

# SIMPLE USE OF PINDIS TO COMPARE CONFIGURATIONS

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1. PINDIS (Procrustean Individual Differences Scaling) is a hierarchy of models for comparing sets of configurations. As a 3-way 2-mode procedure, it is akin to INDSCAL (Carroll-Chang Individual Differences Scaling, which accepts basic 3-way data or sets of dis/similarity matrices), but PINDIS accepts sets of configurations.
2. The full set of six models in PINDIS is described elsewhere (see TUM, ch 13 and TUG ch 7<sup>1</sup>). But for simple configuration comparison, the user should restrict herself to the **most basic model (P0)** and ignore the subsequent weighted distance and vector models, which perform “inadmissible transformations” on the Euclidean distance configurations.
3. **“SIMILARITY TRANSFORMATIONS”** by contrast consist of “permissible” operations on a configuration which leave the relative distances unchanged. These include:
  - < (rigid) **rotation** of axes through a given number of degrees
  - < **reflection** of axes (systematic changing of the sign of co-ordinates)
  - < uniform **re-scaling** of a configuration, and
  - < **translation** of origin (moving the zero-point) – though this is impermissible for vector/factor or non-Euclidean distance configurations.

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<sup>1</sup>Downloadable from <http://www.newmdsx.com>

4. The basic (Similarity, or P0) Model in PINDIS performs these operations on the input matrices (which must have the same number of points, but not necessarily the same number of dimensions) in order to construct a "compromise" or **centroid configuration** which best fits (OLS) the input configurations.
  - < If preferred, configurations can be best fit to an input "**target configuration**"
5. In NewMDSX, it is advisable to suppress some models (SUPPRESS(1), ROTATE(0)) in the PARAMETERS instruction.
6. In the output, particular attention should be paid to:
  - < **Centroid Configuration**, and the (goodness of **Fit** of each configuration to it .
  - < Other output should be ignored (for the simple use of PINDIS). Though it might tempt you further :))