applicability by naming the particular items.

For example, the extension of the term 'cat ' is the set of all the cats in the world; the extension of 'red' is the set of all the red things

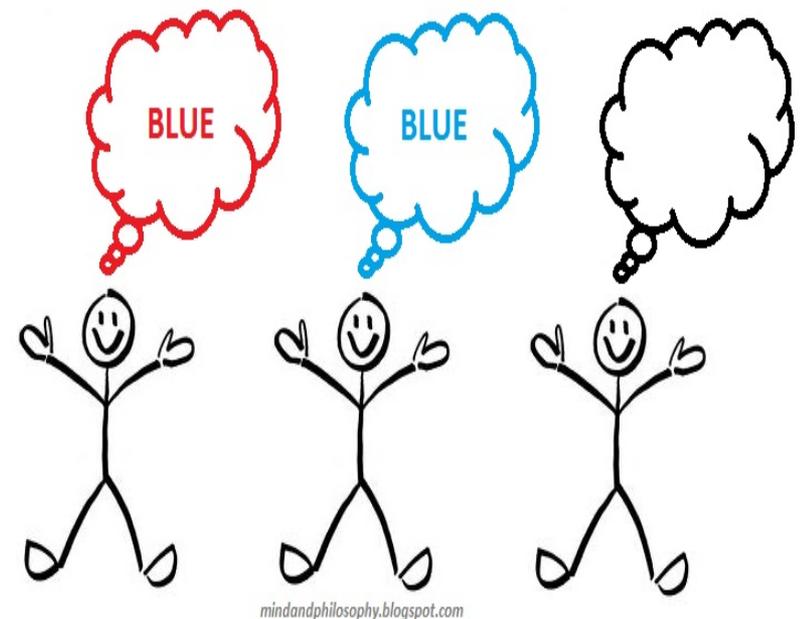
Extension und Intension

- The intension of a term is the sum of its properties, state of affairs, qualities etc. that constitute the necessary and sufficient conditions for being in the extension of a term/concept

For example, the intension of "bachelor" might be something like: adult, unmarried male. Being an adult, being unmarried, and being male are all necessary conditions for being a bachelor, and their conjunction is a sufficient condition

