

1130 and the CDC 6600 computers. The time required on the much slower IBM 1130 is .5 sec per call. There seem to be no problems in computational accuracy; and single precision mode was adequate for all cases tested.

Availability. A limited number of program decks can be obtained by writing:

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There will be no charge for the present supply.

REFERENCE NOTE

1. ABRAMOWITZ, M., & STEGUN, I. A. (EDS.). *Handbook of Mathematical Functions*. National Bureau of Standards

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VALUES: A program for the analysis of Milton Rokeach's "value surveys"

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In numerous articles, Milton Rokeach (e.g., 1968; 1969) argues that social psychologists might find the study of individual value structures to be more fruitful than the more familiar examination of attitudes. To this end, he devised his "value survey." Briefly, this consists of two lists of 18 value statements each, one representing instrumental (or "style") modes of behavior and the other pertaining to terminal (or "end") states of existence. Subjects are asked to rank value statements in each list in terms of personal importance.

A growing body of literature reporting research with the value survey attests to their potential (see Rokeach, 1973). However, for several reasons, analyzing data collected with them is awkward with available general-purpose packages. The researcher must manipulate 18 variables simultaneously, where these variables are measured at the ordinal level. Moreover, while individual ranks are interesting, it is important to consider relative ranks; that is, to evaluate the entire pattern of values. Finally, the analyst is often interested in comparing value profiles among several groups. It was to meet these needs that VALUES was written.

Input. VALUES accepts raw data, including an optional group identifier. Provision is made for declaration of missing values.

Output. Total and group medians, modes, and semi-interquartile ranges are calculated per value. Two measures, based on the median and semi-interquartile range, which indicate relative importance and relative consensus (see Sutherland &

Applied Mathematical Series 55. U. S. Government Publication, 1964.

REFERENCE

PAULSON, E. An approximation of the analysis of variance distribution. *Annals of Mathematical Statistics*, 1942, 10, 233-235.

NOTE

1. Relative error rate = (approximate value—actual value/actual value) × 100, where these values are the probabilities for the right-hand tail of the F distribution.

Tanenbaum, Note 1) are then calculated. Tables output include the above statistics for each set of values organized alphabetically within sets, as well as arranged by importance and consensus rank. A lineprinter scattergram of the latter two measures is also available. Further options include a Kruskal-Wallis approximation to one-way analysis of variance using ranked data and Kolmogorov-Smirnov's test for two samples (Hays, 1965).

Computer and language. VALUES is written in "machine-independent" Fortran IV. It has run successfully on an ICL-1909, a DEC-PDP-10, and an IBM 360/67. Core requirements depend upon the maximum number of observations. One scratch device is required.

Availability. A source listing, user documentation, and a test setup with output is available from Eric Tanenbaum, Social Science Advisory Service, Computer Services, The University, Durham, England DH1 3LE.

REFERENCE NOTE

1. SUTHERLAND, S. L., & TANENBAUM, E. J. Rokeach's value survey in use: Towards validation with criterion attitude scales. *Canadian Review of Sociology and Anthropology*, in press.

REFERENCES

HAYS, W. L. *Statistics for psychologists*. Toronto: Holt, Rinehart, and Winston, 1965.

ROKEACH, M. A. Theory of organization and change within value systems. *Journal of Social Issues*, 1968, 24, 13-33.

ROKEACH, M. The H. Paul Douglas Lectures for 1969. *Review of Religious Research*, 1969, 11, 3-38.

ROKEACH, M. *The nature of human values*. New York: The Free Press, 1973.

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