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A Computer Program for Behavioral Analysis

Animal behavior may be described as a succession of definite units or elements which, once accurately identified, provide essential data for behavioral analysis. The registration of observed behavioral elements is a common procedure although it stores up large amount of data. A number of authors have developed computerised techniques in recent years to assist behavioral research, thus eliminating many tasks previously carried out manually with the subsequent saving of time and the improvement of both the accuracy of measurement and the precision of calculations (1-9).

The aim of this work was to develop a software package for behavioral analysis characterized by its flexibility, which would allow its use in any experimental situations where quantitative measurement of behavioral elements is required. A diagram of the three stage package is shown in fig. 1.

The program was developed in BASIC for IBM-PC to run under DOS and it is currently being used by the second author to study the effects of nucleus accumbens lesions in rats. Animals behavior is recorded on videotape and played back at the most convenient moment for analysis. The program allows experimenter the rapid encoding of the observed behavioral elements by pressing the corresponding keys on the computer keyboard. The operating procedure of the package is very easy and no training is needed since the experimenter is prompted by screen messages.

A software package to work on behavioral analysis has been outlined in the present communication. This package has some notable advantages derived from its flexibility: (i) it can be easily adapted to any situation where a detailed study of behavior is required: and, (ii) it provides for the possibility of various kinds of analysis without reencoding the initial data.

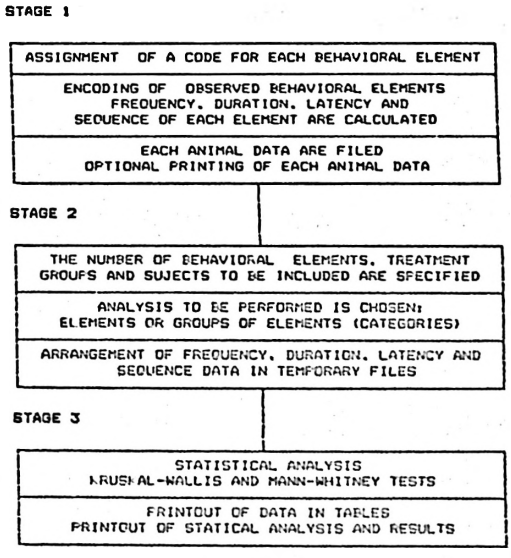

Fig. 1. *General scheme of the computer program.*

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Key words: Computer program, Software, Behavioral analysis.

Palabras clave: Programa de computadora, «Software», Análisis del comportamiento.

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