Extension und Intension

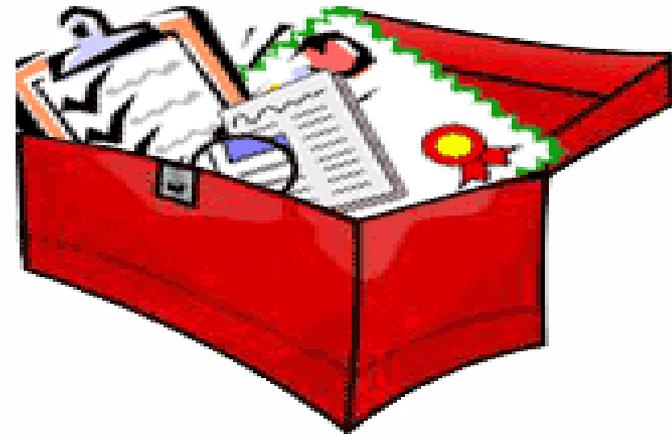
- ***Conventional intension***



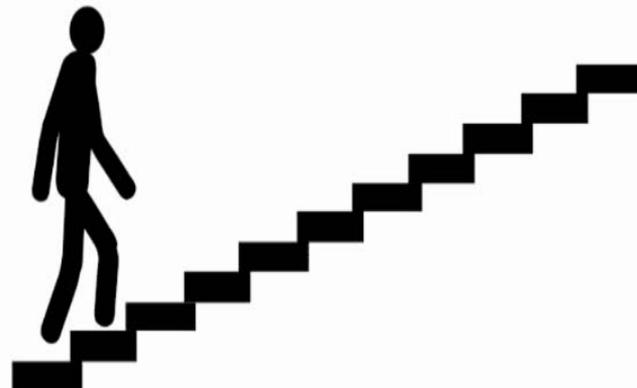


- *Methodological preconditions and tools*

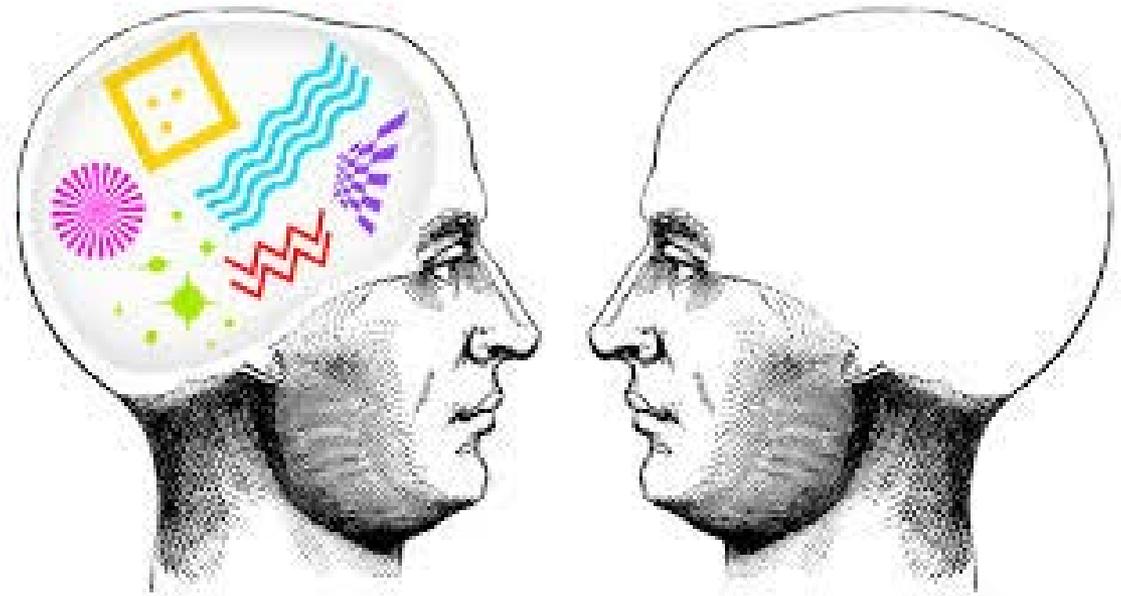
1. *Each concept has a purpose or utility*



2. *Bottom-up method*



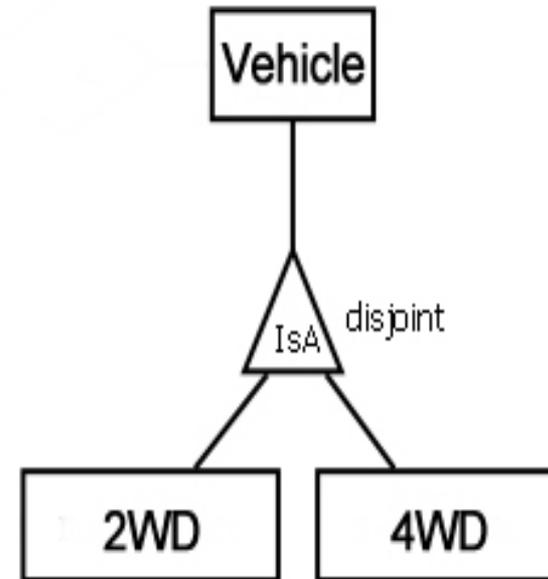
3. *Abstraction from the context of reference*



4. *IsA relationship*

The IsA relationship reveals the common ground between narrower and broader terms.

Motorbike and truck: both are Vehicles!



How to recognize the intensional properties of a term.

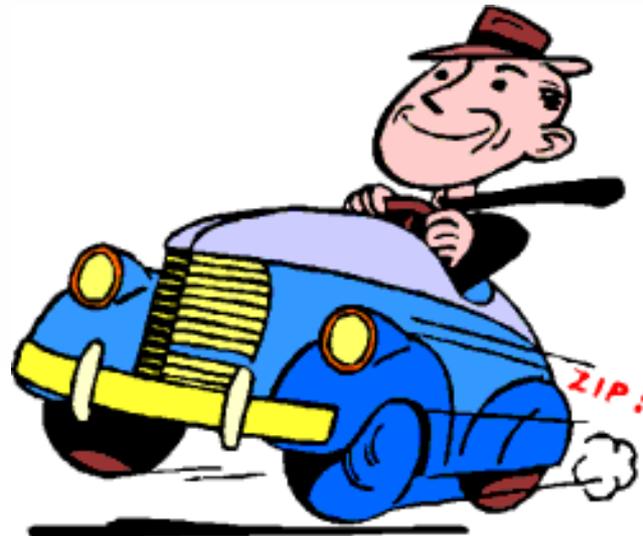


Practical rules and guidelines



1. Intensional vs incidental properties

E.g.: if we define “human” as “driver” i.e. by his incidental property to drive a car, then all people who do not drive are not human!



