

COLLANA  ORIZZONTI

Alberto Banterle

A ROBOTIC HAND  
TO SUPPORT THE “INVISIBLE  
HAND” OF THE MARKET  
—  
THE SIGNIFICANCE OF “POWER”  
IN EXCHANGES

“Orizzonti”

65



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*A robotic hand to support the “invisible hand” of the market*

*The Significance of “Power” in Exchanges*

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## FOREWORD

In the brief reflections that follow, within an obviously very simplified framework, the focus of attention is on some aspects concerning the functioning of the market with the aim of assessing in a completely theoretical way the possibility of using the information technology tools available today to inhibit those ‘free choices’ of producers that lead to even serious damage to citizens and businesses. As is well known, the laws that regulate the market are not ‘laws’ in the sense of physics in which cause-effect relationships are conditioned by deterministic constraints between the variables. They are instead mechanisms linked to behavior, to free choices. If demand for a product exceeds supply, for example, the producer (or producers by agreement) ‘may’ raise the price: they don’t ‘have to’. The laws of the free market allow them to seize the opportunity offered to them to raise the price regardless of the effects their move has on the people involved, at the various stages, for example, of the supply chains fed by that product. However, there are other ways available. If demand for a product exceeds supply, the ‘first come, first served’ route can be taken until the product is exhausted, at a constant price. Or the price can be left to

## 1 THE THIRD PARTY

Again with reference to a product whose demand increases, e.g. as a result of the development of the economy in a particular area, decoupling requires that the third party has the ability to 'govern' demand. Indeed, if not all demand can be satisfied, it is necessary to know which demand underlies an unavoidable need and which, on the other hand, may temporarily remain unsatisfied. That is, the tool the third party needs is a 'map' that distinguishes between consumers or categories of consumers who cannot do without that product and consumers who instead have a medium or low 'urgency index' of need. It is necessary to know, individually or by categories, the consumers in order to rank them so that the third party, in the presence of an excess of demand, can decide who will have access to consumption and who instead will have to wait or draw on stocks or be subject to temporary rationing. This is to ensure that it is not a price increase that determines the pool of those eligible, but need. The use of such an instrument would indeed make it possible, in some cases, for important products such as those for health, to distribute a product not on the basis of the financial capacity of potential users, but on the

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## FOREWORD

The short essay that follows *does not claim to be a rigorous academic work*. It questions concepts such as “power”, “motivation” and “welfare functions” behind which there is a vast literature in sociology, psychology and economics, which is largely unexplored by the author.

Nevertheless, in the hope of providing some meaningful suggestions, a formal elaboration of the mechanism that governs exchanges in simple situations that involve only two individuals is proposed below.

The market has been theorized to overcome the direct exchange between two people, but many of these exchanges are not realized through the market, but just between two subjects.

Attention is focused on cases in which there is an “*imbalance of power*” between the contracting parties. There are many such cases, particularly in those situations where authority prevails in its violent forms: blackmail and corruption.

A meaningful example is the assignment of a contract by a public body to a private company, without resorting – by necessity or political opportunity – to tenders or auctions to choose the best offer, or by distorting the

mechanism to choose ex post the criteria that identify the desired ex ante supplier. In this case the two representatives of the public body and of the private company find themselves negotiating in a situation of potential abuse of power due to the absence of those constraints which, in a call for tenders, guarantee the identification of the most convenient choice for the public body.

The aim is to arrive at determining *objective* economic parameters (such as the price at the end of a negotiation) taking into account *subjective* perceptions concerning especially the imbalances of power between the parties involved.

Since exchange is the basic mechanism, present at all levels, which influences the way a society operates, it is hoped that this paper may contribute to the construction of models that might, for example, simulate the economic mechanisms of a society in which, for structural reasons or otherwise, power imbalances are widespread.

The work develops as follows: initially two determinants of the initial conditions for an exchange are identified and represented. These determinants are those assumed as exogenously given by the traditional economic analysis and they consist of the *motivational element*, i.e. the identification of the force of the reciprocal motivation to exchange, and the *element of power*, which is the imbalance of strength between the two parties (paragraphs 1 and 2). Every initial unequal distribution in the motivation, and in the power, results in an alteration of the reserve prices, that is of the maximum will-

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