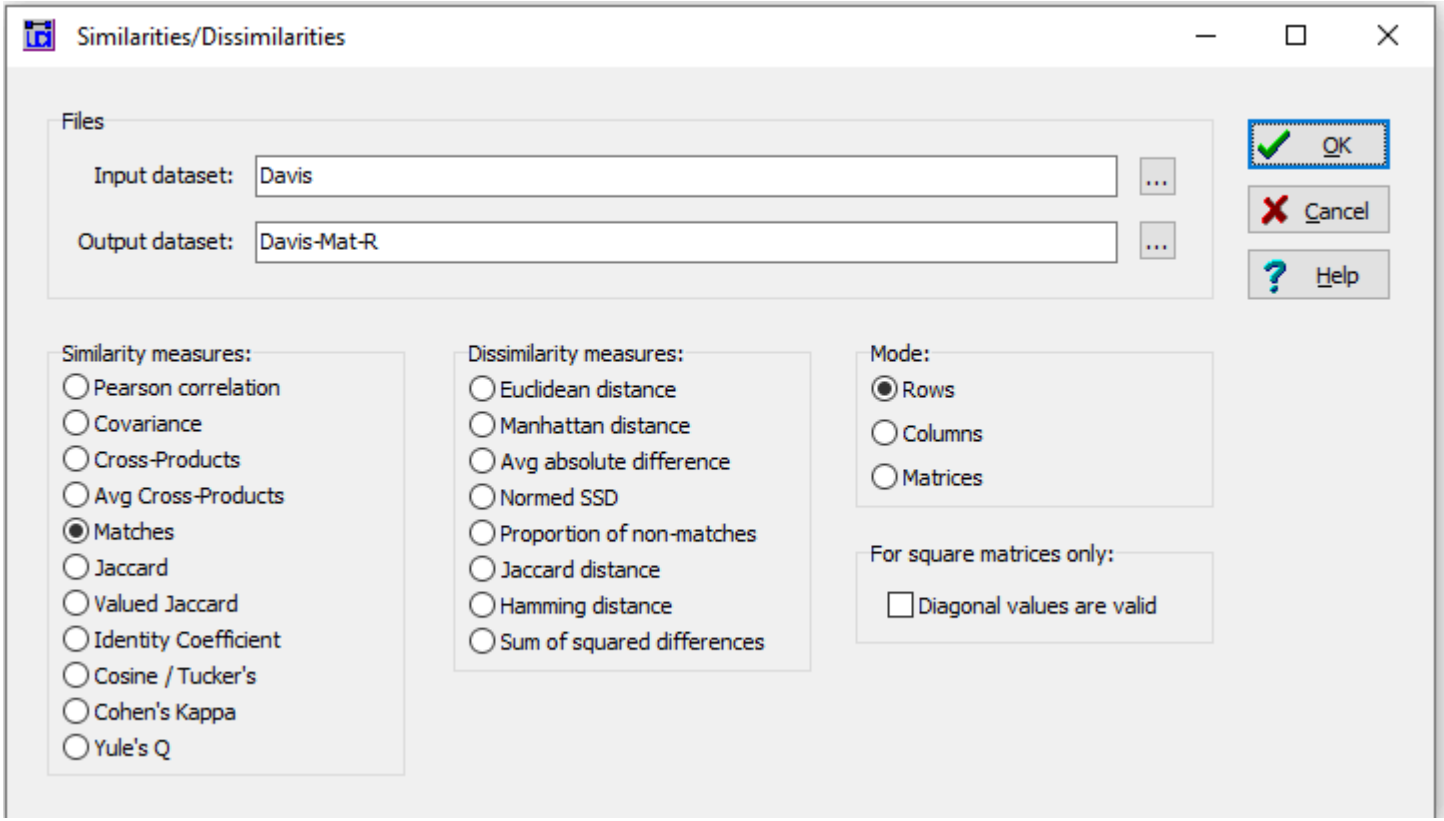
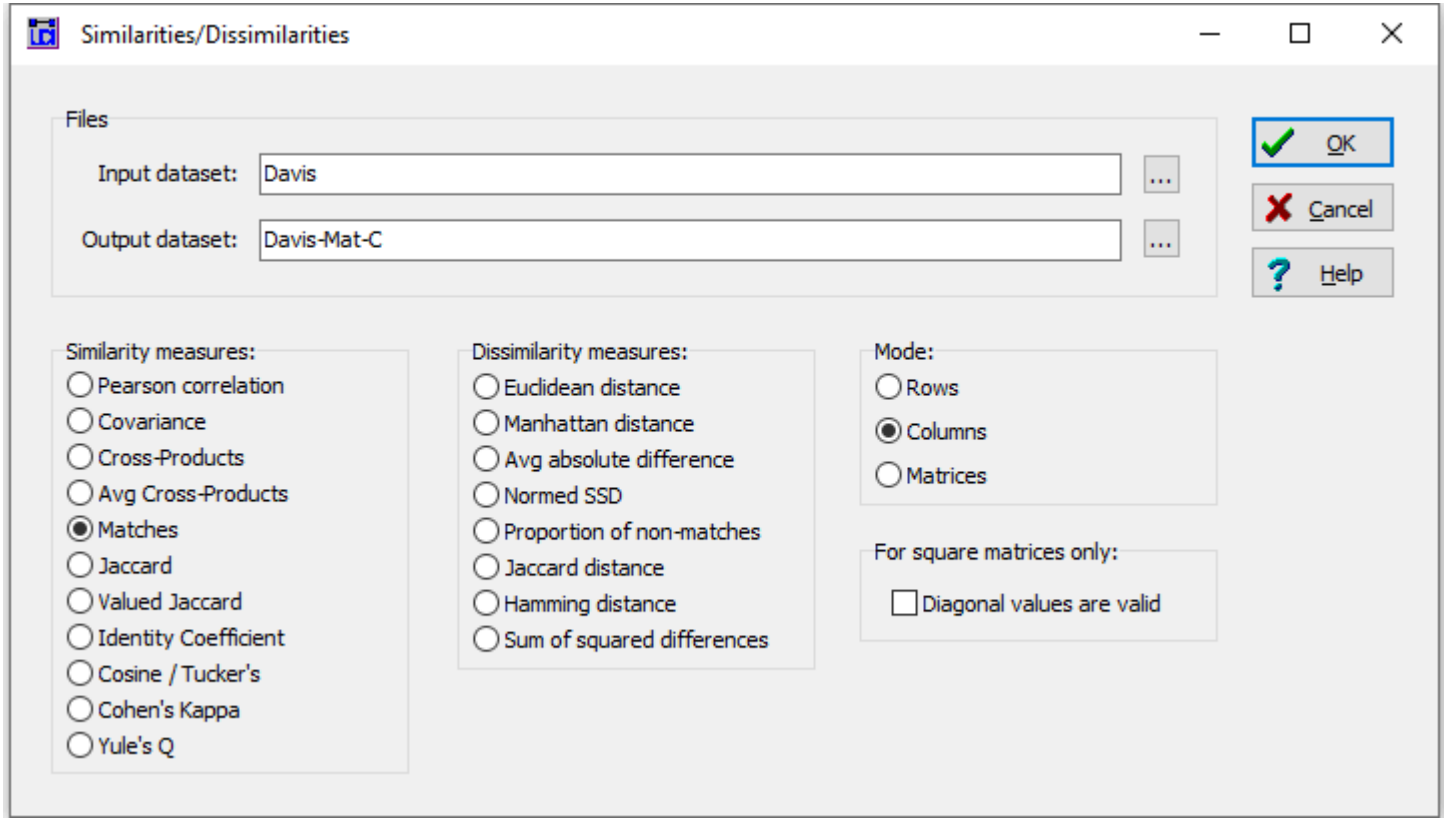
Practice 13.5

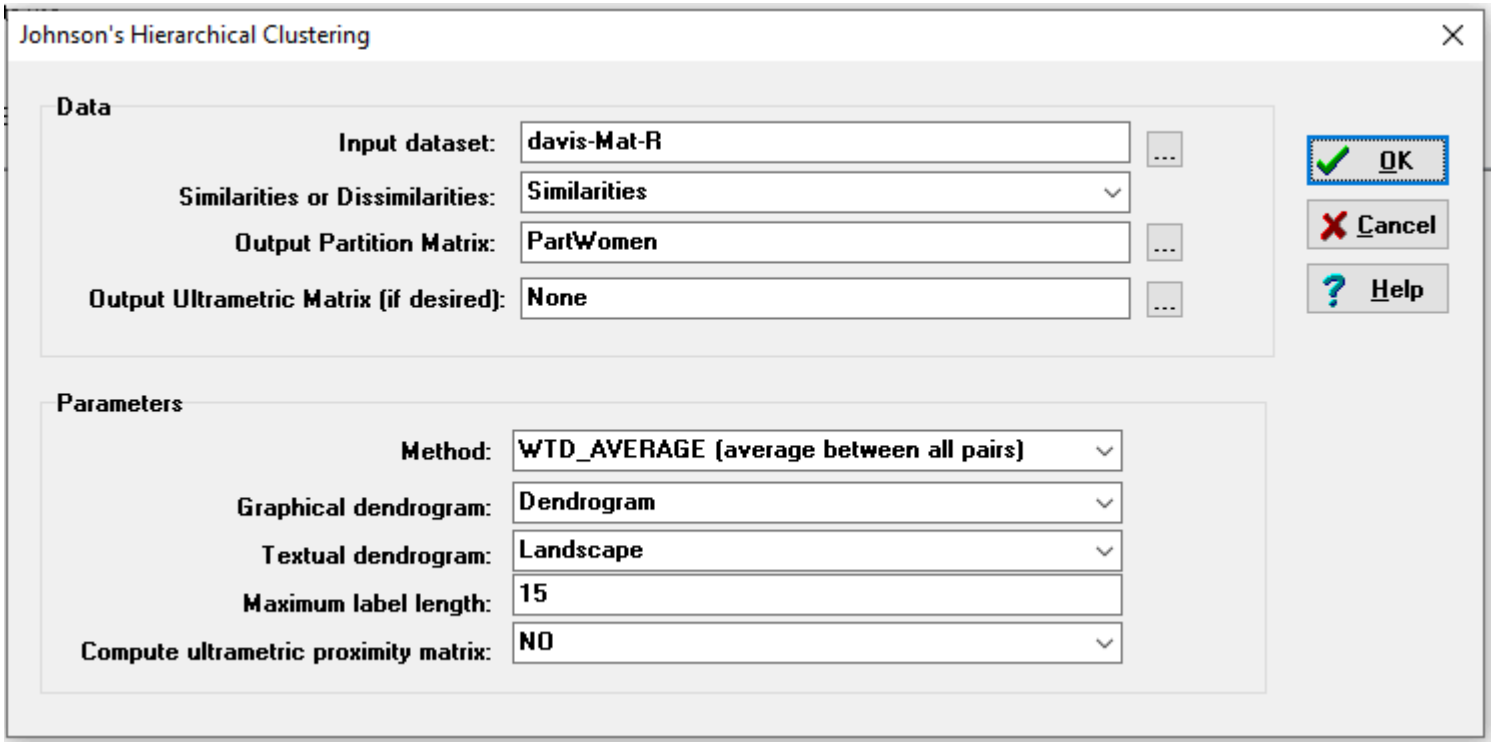
2-mode Structural Equivalence

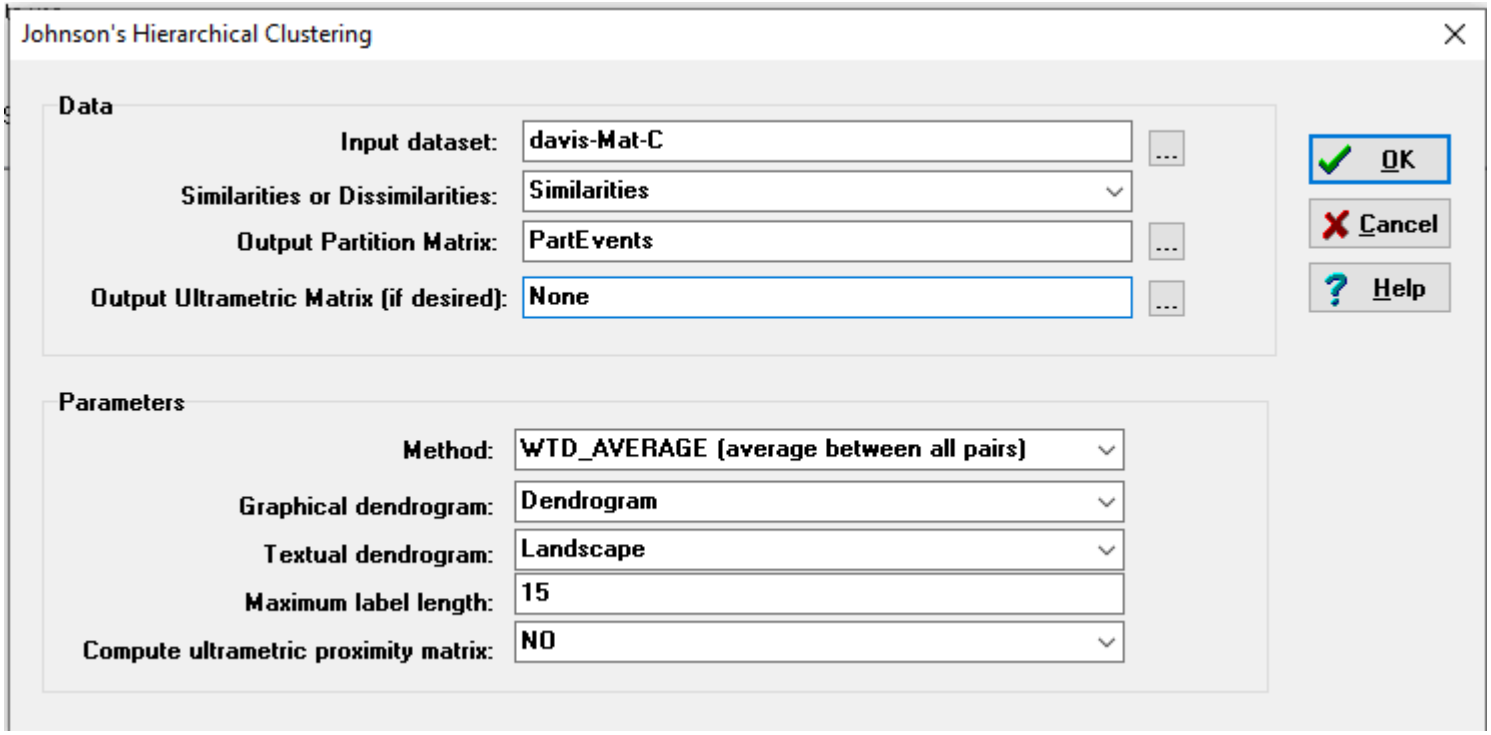
We run Tools|Similarities & Distances routine choosing matches on first the rows and then the columns of the Davis dataset. This will give matrices 13.6 and 13.7.