2. Contradictions

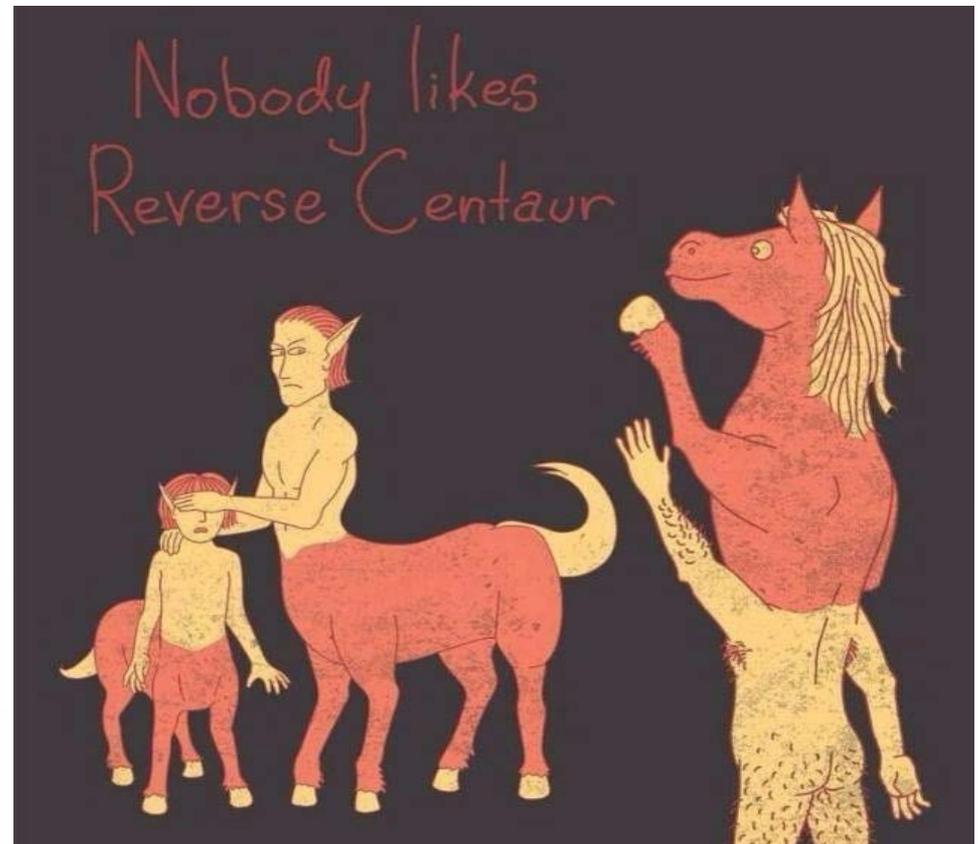
a) Terms are defined through self-contradictory properties:

E.g. conflicts are intentional activities carried out by at least two actors and are caused by natural phenomena!



