

Collective Rationality and Fairness as No-Envy

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We consider the problem of fair collective choice rule, CCR for short, which amalgamates each profile of extended preference orderings into the set of social states such that, for each set of available social states, the CCR assigns the fair set of social states (the set consists of alternatives which are both Pareto efficient and equitable in the sense of no-envy) reflecting the preference profile when such a set exist in the chosen situation. Our main objective is to design a fair CCR satisfying some appealing collective rationality properties. According to Suzumura (1981a; b), we formulate desirable properties of choice-consistency, and look for CCRs satisfying them. Then, We show that there is no CCR that satisfies simple concept of fairness and almost of choice-consistency properties together. Moreover, we reveal that any social ranking must have a cycle whenever the top of ranking is chosen from the fair set.

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