



Introduction

MANY aspects of society, the economic and the political arena in particular, are based, directly or indirectly, on power. The discussion of these aspects develops like in a continuous loop over time, alternating between operative and normative phases. It is important to pause now and then and to examine in detail the problems of measuring power in view of the knowledge which has been gathered over decades of research in this area. This volume presents a series of papers on these problems which clarify old problems and propose new solutions in this area.

Rana Barua, Satya R. Chakravarty and Sonali Roy discuss problems of measuring power with reference to weighted majority games. They propose a new index, based on Banzhaf scores and weight distribution, and test this measure with respect to various properties suggested in the literature. Josep Freixas and Montserrat Pons propose two measures of circumstantial power in their paper. Thereby they choose the viewpoint of an external observer who tries to evaluate the probability of a proposal to be passed by a certain committee. A reformulation of the indices of Banzhaf and of Myerson, which brings to light a series of interesting properties, is presented by Arsen Palestini. Maria Montero examines the solution concept of the nucleolus as a specific power index. The results suggest that the nucleolus can compete with the Shapley value as measure of P-power. Some results on the Shapley value relative to the glove game and to oceanic games are illustrated by Anna Sabak. This paper concludes the purely theoretical section of the volume. Papers of a more applied nature follow.

Vito Fragnelli, Giovanni Monella and Guido Ortona propose an interesting simulation method with applications to the choice of an electoral system. Cesarino Bertini, Gianfranco Gambarelli and Izabella Stach apply the power analysis to the European Parliament and suggest a solution to the problem of assigning seats to new countries applying for membership. Dennis and Robert Leech analyze the power distribution in Bretton Woods institutions which they model as a compound voting game. The analysis shows that the institutions enhance the power of the United States at the expense of other

members. The final applied paper concerns an answer to an environmental question by Jérôme Le Tensorer, Rahhal Lahrach and Vincent Merlin. The volume is tied off with a short conceptual note by Matthew Braham who looks at the concept of power measurement through the lens of causality. Braham's idea is an appropriate one because if the concept of power is should 'explain' something – for instance, responsibility – then we should hope for a causality argument at the foundation of our power measures. To add more would ruin the end of this 'whodunit'.

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