Similarities/Dissimilarities
Files
Input dataset:
Davis
Output dataset:
Davis-Mat-R
OK
Cancel
Help
Similarity measures:
Pearson correlation
Covariance
Cross-Products
Avg Cross-Products
Matches
Jaccard
Valued Jaccard
Identity Coefficient
Cosine / Tucker's
Cohen's Kappa
Yule's Q
Dissimilarity measures:
Euclidean distance
Manhattan distance
Avg absolute difference
Normed SSD
Proportion of non-matches
Jaccard distance
Hamming distance
Sum of squared differences
Mode:
Rows
Columns
Matrices
For square matrices only:
Diagonal values are valid

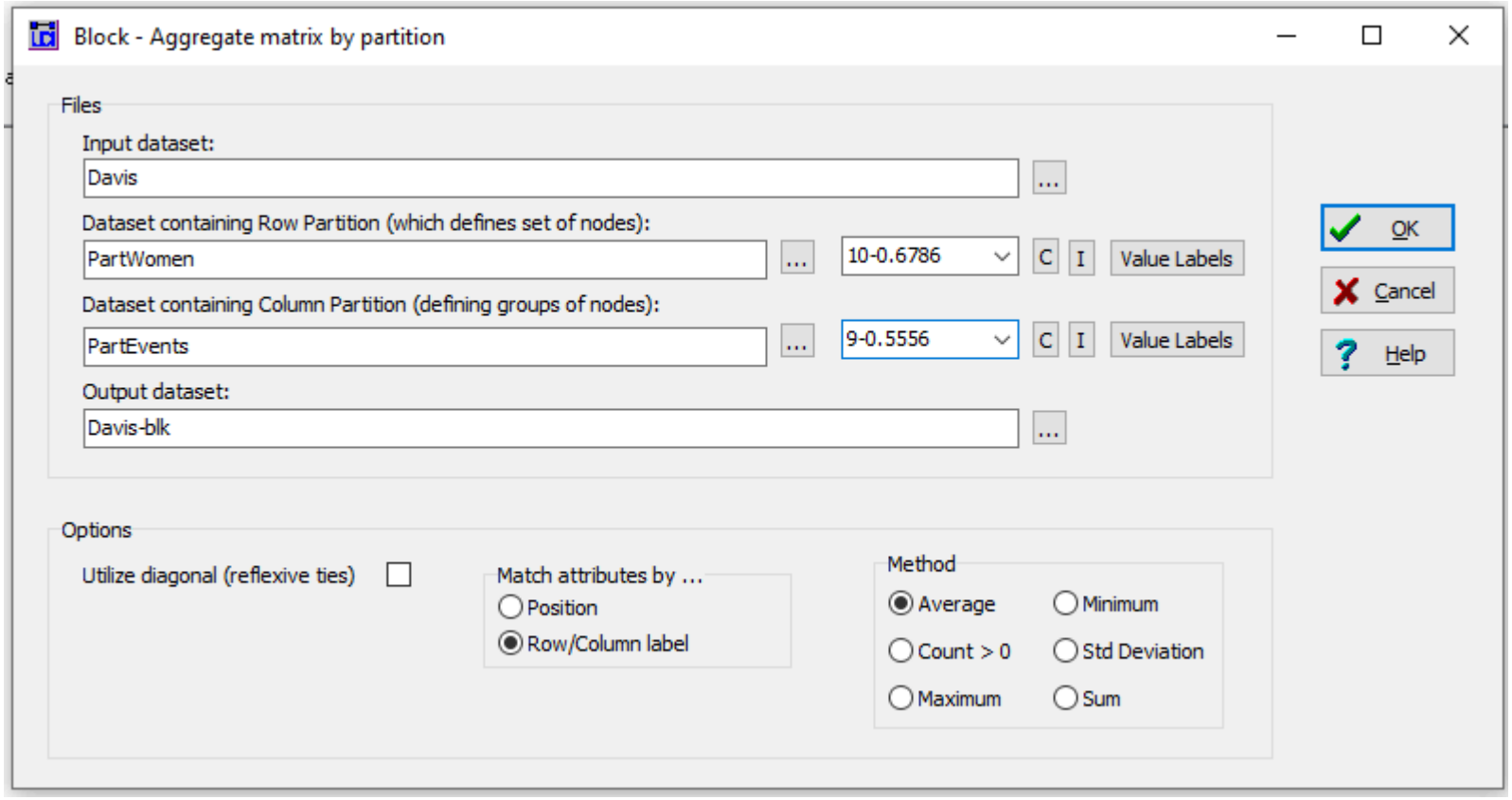


The two output datasets Davis-Mat-R and Davis=Mat-C are then submitted to the weighted average link hierarchical clustering as follows. Note we name the outputs PartWomen and PartEvents


Johnson's Hierarchical Clustering
Data
Input dataset:
davis-Mat-R
Similarities or Dissimilarities:
Similarities
Output Partition Matrix:
PartWomen
Output Ultrametric Matrix (if desired):
None
OK
Cancel
Help
Parameters
Method:
WTD_AVERAGE (average between all pairs)
Graphical dendrogram:
Dendrogram
Textual dendrogram:
Landscape
Maximum label length:
15
Compute ultrametric proximity matrix:
NO



Finally as in previous examples we submit to Transform|Aggreate (includes CSS)|Block aggregate by partitions selecting column 10 for the women and column 9 for the events as shown below



The ouput will be the partitioned matrix shown in Figure 13.7