these translation problems caused by the nonstandard coding of information. It does this by reading the data directly into core (in forced column binary) without going through the Hollerith interpreter. This means that 12 bits of a computer word instead of 6 are needed to store one column's worth of information. For the CDC6600, five columns of information can be stored in one 60-bit word. Once the information is stored in the computer, the program shifts the 12 bits of information (representing the column of interest) to the low-order 12 positions of the computer word. The 48 high-order bits are masked out and each of the low-order 12 bits can then be interrogated separately. If a bit is found to be on, control is transferred to a table look-up routine. A table (supplied by the user) tells the program what to

substitute for the bit found to be on and where to substitute the new information.

OUTPUT

Once an entire 80-column record has been interrogated, the information is put to an output device of the user's choice, the tables are cleared, and the next record is processed.

AVAILABILITY

A program listing, source deck, and technical description may be obtained by writing to the Political Science Laboratory and Data Archive, Room 248, Woodburn Hall, Indiana University, Bloomington, Indiana 47401.

Scale construction—A correlation program

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This program was created with the aim of facilitating the process of scale construction in social research. A common procedure in scale construction is to combine selected items into a composite variable (Schuessler, 1971). In behavioral research, the items of a given scale usually do not appear in sequential order in the data matrix in order to avoid some biased response. Because of this fact, coding and recoding variables become a tedious process especially when more than one scale has to be constructed and evaluated.

The program performs the following tasks. A composite variable is created and a complete Pearson r correlation between all items and the constructed scale is produced. The user has three options: To get (1) simple correlation (no composite variable produced); (2) a composite variable constructed from all items on the data matrix; and (3) a composite variable constructed from only specified items selected from the complete data matrix. For Options 2 and 3, a complete matrix of correlation between the composite variable and all items in the matrix will be produced.

The general purpose in correlating the items with the

composite variable is to drop out items with low correlation or to replace them with a new set of items.

The program could rerun on the same data matrix an unlimited number of times where, in each run, new items and new scales are evaluated.

The initial data matrix produces an $n \times n$ correlation matrix and with the addition of a total or composite variable, the matrix will be augmented to the size of $(n + 1)(n + 1)$.

Input. Any numerical real type data described by a specified format card. Control cards should specify size of data matrix and the desired option of the program.

Output. Means, standard deviations and correlation matrix for all items with the constructed scale.

Computer and Language. The program was written in FORTRAN IV and was tested on an IBM 360/65.

Restrictions. The capability of a specific computer installation to store the input data matrix is the major restriction of the program. Up to 10 input format cards will be accepted.

Availability. The program printout and user instructions can be obtained with no charge from: Gideon Vigderhous, Department of Sociology, University of Illinois, Urbana, Illinois 61801.

REFERENCE

Schuessler, K. *Analyzing social data*. New York: Houghton Mifflin, 1971.