

Thomas Salzberger, PD Dr. thomas.salzberger@wu.ac.at



Quantitative Research Methods

Measurement

http://statmath.wu.ac.at/courses/m1bw/m1bw_en.html

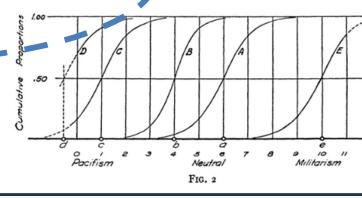


Thurstone, L. L. (1927). The method of paired comparisons for social values. The Journal of Abnormal and Social Psychology, *21*(4), 384.

> Thurstone, L. L. (1928). Attitudes can be measured. American journal of Sociology, 33(4), 529-554.

Best Worst Scaling

Rasch model / Item Response Theory



Guttman, L. (1950), 'The Basis for Scalogram Analysis', in Samuel Andrew Stouffer, Louis Guttman, E.A. Suchman, P.F. Lazarsfeld, S.A. Star and J.A. Clausen (eds). Measurement and

Prediction, The American

Soldier, Vol. IV, New York:

Thurstone, L. L. (1947). Wiley. Multiple-factor analysis; a development and expansion of The Vectors of Mind. University of Chicago Press.

Lord, F. M., & Novick, M. R. (1968). Statistical theories of mental test scores. Reading, MA: Addison-Wesley.

Spearman, C. (1904). The proof and measurement of association between two things. Am J Psychol 15: 72–101 [reprinted 1961 and 1987: Spearman, C. (1987). The proof and measurement of association between two things. The American journal of psychology,

the Social Sciences. By TRUMAN . KELLEY and A. C. KREY. (Charles Scribner's Sons,

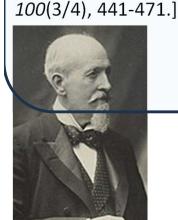
Tests and Measurements in

Thurstone, L. L. (1934). The

review, 41(1), 1.

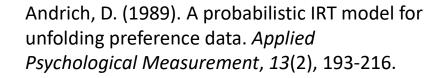
New York, 1934).

vectors of mind. Psychological



Thurstone, L. L. (1929). Fechner's law and the method of equal appearing intervals. Journal of Experimental Psychology, 12(3), 214.

Thurstone, L. L. (1929). Theory of attitude measurement. *Psychological review*, 36(3), 222.



SOME MILESTONES OF SOCIAL MEASUREMENT

Measurement

Epistemology

Theory of
knowledge
Route to knowledge
What we can learn
beyond observation
with our senses

What is considered real

Definition of measurement

Ontology
Nature of existence

Different methods imply/represent different epistemological approaches

Methodology

Practice of acquiring knowledge
Application of methods

Different methods have different relationship with ontology

Definition of measurement

Definition of measurement in the social sciences?



SCIENCE

Vol. 103, No. 2684

Friday, June 7, 1946

On the Theory of Scales of Measurement

S. S. Stevens
Director, Psycho-Acoustic Laboratory, Harvard University

A CLASSIFICATION OF SCALES OF MEASUREMENT.

Paraphrasing N. R. Campbell (Final Report, p. 340), we may say that measurement, in the broadest sense, is defined as the assignment of numerals to objects or events according to rules. The fact that numerals can be assigned under different rules leads to different kinds of scales and different kinds of measurement. The problem then becomes that of making explicit (a) the various rules for the assignment of numerals, (b) the mathematical properties (or group structure) of the resulting scales, and (c) the statistical operations applicable to measurements made with each type of scale.

Measurement by assignment

Scale levels Permissible statistics

p.677