

The concept “man” can be subdivided in numerous ways by adding different characteristics to the distinguishing characteristic: “boy” (adding age and gender), “Negro” (adding race), “Republican” (adding political affiliation), “economist” (adding profession). To give an idea of the range of possibilities that cross-classifications open up, here are some further examples — each using a different basis of cross-classification: “cousin,” “student,” “criminal,” “Baptist,” “environmentalist,” “theorist,” “hero.”

Cross-classifications range across a rich and interesting variety of cases, and they serve many different cognitive purposes. As with all conceptualization, the basic process remains the same: differentiation, measurement-omission, and integration.

Subdivision is a fairly easy process to perform, because the integration is already established, and one need only make finer differentiations within it. Differentiation is an easier task than integration.

CONCEPTUAL HIERARCHY

The process of abstraction from abstractions gives rise to a phenomenon of immense importance for epistemology: hierarchy.

In its most general usage, a “hierarchy” is an ordered relationship among items: each item is located in a series according to its dependency upon the item below it.⁶⁷ Examples are military rank (private, sergeant, captain, etc.) and levels of courts (trial, appellate, supreme). The hierarchy terminates in (or begins with) a primary, or set of primaries. This primary is the fundamental item of the series, the one on which all the others depend. For instance, the military hierarchy terminates in the Commander-in-Chief, or each of the floors of a building depends on the one below it, terminating in the ground floor.

The hierarchy of *concepts* results from the iterative nature of abstraction from abstractions. Higher-level concepts depend upon the earlier ones that they integrate or subdivide. “Organism” (a widening) depends on “plant” and “animal,” and these concepts, in turn, depend on earlier concepts formed from perception, such as “tree” and “bush,” and “dog” and “pig.” “Celebrity” (a narrowing) depends on “fame” and “man.”

67 There is an unfortunate ambiguity in speaking of “above” and “below” here. I take the perspective that a hierarchy moves “up” from its base or foundation, though one could alternatively say that the hierarchy flows down from the top (e.g., the Commander-in-Chief is usually thought of as being at the “top” of the military chain of command).

This dependency is absolute: without lower-level concepts to link them back to perceptual reality, the higher-level concepts lose their meaning, becoming empty sounds.

The hierarchy of concepts concerns the necessary order of their formation. By virtue of the identity of man's consciousness, concepts have to be formed in a certain order. The concept of "stockholder" cannot be formed before the concept of "stock," which cannot be formed before the concept "corporation," which cannot be formed before the concept "business."⁶⁸

It is the condensation afforded by the first-level concepts that permits the formation of wider concepts, because the wider concepts would not be graspable without that condensation. Take the formation of the wider concept "furniture." Tables, beds, and dressers have no *perceptual* features in common. A table does not look like a bed, and neither of them looks like a dresser. Nor do these objects look similar when contrasted to such non-furniture items as a kitchen cabinet or a refrigerator. The level on which items of furniture are in fact similar — which involves their movability plus their function — is too wide a level to be grasped directly from perception. In other words, the perceptual variety of items of furniture is too great for the "crow."

Likewise, consider the concept "organism" as denoting any living being, whether plant or animal. A child can *see* the similarity among dogs, or among horses, or among trees. But now picture the child, before he has any concepts, looking at a grassy field on which there are dogs, horses, trees, and rocks. Given the limits of the "crow," no child can grasp by just looking at the scene that the living organisms (dogs, grass, horses, trees) are similar as opposed to the rocks. In order to reach the required scale of awareness, the child must first condense the dogs into "dog," the horses into "horse," then "dog" and "horse" into "animal," and he must separately condense "tree" and "grass" into "plant." Only after these intermediate concepts have been formed and automatized can he then consider the two units "animal" and "plant" in opposition to "rock." (Even this is a simplification: one would have to form many more concepts — e.g., "growth," "reproduction," and "action." In fact, one would have to make propositional identifications — e.g., "The animal and the plant act on their own, but the rock remains where it is unless pushed or pulled by an external force.")

To fully appreciate the hierarchy of concepts, one must firmly distinguish between grasping concepts and merely uttering words. Just seeing

68 The overall order allows, in some cases, for options regarding the particular details of its implementation. See ITOE, 204–217.