

Combining the best of two worlds, the “sorted napping”

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Holistic approaches (*i.e.* approaches that consider items as a whole), such as napping or sorting task, are becoming increasingly popular in sensory analysis since they are few time-consuming methods and they can be carried out by untrained people. With napping, the judges are asked to position products on a tablecloth according to their resemblances and with sorting task they are asked to provide groups of products. The choice between one or the other method depends on the importance we grant to their own specificities, *a priori* more rich for the first one versus *a priori* more synthetic for the second one, or on our own practices.

The purpose of this communication is to propose a new approach combining both napping and sorting task in which each judge is asked to provide a tablecloth with products that have been possibly gathered. Thereafter this approach will be called “sorted napping”.

Data can be displayed in a table with as many rows as there are items/products and as many columns as there are judges multiplied by 3: to each judge we associate three columns, two for the coordinates of the items on the tablecloth, one for his partition variable on the items (each sorting task can be considered as a qualitative variable with as many categories as there are groups). Such data can be structured according to two nested partitions on the columns; one at the “judge level” (with as many triplets of columns as there are judges) and the other one at the “approach level” (for each triplet we consider two subsets of columns, one for the coordinates of the napping and one for the partition variable of the sorting task). We analyzed the data using hierarchical multiple factor analysis (HMFA) in order to balance the part of each judge and within each judge the part of each approach. HMFA provides usual factorial analyses representations (representation of the products, of the variables, etc.) but also a representation of the judges, of the products from the point of view of each judge.

This method will be illustrated with a real example in which 24 judges (students) performed a sorted napping on 8 fresh squeezed juices (smoothies).

Keywords: holistic approaches, sorting task, napping, sorted napping

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