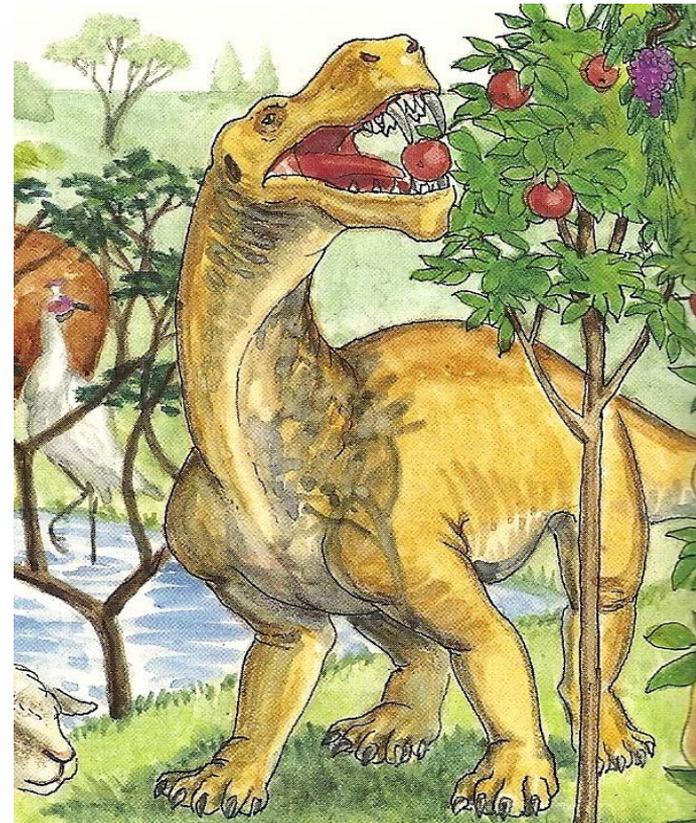
- b) Reverse of the relation between broader and narrower term.

E.g.: Stelae, which is a concrete piece of stone bearing inscriptions that can be transferred is the broader than the term “mobile objects” which comprises any object that can be transferred!

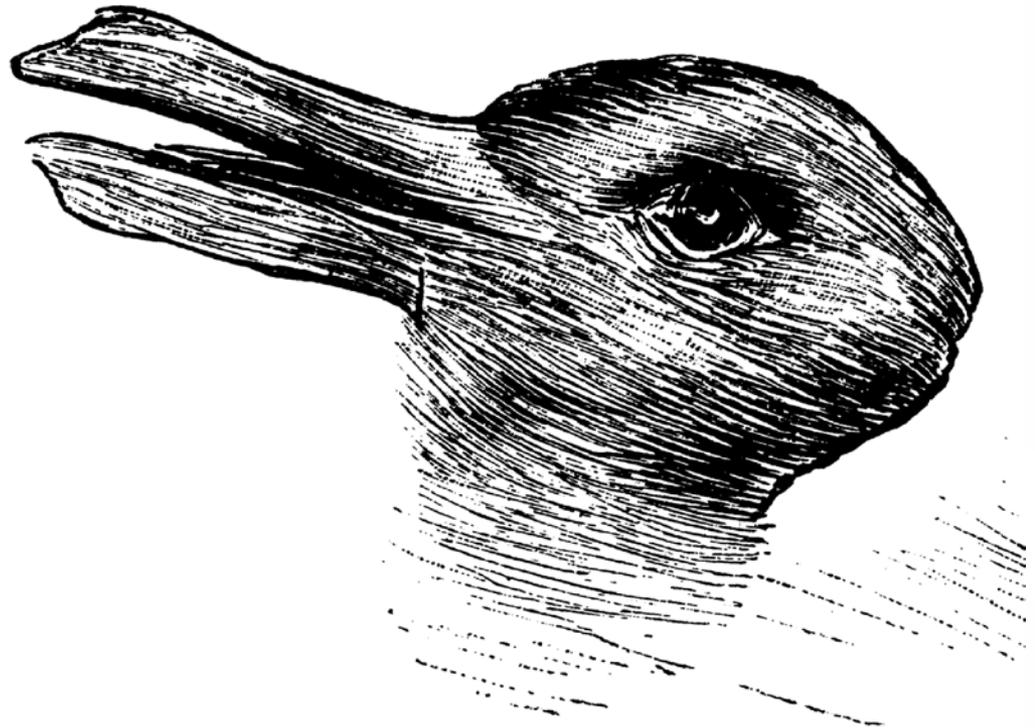


- c) A narrower term is attributed properties which contradicts at least one of the necessary properties attributed to its broader term.

E.g.: if we subsume the term Stelae which is a mobil object under the broader term immobile objects, then “Stelae” seems to posses contradictory properties: it can and cannot be transferred!

