

Factorial analysis of hierarchical sorting data

Holistic approaches (such as free sorting, napping, etc.) which considered objects as a whole are more and more used in sensory analysis. With these approaches, each subject uses its own criteria to realize the task and he can use one or more criteria; but subject strategy during the task isn't known. The hierarchical sorting task is a data collection which tries to understand these strategies.

The starting point of our research framework is the hierarchical sorting task. This method consists in asking subjects to provide each their own hierarchical tree from the same given set of objects. This hierarchical tree is constructed mostly in a binary and descending way: the subjects are asked to divide the objects into two homogeneous groups and then to divide again each of the two groups until they consider the final groups homogeneous. The main feature of this method is that each subject uses his/her own criteria for making these successive divisions. In this experiment we're interested into getting a consensus representation of the objects from all the subjects and a representation of the subjects, function of the way they classified the objects.

In this talk, we propose a method which provides on the one hand a Euclidean representation of the objects and on the other hand a Euclidean representation of the subjects linked to the previous one in the manner of MFA. This subject representation allows to visualize the different steps taken by each subject and to understand in a certain way his/her cognitive process.