

MARIO ARCELLI

Complexity of Modern Economics

Mr. President, Secretary of the Cracow Branch of the Polish Academy of Sciences, Mr. Chairman of the Symposium, Ladies and Gentlemen.

It is a great honour to be invited by the Polish Academy of Sciences and I wish to express my personal thanks and that of my colleagues for the warm welcome we have received and for the wonderful opportunity you give us with this cultural meeting. I am very happy that the seventh Polish-Italian Symposium holds its opening session, here in Cracow. It is the second time that the Symposium holds a session in Cracow: the first time was in 1972 when we began this stimulating experience of confronting scientific contributions of Italian and Polish Professors into the field of Systems Research and Control Theory. We have achieved much progress since then and the Symposium has become a tradition. The progress has not only been scientific, but also on a human level: the comprehension between Italian and Polish Professors has greatly improved and we are now accustomed to consider our hosts as old friends. Many of them speak a wonderful Italian and we regret we can't say the same thing of our Polish.

I speak here as the dean of the Italian delegation having taken part at the first symposium. It is not surprising that we started our meetings in Cracow and that we have returned here after 13 years: Cracow has many things that remind us an old habit of relations with Italy and witnesses common cultural values. Since I was for 6 years, from 1968 to 1974, a Professor at Padua University, I would like to mention a kind of brotherhood that existed between the Jagiellonian University and Padua University during the Middle Ages and the Renaissance. Now we are renewing that spirit and the Polish-Italian Symposium helps in assessing the new problems of a modern world.

The complexity of modern economies explains why systems research is particularly suitable to investigate the functioning of our countries. But expectations in complex economies play a more and more important role in explaining the behaviours and the reactions of economic agents and therefore it has become difficult to come to grips with reality on the basis of old uniformities.

The theory of rational expectations has incorporated in its models the process of formulation of expectations and their impact on the functioning of the economies, but the consequence has been rather destructive from the point of view of economic policy, particularly for monetary policy.

The rational expectation hypothesis actually implies the impotence of monetary policy, because the agents having the same information of the authorities, can counteract their action. Not only monetary policy would be impotent in the long run, as the monetarists had ahead stated, but its effect would either be null also in the short run, or destabilizing if the intervention of the authorities is unanticipated.

This conclusion has led rational expectations scholars to propose automatic rules in the management of monetary policy, like the monetarists, but for different reasons. The monetarists prefer to adopt an automatic rule (like the rate of growth of a money aggregate) because their knowledge of the lags between monetary impulses and real variables is so uncertain, that any discretionary intervention could be destabilizing.

Rational expectation hypothesis followers reject discretionary interventions (fine tuning) because the knowledge of the economy is so wide that any intervention is anticipated and counteracted. Whatever the reason, a new controversy has been added to the old one concerning automatic rules versus discretionary interventions. Now, the debate concerns the issue whether no intervention or an automatic rule is better than a feed-back rule. This subject is now attracting a lot of attention and I remind it here in order to show how economists are interested in the progress of control theory.

The considerations have not only theoretical value but help to interpret the world of to-day and some of the most crucial problems of current economic policies. Among these I would simply mention the volatility of exchange rates and the related imbalances of international payments or, at a domestic level the changes in the "modus operandi" of monetary policy.

Here, too, the crucial question is which of the strategies (I mean rules of economic policy) mentioned above, should be followed by Governments and monetary authorities.

The year 1984 has marked some progress in the evolution of the world economy and of international trade. Some clouds are however gathering ahead of us and it is unlikely that we will be able to repeat the same performance of last year, during 1985. It is apparent to me that in order to sustain a long run non inflationary stable growth, international cooperation and convergence of economic policies are needed.

However, the success of any economic policy is contingent upon a greatly improved political framework. Substantial progress in the current peace talks would aid substantially to that aim. Italy and Poland are two countries equally interested in maintaining peace and good international relations in Europe and in the world and I think that this symposium, besides his scientific achievements, is a limited but significant contribution to that end.