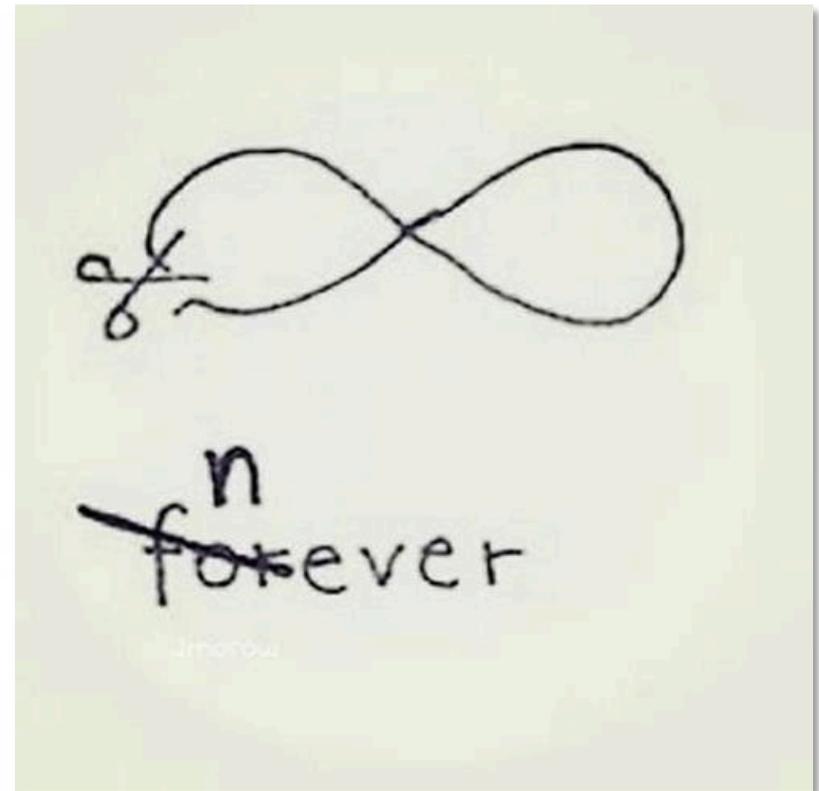


3. Avoid ambiguity:
Duck or Rabbit?



a) *Avoid too broad concepts.*

E.g. If we choose for an upper-level concept the term “research object”, we could subsume under this concept the whole thesaurus!



b) Ambiguity related with the polysyme of the terms

E.g. Mercury could mean: a metal, a planet, a God in mythology



4. *Identify the common meaning between the terms.*

E.g. if we define wars as “armed conflicts” we exclude all the other forms of war that are not based on weapons”.



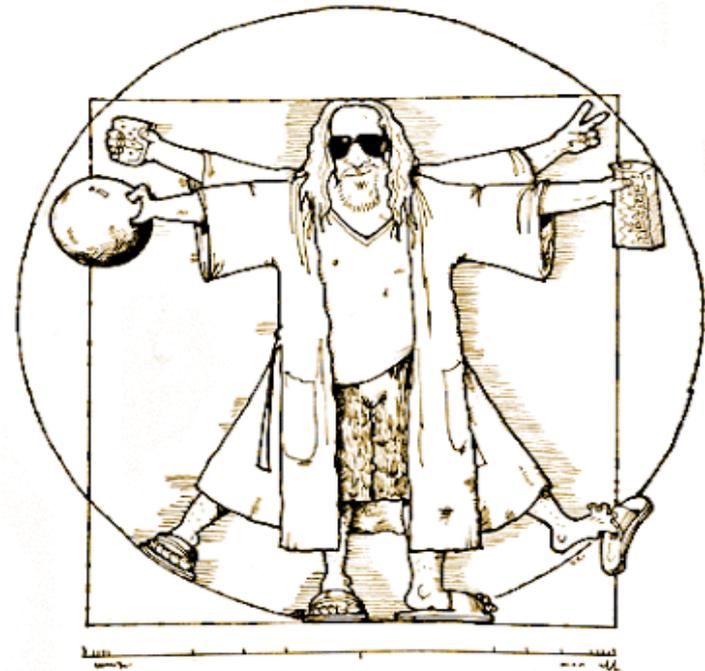
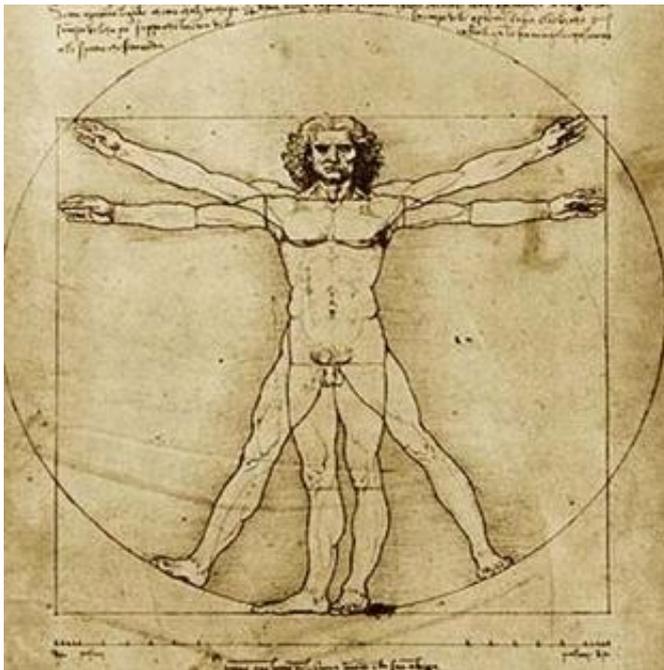
5. *Avoid introducing upper level concepts whose meaning is tied to a specific context.*

