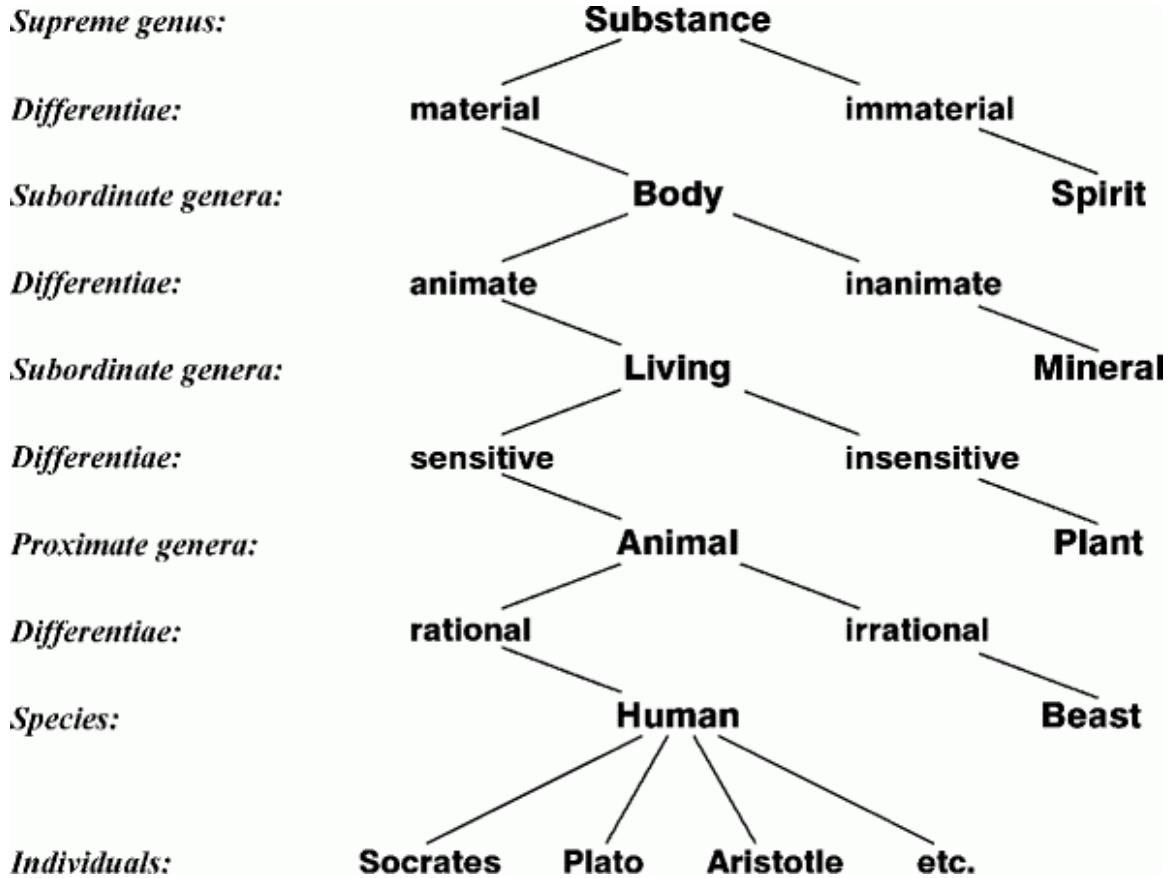


Definitions and the Tree of Porphyry



The Form of a Definition by genus and differentia

Each definition takes the form:

$$\textit{Definiendum} =_{df} \textit{differentia} + \textit{genus}$$

where the *definiendum* is a species (or genus), and the *definiens* is the formula that consists of the differentia + the genus (or super-genus). Thus, just as a species is defined in terms of its genus and a differentia that marks it off from other species of that genus, each genus is defined in terms of its super-genus and a differentia that marks it off from other coordinate genera falling under that super-genus.

Some of the definitions embodied in the tree above

- Body =_{df} material substance
- Living thing =_{df} animate body
- Animal =_{df} sensitive living thing
- Human =_{df} rational animal

Fully explicit definitions

In a fully explicit definition, each definable term (*definiendum*) is replaced by its *definiens*. Thus, the fully explicit definition of *human* will be:

Human =_{df} rational sensitive animate material substance

This is obtained from the compressed definition above by successively replacing each definable term (*definiendum*) in the definition with its *definiens*. Thus, we replace ‘animal’ in ‘human =_{df} rational animal’ with its *definiens* and obtain ‘human =_{df} rational sensitive living thing’. We then do the same for the *definiendum* ‘living thing’ to get ‘human =_{df} rational sensitive animate body’, and finally, replacing ‘body’ with its *definiens* ‘material substance’ we obtain the fully explicit definition above. A glance at the Tree of Porphyry shows that the complete definition of a species consists of its differentia together with the differentiae of all of the genera under which it falls. In this way, all the genera (except for the supreme genus) seem to disappear from the definition, and thus, as Aristotle says (*Metaph. Z.12, 1037b30*) “there is nothing in the definition except the first-named genus and the differentiae.”

There will be many differentiae because there is at least one differentia at each level: species, genus, super-genus, super-super-genus, etc.