

SOFTWARE

THE DEVELOPMENT OF SELF-ORGANISED LEARNERS:
THE C.S.H.L LEARNING TECHNOLOGY
AND METHODOLOGY FOR
REFLECTING ON BEHAVIOUR & EXPERIENCE

FOCUS



FOCUS

Comprising:- **GRID-FORM, TRIAD, GRIDS-IN, READ-GRID, RATINGS, VERBAL LABELS (E), VERBAL LINES (C), ; FOCUS (15x15), FOCUS (25x25), FOCUS (50x50), EXACT, CORRELATE, : DISPLAY-FOCUS, TREES, LABELLED-FOCUS SPACED, LABELLED SPACED, DISPLAY TRI-GRID, LABELLED TRI-GRID, SPACED TRI-GRID, COLOUR.**

This list of apparent 'components' of **FOCUS** is provided for general explanatory purposes only. The programs and routines for performing any particular **FOCUS** function on any specific computer-peripheral configuration will not map exactly onto this explanatory structure. See notes on 'computer program compatibility' and on the 'trial run' service for more details.

BACKGROUND

The FOCUSED GRID is specifically designed for analysis of repertory grids for easy interpretation. It has gradually evolved through more than a hundred projects (Centre Publications, 1982) in which the major purpose was to use the repertory grid to help people become more aware of their own pattern of thoughts and feelings about a topic particularly in education, management development, industrial and commercial training.

DESCRIPTION

This chained suite of computer programs has been developed to offer a flexible system for processing 'raw' repertory grids into the FOCUSED form. From the raw grid the program produces a matrix of element matching scores, and a matrix of construct matching scores, including all reversals. It uses these to perform two-way cluster analysis on the raw grid. the cluster analysis are used to re-order the elements and to re-order the constructs with optimal reversals, to produce minimum cumulative difference between adjacent (columns of) elements and minimum cumulative difference between adjacent (rows of) constructs.

The resulting FOCUSED grid does not change the original responses of the client and is therefore easily understood. But the new clustering of elements, the new clustering of constructs and the mapping of the element and construct clusters onto each other, reveals and highlights the patterns of personal meaning which were implicit in the raw grid. The FOCUSED grid is, therefore, specifically designed to provide a display of the repertory grid which is ideally suited for feedback or talkback sessions with a client. The FOCUS suite is primarily designed to provide permanent printout materials but each phase can be presented on the screen, in colour if the system allows.

THE OUTLINE DESIGN

PREPARATION:

A run on the FOCUS suite of programs starts by asking what form repertory grid will take, i.e. how many elements, how many constructs and what form of response, (dichotomous, rating scale, or ranking).

GRID FORM then offers a print-out option of a blank repertory grid form (including suggested triads) which can be photocopied and used for the recording of repertory grid interviews.

TRIAD produces a list of triads in which all elements are used equally often, all pairs of elements are used as near equally as possible and no triad is repeated.

Input : Repertory grids which are produced with or without the aid of the preparation routines may then be entered into the computer and filed, using one of two input routines; READ-GRID or GRIDS-IN.

GRIDS-IN is designed for easy and rapid input of a number of repertory grids. Responses (i.e. dichotomous sort ratings or rankings) only may be entered.

READ-GRID offers the option of entering VERBAL LABELS for elements and constructs so that any grid display and print-out can be so labelled for easy feedback to the client.

NOTE: These input routines are designed for easy and accurate entry of repertory grid data and have error check and correction options built-in.

Files: Where the computer has disk storage, raw grids are filed on disk in a form which makes them available for use with all other grid programs.

Analysis

FOCUS (15 x 15)

FOCUS (25 x 25) and

FOCUS (50 x 50)

are different versions of the main analysis program. They vary as their names imply, in the maximum size of a grid that can be processed. The size of useable core memory and array available in the computer largely determines the maximum size which can be economically run on any system. Large grids can be run (more slowly) on small core computers which have disk files.

FACILITIES

DEMONSTRATE offers a coloured video display of the step-by-step FOCUSing of each grid.

EXACT is an expensive option (both in original cost and computer space and time) which calculates the exact probability of any matching score from the two distributions of responses which produced it.

CORRELATE is a clumsy (and indeed inappropriate) option which provides correlation matrices for those who require the apparent support of traditional statistics. The cluster-analysis resulting from correlation matrices would not produce minimal cumulative differences between elements and constructs so whilst correlation matrices may be add-ended to the print-out they are not used for FOCUSing.

Files: the results of the FOCUS analysis are filed so that multiple print-outs may be produced without repeated processing.

OUTPUT (DISPLAY)

The pure FOCUS grid DISPLAY presents the original repertory grid responses re-ordered on the basis of the two-way cluster analysis.

The '**TREES**' routine can be used to add hierarchical cluster '**trees**' reminiscent of the original **MC'QUIT** algorithm. (Thomas 1970). this is virtually useful and has been widely used, but it can be misleading.

TRI-GRID and **SPACED** offer rather better alternative visual displays, with or without '**TREES**' the: **FOCUSed** grid can be printed-out, fully annotated, with verbal labels. this greatly facilitates feedback to the client but involves more 'typing-in' at the input stage. Obviously, the physical limitations of peripheral printers will determine the size of labelled grid that can be output "all in one piece". Versions which present the display only on the screen or in smaller print-out segments can be made available.

SPACED print-outs visually emphasises the cluster structure by varying the distance between elements and between constructs.

TRI-GRID and **SPACED TRI-GRID** overcome most of the remaining difficulties associated with linear cluster analysis. They offer a display which is not only visually optimised on the two-dimensional surface of the paper but provides all the information needed to indentify relationships (in other dimensions) which are observed by the limitation of a two-dimensional display.

Colour : on an 'X' - 'Y' plotter is an output option which allows a colour scheme compatible with the scaling of the responses to further enhance the 'pattern of meaning' in the FOCUSed GRID.

