

Formal Ontology of Quality Space. Location, Subordination and Determination

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Abstract : Determination is the relation that holds between certain kinds of properties, determinables – such as “being colored”, and others, determinates – such as “being red”. Subordination is the relation that holds between genus properties – such as “being an animal”, and others, species properties – such as “being human”. It is widely held that Determination and Subordination share important similarities, yet also crucial differences. But what grounds such similarities and differences? This question is hardly ever addressed. The present paper provides the first step towards filling this gap in the literature. It argues that a locational theory of instantiation, roughly the view that to have a property is to occupy a location in quality space, holds the key for such an answer. More precisely, it argues that both principles of Determination and Subordination are just examples of more general principles of location. Consider Determination. The principle that everything that has a determinate has a determinable boils down to the claim that everything that has a precise location in quality space is in quality space – an eminently reasonable principle. The principle that nothing can have two determinates (at the same level of determination) boils down to the principle that nothing can be “multilocated” in quality space. In effect, the following provides a “translation table” between principles of location and determination: LOCATION DETERMINATION Functionality At Most One Determination Focus At Most One Determination & Requisite Determination* Exactness Requisite Determination* Super-Exactness Requisite Determination Exactitude Requisite Determination Converse-Exactness Determinable Inheritance This grounds the similarity between Determination and Subordination. What about the differences? The paper argues that the differences boil down to the mereological structure of the regions that are occupied in quality space, in particular whether they are simple or complex. The key technical detail is that Determination and Subordination induce a “set-theoretic rooted tree” structure over the domain of properties. Interestingly, the analysis also provides a possible justification for the Aristotelian claim that being is not a genus property – an argument that the paper develops in some detail.

Keywords : determinables/determinates, genus/species, location, Aristotle on being is not a genus

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