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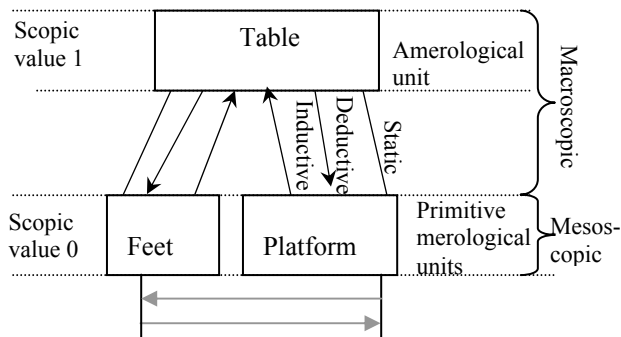# Merological Morphogenesis and the Lexical Notions Meronym/Ameronym

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The Merological Morphogenesis

By morphogenesis, R. Thom (1972,1980) intends the *destruction or generation of forms*. Our interest resides on the *merological morphogenesis* of qualitative objects, which concerns their physical genesis by consocation and synthesis of their parts. Pragmatically, this process consists of assembling their parts in accordance with the schematic organizations we got in mind about these objects, and which could have been computerized. Let us illustrate on the following taxonomic representation:

It is about a simple *table* made of *feet* nailed to the *platform*. We find different kinds of *tables*, and each instantiates a specific systemic merological organization reflecting its proper complexity. The above taxonomic representation possesses two plans: the *vertical plan* structured by *phyletic relationships*, and the *horizontal plan* structured by *connective unions* that are *active* and *interactive*. These unions can be reinforced by connective agents namely *nails, screws, glue, soldering…* In this functional context, *connective unions* are not *associationnist*: they are *consociationnist* because they engage contents (or parts) sharing structural and functional affinities. So while phyletic relationships are *conceptual* and *schematic,* unions are *material* and *connective*.

The above phyletic organization of the *table* is parametered by *scopic values* that are *0* and *1*. The entities of the mesoscopic plan (*feet* and *platform*) are primitive merological contents with scopic value 0. The *table* is itself a modular macroscopic *whole* with scopic value *1*, directly made of its mesoscopic *parts*. When the completeness and fullness of the *whole* is reached, the process of its formation stops. It could not continue because it reached its ontological end. As Husserl (1972) stressed it, whereas *parts* are characterized by their *functional dependency*, the *whole* is characterized by its *structural autonomy* and *independency*. This gives justice to our claim that the *part* is

merological, and the *whole*, *amerological* (with negative prefix *"a"*).

In the left taxonomic representation, the phyletic relationships are prior *inductive* / *affiliative*, oriented from bottom to high. In this shape, the function they play is *to form* a non pre-existing *table*. These relationships can also be *deductive /derivative* from high to bottom and shaped like that, the function they play is *to constitute* a pre-existing *table*. Thus, *merological affiliations* are prior to *merological derivations*: the former "form" a *non pre-existing entity*, and the latter "constitute" a *pre-existing entity*. Otherwise, *affiliations* and *derivations* can annul themselves to just appear *static* and *generic*. For simple objects like *table, chair, book…* the representation of their merological organizations could appear simple because the number of their contents is ontologically reduced. But for complex objects like *cars, planes, boats, computers…* the endeavour of representing taxonomically their merological organizations is very difficult: it could need computer assistance. Generally, the extension and complexity of a given physical entity reside both on its modularity degree, and on the phyletic irregularities that can characterize its own progressive merological synthesis.

Meronyms and Ameronyms

We derive these lexical notions from the logical notions *merology /amerology. Meronym* categorizes a lexical item denoting a *part* in the outer reality, and *ameronym,* a lexical item denoting something that is ontologically a *whole*. However, in this functional context, a *meronym* should be enunciated with regard to the *whole* it integrates, as we can see below:

⇒Ameronym : *table.*
Meronyms of *table*:
platform, feet…

⇒Ameronym : *house.*
Meronyms of *house* : *walls, floor, roof, rooms, kitchen...*
⇒ETC.

⇒Ameronym : *animal body.*
Meronyms of *animal body* :
head, eyes, hair, mouth...

⇒Ameronym : *tree.*
Meronyms of *tree* : *trunk, branches, foliage, roots...*
⇒ETC.

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