"Strategic interactions in collective organizations"
A symposium in memory of Louis-André Gérard-Varet*

Claude d'Aspremont†

On January 24-25, 2003, a conference on "Strategic interactions in industrial and social organizations" was organized at CORE in Louvain-la-Neuve to honor the memory of Louis-André Gérard-Varet, two years after his death. No proceedings of this conference have been published. However, two years later, following the invitation by the journal *Economie Publique/Public Economics*, some of the participants to this conference decided to renew their homage and contribute to a symposium on the same theme to be published in a special issue. In fact the et of articles published in this symposium differs from those presented at the conference and the set of authors is not identical. But the theme and the motive remain: to honor the memory of Louis-André by treating topics that were of the greatest interest to him. Something special is added this time since this new set of papers is published in a Journal which was created by him. No doubt that such asset of articles appearing in such a place would have pleased him.

No doubt indeed concerning the first paper "Unique implementation in auctions and in public good problems" since Louis-André Gérard-Varet was a co-author together with Jacques Crémer and Claude d'Aspremont. This paper as well as the two next ones "The ex ante incentive compatible core in exchange economies with and without indivisibilities" by Françoise Forges and "A bargaining model of monetary no neutrality" by Robert Wilson, are dealing with issues in mechanism design when individual agents have private information framework, as described by Harsanyi, in which a large number of Gérard-Varet's contributions have been derived. The key

**Economie Publique*, 17, 5–7, 2005, Reprint 1975.

†CORE, Louvain University, Louvain-la-Neuve, Belgium

notion, introduced by Gérard-Varet, is that of Bayesian Incentive Compatibility (BIC) meaning that truth-telling by the individual agents forms a Bayesian Equilibrium (in the Harsanyi sense). The first paper explores ways to guarantee that truth-telling is the unique (or essentially unique) equilibrium, first in the design of auction mechanisms, then in a more general class of mechanism-design problems that includes the provision of a public good by a central planner, imposing transfers and balancing its budget. The second paper adopts the point of view of cooperative game theory where agents must commit themselves in a preliminary (ex ante) stage. Still, at the (interim) implementation stage they have private information and BIC should hold. Assuming no externalities are involved, incentive compatible mechanisms can be chosen by any coalition of agents. For such a context, the paper defines suitable notion of core-stability for BIC mechanisms involving all agents (stability in the sense that no coalition could object ex ante) and studies the existence of such stable mechanisms. In the third paper asymmetric information is between a buyer and a seller negotiating the price of a transaction in nominal terms. The asymmetric information results from supposing that only the buyer has complete knowledge of the purchasing power of money (represented by a conversion factor). The striking conclusion of the paper is that no (or little) information is revealed by the buyer to the seller during the negotiation. This result is obtained first using the standard mechanism design approach (looking for the best BIC and individually rational trading mechanism), then by looking at the sequential equilibrium of various bargaining procedures (seller's offers only or alternating offers). Such a bargaining model, resulting in a theory of sticky information, thus provides the micro"building block" for a theory of sticky prices in a macroeconomic perspective.

The two next papers, "Bayesian average voting game with a large population" by Régis Renault and Alain Trannoy and "On the uniqueness of equilibrium in symmetric two-player zero-sum games with integer payoffs" by Michel Le Breton, are relevant for situations that can be seen as different forms of voting. In the former, this is a voting rule where the result is based on the weighted average (with given weights) of announced numbers between 0 and 1. Examples are given by procedures to collect funds (say as a percentage of income) and allocate them to two possible public uses. Assuming incomplete information of voters concerning their respective

tastes and strategic voting, the paper analyses the Bayesian equilibrium of the associated voting game. Such an equilibrium always exists and nice approximation results are given for large populations. Le Breton's paper applies to the kind of situation where two political parties compete for the number of votes by choosing a political platform in a given finite set. It is proved that this type of game has a unique equilibrium in mixed strategies.

Louis-André Gérard-Varet has been very much interested, both from a theoretical and policy oriented point of view, by the issue of decentralizing collective decisions. This is the main concern of the paper "Secession-proofness in large heterogeneous societies" by Jacques Drèze, Michel Le Breton and Shlomo Weber, where a set of individuals distributed over a bounded interval have to choose one or several locations for a public good, then share the use and the cost accordingly. Individuals have also to support transportation costs but can be partitioned in different jurisdictions. Secession-proof allocations means that no subset of individuals can all be made better off by fixing a location of the public good and sharing the cost among them. The paper examines the compatibility of secession proofness with various equity requirements.

For Louis-André Gérard-Varet decentralization also concerned firms conduct and competition policy. In particular he has been very interested in various form of oligopolistic competition. The last paper owes much to discussions with Louis-André and his interest in models where firms compete simultaneously in prices and in quantities.

By referring to a duopoly example, it shows that, with market revenue a decreasing function of market price and firms offering sales contracts which combine the meet-or-release clause with a most-favoured-customer clause, the equilibrium will coincide with the Cournot solution. From a competition policy point of view, allowing firms to resort to such "facilitating practices", amounts to allow coordinated behavior of the Cournot type and entails the same consequences for the consumers and for general welfare.

While reviewing the contributions to this symposium, one cannot avoid thinking how close they are to some topics dear to Louis-André Gérard-Varet, and also how much pleasurable it would have been for his friends to discuss them with him. The purpose of this symposium is to trigger further research on these and other important issues that his work has raised.