

An evolutionary approach to social choice problems with q -majority rules *

Akira Okada^{†1} and Ryoji Sawa^{‡2}

¹Graduate School of Economics, Hitotsubashi University
²Center for Cultural Research and Studies, University of Aizu

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Abstract This paper examines a dynamic process of n -person social choice problems, in which people choose one from a set of alternatives by q -majority voting. We characterize stochastically stable alternatives of these settings. Over time players select an alternative as a proposal and vote on it. A pairwise q -majority rule determines the social choice of the next period; The proposal will be implemented if it receives at least q votes, and the status quo will remain otherwise. The evolution of social conventions is studied with the presence of stochastic noise which leads players to cast a suboptimal vote. A Condorcet winner is stochastically stable for all q -majority rules under the best response with mutations rule. While, the logit choice rule is in favor of a winner of the Borda rule under certain conditions.

Keywords: Stochastic stability; Social choice; Voting.

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[†]Address: 2-1 Naka, Kunitachi, Tokyo 186-8601, Japan.

[‡]Corresponding author. Address: Tsuruga, Ikki-machi, Aizu-Wakamatsu City, Fukushima, 965-8580 Japan, telephone:+81-242-37-2500, e-mail: rsawa@u-aizu.ac.jp.