MDS results window

As with all results windows, the MDS1 window first lists the resemblance sheet on which analysis is carried out, and whether it was under any selection on the original sample set (given as ranges of sample numbers) but the main function of this window is to report the stress the iteration converges to, from each of the 100 restarts (independently for each dimensionality, here just 2-d and 3-d). The same lowest stress values of 0.03 for the 3-d solutions, and 0.05 for 2-d (stress must be higher in lower dimensions), are found over 50% of the time, so is very unlikely to be bettered by any further restarts. Note that your run of MDS will not produce exactly this sequence of stress values, because restart layouts are randomly drawn, and the random seed is taken from the computer's clock. Each restart involves an iterative cycle (alternately fitting monotonic regression to the Shepard diagram and adjusting the configuration points by steepest descent – see Chapter 5 of CiMC). If the process has not converged within 100 cycles then it terminates: this happens here for a few of the restarts with the 3-d solution, indicated by ** after the quoted stress. (It probably suggests that two equally good solutions are available, and the algorithm cycles back and forth between them, which happens often when the structure can fit easily into low-d, so that stress is very low).

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