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Dipartimento di Informatica  
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## SEMINARI DISA

### *A MODEL OF ELITIST QUALIFICATION: A RECURSIVE GROUP DECISION MAKING PROCEDURE FOR CHOOSING QUALIFIED INDIVIDUALS*

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**Abstract** The presentation regards the collective qualification of members of society as belonging to a certain category or group based on a fixed attribute. Our model contains three main features: the existence of individual gradual opinions, the notion of elitism (only the opinions of certain individuals are taken into account to delineate the reference group), and the idea of sequentiality (elites are successively created by using the previous elites' opinions on a social decision scheme). The main results of the paper describe the convergence of this sequential procedure. The new group decision procedure introduced follows a recursive pattern. In the first stage, the members of a group show their opinions on all the individuals of that group, regarding a specific attribute, by means of assessments within the unit interval. Taking into account this information, some aggregation operators and a family of thresholds, a subgroup of individuals is selected: those members whose collective assessment reach a specific threshold. Now only the opinions of this qualified subgroup are taken into account and a new subgroup emerges in the implementation of the aggregation phase. We analyze when this recursive procedure converges providing a final subgroup of qualified members, taking into account some extended OWA operators.

**Keywords** Social choice and voting systems, group decision making and consensus, gradual assessments and preferences, aggregation and OWA operators, qualification.

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