

Comparison of the Reproducibility of a Trained and an Untrained Panel in a Napping Evaluation

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Napping (Pagès, 2005) is usually tackled through multiple factor analysis (MFA; Escofier & Pagès, 1988-2008) which supposes a certain homogeneity among the panellists with regard to their napping configurations. When this homogeneity cannot be assumed, we propose a methodology to detect groups of similar panellists that should be separately analysed.

Two panels with, respectively, 10 experts and 10 non-experts have taken part into a hall test session to evaluate the similarities between 10 cavas through napping completed by short free-comments (ultra-flash profiling). These cavas, from Penedès (Spain), all brut or nature type, were provided by three different brands. The cavas were arranged so that the presentation order and first-order carry-over effects were balanced (Macfie & Bratchell).

First, we tested for a consensus configuration in both panels, separately obtained through MFA, by studying the signification of the first MFA eigenvalue as compared to random generated nappings. Evidence (P-value=0.6) was obtained that non-experts were not consensual, while the experts showed a higher consensus (P-value=0.11) which turns out to be significant excluding one expert (P-value=0.03).

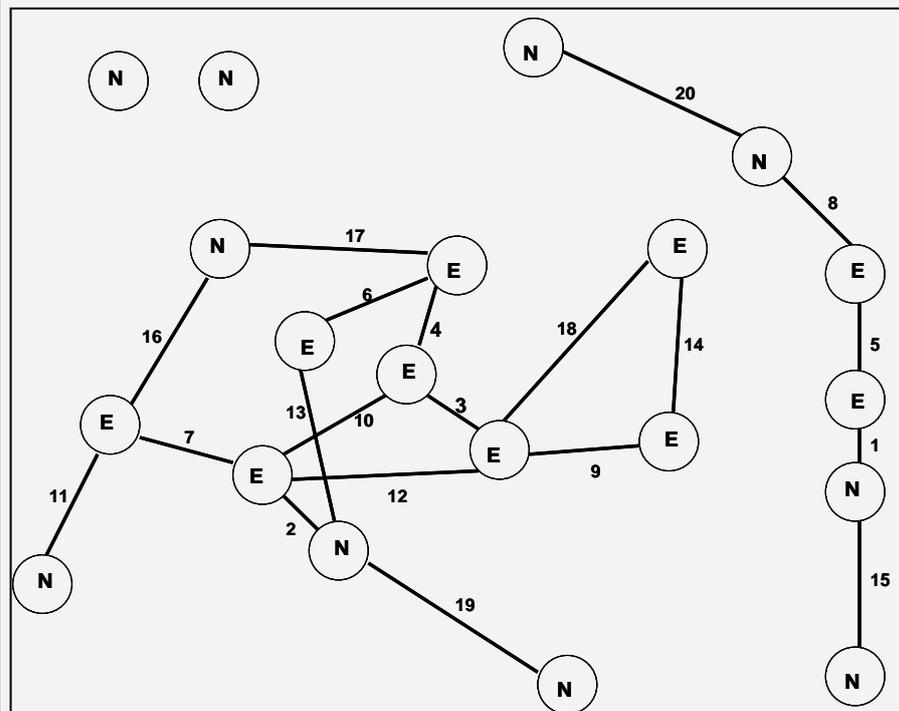


Figure 1. Similarity graph between the panellists.
E: expert; N: non-expert; 1: rank of the edge

This led us to compute a similarity graph on the set of the panellists, from the proximities between their nappings, as computed from *Lg* coefficient (Escofier & Pagès, 1988-2008). The 20 shortest edges were kept, leading to two groups of connected panellists (Figure 1). The first was composed of 8 out of the 10 experts, strongly interconnected and 4 out of the 10 non-experts. The second group was composed of 2 experts and 4 non-experts. 2 non-experts did not present any connection.

Then, the consensus configurations of the two groups were built up and analysed through MFA.

References

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