## Supplementary Material A

Distribution of the optimal number of components.
We performed 1000 rearrangements of the rows of the dataset used to build figure 1 (Supplementary Data, Dataset 1xlsx).
For each rearrangement, the value of the optimal number of component (ONC) was determined by looking for the first local minimum of $\mathrm{p}_{\mathrm{CV} \text {-ANOVA }}$ when NC is incremented.

The ONC distribution is represented in figure S1. We observe that for the 1000 rearrangements, values of ONC spread from 1 to 6 . This corresponds to a Q2 that spreads from -0.8 to 0.38 .


Figure S1: Variation of ONC when 1000 random permutations of the dataset lines are performed. Each color is associated to a specific value of NSC.

