

Empirical Scaling of Democracy

Rien van der Leeden *)
Marieke Polak *)
Renske Doorenspleet **)

*) Dept. of Psychometrics and Research Methodology, Faculty of Social Sciences, Leiden University, P.O. Box 9555, 2300 RB Leiden, The Netherlands, vanderleeden@fsw.leidenuniv.nl

***) Dept. of Political Sciences, Faculty of Social Sciences, Leiden University, P.O. Box 9555, 2300 RB Leiden, The Netherlands

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Abstract

Problems in scale construction arise in a variety of social research areas. For a long time, the measurement of democracy, and the development of a democracy scale positioning independent states relative to each other, has been a major concern in political science. Although there are a number of democracy indices known from literature, the most widely used measure has been developed within the Polity Project (Gurr, 1974 [Polity I]; Gur, Jagers and Moore, 1990 [Polity II]; Jagers and Gurr, 1995 [Polity III]; Marshall and Jagers, 2002 [Polity IV]).

Despite the fact that Gurr's scale is used in numerous studies on comparative politics and international relations, until now researchers have paid hardly any attention to the quality of the scale values it provides. Methodological issues related to Gurr's scale were only recently addressed by Munck and Verkuilen (2002), who state that this scale has at least been used too uncritically.

Gurr's scale is based on five indicator variables. Thorough inspection of the scale and the procedure leading to scale values shows several problems and ambiguities. These include the use of a non-empirical coding and weighting scheme, using subjective and partly arbitrary category codes, and an assumed unidimensionality of the set of indicator variables. So far, these issues have not been explained, discussed, or defended by the researchers of the Polity Project.

In this paper we present an alternative scale of democracy based on an empirical analysis of the Polity IV indicator variables. HOMALS, a technique performing principal components analysis for data of nominal and/or ordinal measurement level, was applied for scale construction. Gurr's scale values are compared with the HOMALS results in terms of their quantitative relationship, and the surplus value of the HOMALS scale values in terms of interpretation is examined.

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