# COMMENTS ON MICRO COMPUTER SOFTWARE

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The diversity of possible approaches to the analysis of longitudinal data is described in HAND (1991). This diversity is also present in the types of analyses available in computer packages for analyzing longitudinal data. The purpose of this note is to provide some indication of the range of software that is available on micro computers and which may be used for analyzing longitudinal data. Attention is restricted to software packages, thus excluding libraries of subroutines.

Software for the analysis of longitudinal data may be broadly categorized into three main types as follows:

1. Special purpose software that is tailored for longitudinal data. This type of software is sometimes restrictive in the range of analyses that it performs, but it is often efficient, since it can take account of special structures and restrictions;

2. General model fitting software, where analyses suitable for longitudinal data are performed as a special case of a more general model (eg. MANOVA in SPSS, MGLH in SYSTAT);

3. General purpose software that has no specific facilities for handling longitudinal data, but where it is possible to program a series of steps using available functions and facilities supplied with the software to perform suitable analyses. These steps (sometimes referred to as macros or procedures) may be stored and used repeatedly (eg. GAUSS, MATLAB, S, S-SPLUS, SAS, and X-LISP STAT).

Software systems, or packages, may contain implementations of the three types of software within the single system. This is common amongst the 'bigger' systems such as BMDP, GENSTAT, PSTAT, SAS, and SPSS. Some software that may be classified as either of the first two types, have matrix manipulation and other facilities, which may be used to fit 'non-standard' models, or extend and/or modify supplied analyses.