Social choice: locating public facilities & voting in a large electorate

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STELLINGEN

ACCOMPANYING THE THESIS

SOCIAL CHOICE: LOCATING PUBLIC FACILITIES & VOTING IN A LARGE ELECTORATE

BY

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1. In locating a public good on a sphere, if we apply the coordinatewise median voter rule based on Euclidean coordinates, then the median could be at the center of the sphere. (Chapter 2)

2. Without Maskin monotonicity or double uncompromisingness the description of the class of rules is technically very complex and hard to comprehend. (Chapter 3)

3. Outcomes of a Pareto optimal social choice rule belong to the convex hull of the peaks. (Chapter 3)

4. For a Pareto optimal outcome the following situation cannot happen. There are two non-empty complementary subsets of peaks (strictly) separated by a channel, where a channel is a pair of parallel lines going through the chosen (two distinct) locations and perpendicular to the line segment joining the chosen locations. In case, the chosen locations are not distinct, a channel is any straight line going through the location and separating the subsets of peaks. (Chapter 3)

5. Even if we allow for intransitive preferences of the agents, Theorem 4.1 remains true for voting with three candidates. (Chapter 4)

6. The main question of Social Choice Theory is: Given a group of individuals confronted with some choice, in what manner should a central authority join the individual opinions in order to best mirror the "will of the group"?

7. Social Choice Theory uses extensive mathematics in order to develop and analyse a theoretical model that captures economic/social scenarios.

8. We are often sure that something is true well before we have a rigorous proof for it (this happens particularly often in geometry).

9. In real life applications of the results in chapter three, it is important to first convince the social planner that the conditions imposed on the rule are desirable.