Testing Interpoint Distance in Non Symmetrical Correspondence Analysis

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Non Symmetrical Correspondence Analysis (NSCA, 1989) is a well-known technique that allows us to display the directional relationship of a two-way contingency table. NSCA is the obvious extension of classical Correspondence Analysis (CA; Benzécri 1969,1973) when the rows modalities influences the row variable depends on column variable. NSCA starts form the properties that (in the same manner of CA), the index that measure the departure from the independence hypothesis proposed by Goodman and Kruskal (1954) can be decomposed along principal axes. The NSCA allows us to represent in a low dimensional subspace the row and column profile coordinates. From an inferential point of view, the confidence circles can be computed to test which modalities are significant at a fixed error level but it is moreover important to test the significance between any couple of point. In this paper we adapt the test proposed by Gabriel (1995) to test the difference between two profiles.

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