

Leximals, the Lexicore and the Average Lexicographic Value

Yukihiko Funaki¹, Stef Tijs² and Rodica Branzei³

abstract: The lexicographic vectors of a balanced game, called here leximals, are used to define the lexicore on the cone of balanced games. Properties of the lexicore and its relation with the core on some classes of games are studied. It is shown that on cones of balanced games where the core is additive, the leximals, the lexicore and the Average Lexicographic (AL-)value are additive, too. Further, it turns out that the leximals satisfy a consistency property with respect to a reduced game à la Davis and Maschler, which implies an average consistency property of the AL-value with respect to the core. Explicit formulas for the AL-value on the class of k -convex games and on the class of balanced almost convex games are provided.

JEL classification codes: C71.

Keywords: cooperative games, the core, the AL-value, the Shapley value

¹School of Political Science and Economics, Waseda University, 1-6-1 Nishi-Waseda, Shinjuku-Ku, Tokyo, 169-8050 Japan. E-mail: funaki@waseda.jp

²CentER for Economic Research and Department of Econometrics and Operations Research, Tilburg University, the Netherlands and Department of Mathematics, University of Genoa, Italy.

³Faculty of Computer Science, “Alexandru Ioan Cuza” University, Iasi, Romania.