E.g. X-Ray systems are used by many disciplines, such as medicine, material assaying, art conservation, archaeology. Classifying them as “medical instruments” or “archaeological instruments” would not render anything about their nature.



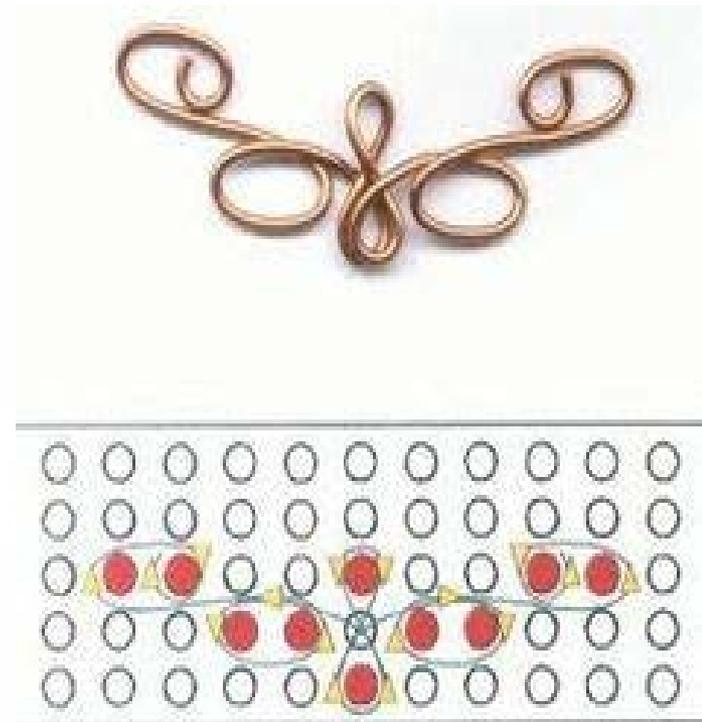
6. Distinguish between universals and particulars.

E.g. the term ethnic groups is a specialization of groups because they designate a specific type of groups based on the origins of people, while the term Germans is not a specialization of groups, which establish a type of a group but a realization of a certain type of group which is based on the differentiation according to the (geopolitical etc.) origins of certain people.



7. *The definition should correspond to the term and vice versa.*

E.g. it is easy to get carried away by the affinity of the meaning and consider the term “distribution of roles” as a narrower term of the facet “groups and roles. But Distribution/allocation of roles is an action and there is a contradiction between the facet and the narrower terms!



8. Define a concept/term according to the contemporary terminology we use to describe it.

E.g. according to the contemporary approach of architecture it is a science while according to an earlier approach architecture is handwork.



9. *The names you choose in order to express the meaning should not lead to ambiguities and confusions with other terms.*

E.g. Although the term “book” is a material object we frequently use the term to denote the content of the book which is however a conceptual object.



activities

- disciplines
- human interactions
- intentional destructions
- functions
- other activities

natural processes

- natural disasters
- geneses

materials

material things

- mobile objects
- built environment
- physical features
- structural parts of material things

types of epochs

conceptual objects

- symbolic objects
- propositional objects
- methods
- concepts

groups and collectivities

roles

- offices
- roles of interpersonal relations

geopolitical units



<http://backbonethesaurus.eu>