EXPLORATORY ANALYSIS OF DATA SET 2

SUSAN R. WILSON

These data consist of an ordered categorical response observed at unspecified time points (presumably), and the timing for the commencement of treatment/placebo is not given. The following is based on the interpretation that interest was centred on changes between the scores over 'time', and how these changes differed between the two Groups.

First the following hypotheses were examined: whether the proportion of missing scores is the same in each Group; whether the initial distribution of scores is the same in each Group; whether the distribution of scores at the last observation is the same in each Group. Simple statistical tests indicate there were no apparent differences between the two Groups for these comparisons.

Since data of this type are not particularly well-suited to visual representation, an aural representation was used for their exploration. This representation has been described elsewhere, *eg* in WILSON [1]. Here, the value 0 was assigned to Middle C, with the remaining values being assigned to the notes of the C-Major arpeggio. Application of this approach, using the Macintosh software, HyperCard is available from the author. Listening to these data, one is alerted to a (possible) difference between the two Groups occurring between the first and second observations. The values for the first Group tend to decrease between these two time points (*ie* there is an apparent lowering of tenderness scores), while the tenderness scores for the second Group tend not to change. A simple test for differences between the proportion changing indicates the two Groups do differ significantly (even when one restricts attention to just those individuals with an initial score of 2, since those with an initial score value of 1 tend to not change while those with an initial score of 3 to always fall). The exploratory nature of such a result needs to be emphasised.

DISCUSSION

Discussion centred on the difficulties of representing this medium, ie "sound", in the presently used medium for dissemination of research, ie "print".

REFERENCE

[1] WILSON, S.R. (1982) Sound and exploratory data analysis. *Compstat 1982 Part 1: Proceedings in Computational Statistics,* ed. H. Caussinus, P. Ettinger and R. Tomassone, Physics Verlag Wien, pp 447-450.

Centre for Mathematics and Its Applications
The Australian National University
GPO Box 4, Canberra, ACT 2601