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Projective mapping

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Projective mapping [1] and its Napping [2] variations have become increasingly popular in the sensory field for rapid collection of spontaneous product perceptions. It has been applied in variations which are sometimes caused by the purpose of the analysis and sometimes by the practical testing environment. As a result, a reasonable assumption would be to question the consequences caused by these variations in method procedure. Below, we highlight some of the proven or hypothetic consequences of the variations of projective mapping.

Variations   &   Consequences

Frame geometry

The response surface or frame geometry as applied to the assessor are varying between projective mapping studies. Currently, these shapes include the rectangle, the circle and the square. In addition, some studies apply guiding grids or lines inside the geometry.
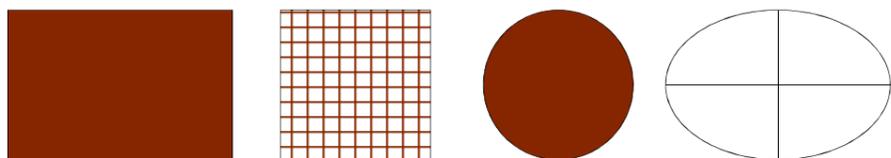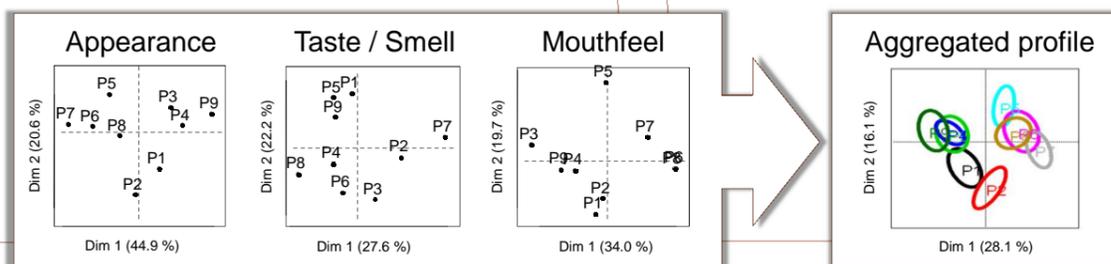

Consequence

Early gestalt psychology explains visual recognition to be based on whole figures rather than the lines that connect them. Hence, we over- and underestimate lines and probably also Euclidian distances according to the frame geometry, as shown by the vertical-horizontal illusion.

Our results show some **significant variations in the use of vertical and horizontal dimensions** when applying e.g. a round vs. a rectangular frame. These variations show **less practical significance**. More important is the implication of the value of the dimension, e.g. the horizontal as being more important in the rectangular Napping framework [3].

Semantic restrictions

Semantic restrictions can be a part of the assessor instructions. In this way the instructor can guide assessor focus and semantic output. Individual sensory modalities are a typical choice of restriction. Others can be emotions or associations.

Consequence

Semantic restrictions **heavily influence** the product placements as well as the descriptive vocabulary. Special sensory assignments might favour a condensed sensory focus. Evaluations one the same product set can be rapidly repeated on various sensory modalities. Furthermore, relevant **partial profiles can be aggregated** into a global product profile [3,4].

Type of assessors

Projective mapping can be performed with various types of assessors; trained panelists, consumers, product experts or creative groups, among others. The assessor type influences results more in projective mapping compared to e.g. conventional profiling, as the given spontaneous perceptions are much dependent on the assessor's way of thinking.

Consequence

The assessors perceive according to their product wise world scheme, e.g. trained panelists may rely on vocabularies learned at previous tasks. For more holistic product descriptions, use assessors with limited training in analytical vocabularies. When using consumers, method **experience shows to enhance consistency of the projection strategies** [5].

Validation

Validating products' confidence is often left out of the explorative data analysis. A relevant and graphical way to validate sensory product placements is to apply confidence ellipses. Using a bootstrap procedure, product placements can be simulated a number of times to form clouds of product placements. Around the geometric centre of a cloud, the ellipse is drawn as the contour of e.g. 95 % of the simulations. Various ways exist to calculate confidence ellipses, e.g. based on different strategies to bootstrap the assessors' data.

Consequence

The figure illustrates why using **confidence ellipses add valuable information**, as the same products evaluated with different techniques show large variations in the size of the ellipses. We propose an ellipse construction broadly applicable and useful to compare results obtained from different methodological approaches [4,6].
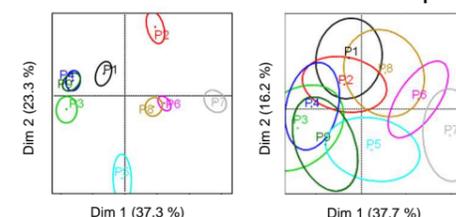
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