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## **Economic theory and social change: problems and revisions**

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## **Economic theory and social change**

### Problems and revisions

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### **Extended abstract**

Human activity directed to knowledge, like Man's day-to-day action in general, is obliged to proceed by trial and error and to develop by the free interplay and confrontation of ideas, for the simple reason that human cognitive capacities are limited. The point is to prevent this trial-and-error method from proceeding blindly. This requires methodological rules that permit judging the explanatory power of ideas and theoretical proposals; which means recognizing clearly enough the contribution of models and theories to the advancement of earlier knowledge and hence to the intelligence of decision-making, by comparison with earlier theories. This methodological procedural support is indispensable to the advance of knowledge, i.e. to the accumulation and growth of knowledge based on knowledge. Creativeness, by definition, is not the product of method. But method is indispensable for selecting the contributions of creative processes to knowledge. In a world where all modes of thought and judgment are accorded equal dignity, as advocated by methodological anarchy (improperly called 'pluralism'), knowledge will grow haltingly and advance in a most confused fashion. A number of scholars, most notably Feyerabend, have disputed the comparability of theories with sophisticated, even stimulating arguments. Their critical contribution deserves appreciation, but their negation of method denies science and is accordingly unacceptable.

The title of the book, *Economic Theory and Social Change*, contains an implicit question: is there an economic structure separate from social structures and their evolution? The principle question is whether economics is actually analyzing a substructure of the surrounding social structure. If so there are few possibilities for isolating a logical system of the economic structure within the realm of the social structure when we live in a dynamic society. Our scope with this book which appears in the second part of the title, *Problems and Revision*, implies that we want to discuss the logical problems of such an isolation, and we will also suggest some revisions of the theory in order to bring in other questions and other analytical approaches.

Not seldom, it is said that the market is always right. For those not understanding the language of economics the relevant question is of course 'who is the market?' but for economists this proposition is also a bit tricky, after the financial debacle autumn 2008. We may ask the leading persons of the financial industry why they did not listen to the advices of the market. Did some agents wish to have a breakdown and some not or is the market result something else than the sum of good wishes and optimal individual behavior? If either of these explanations are true we are at difference with the traditional neoclassical market theory.

Furthermore it is sometimes claimed that the market should govern itself and further that the market, although void of any ethics, leads towards results which are ethically acceptable in the society. A prominent banker in Sweden claimed in an editorial debate article in one of the biggest Swedish newspaper, spring 2008, that moral questions were to be hold outside the realm of the markets and that markets will correct themselves with respect to moral failures. That is a very convenient approach – the individual agent has no responsibility for the aggregate result but that is fixed by someone beside or above the human agents, maybe we can call this agent the *invisible hand*.

These lines of argument are probably due to Adam Smith's famous Invisible Hand. Scientists within economics seldom discuss this Invisible Hand seriously except for historical reasons, and reject it in its naïve form, however many main-stream economists struggle implicitly with the question of aggregating microeconomic analysis into normative discussions of economic policy. Keynes frankly dismissed any such possibility by rejecting Say's law, but in the modern variants of neo-classical theory Say's law lingers in the shadows under the name of Axiom of Local Non-Satiation and thus there is still a strong temptation to use the neo-classical theory for normative analysis of the society in the form of welfare theory.

After the financial debacle in the end of 2008 the general sentiment has also been changed towards political actions to support different groups of market agents and the whole banking sector has been begging, save for a few financial organizations, for guaranties and help with capital support from the taxpayers.

Another interesting effect of the financial debacle is the remorse it seems to have created among economists. The Nobel Laureate Paul Krugman wrote in *New York Times*, 2<sup>nd</sup> of September, 2009:

Few economists saw our current crisis coming, but this predictive failure was the least of the field's problems. More important was the profession's blindness to the very possibility of catastrophic failures in a market economy ... the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth ... economists fell back in love with the old, idealized vision of an economy in which rational individuals interact in perfect markets, this time gussied up with fancy equations ... Unfortunately, this romanticized and sanitized vision of the economy led most economists to ignore all the things that can go wrong. They turned a blind eye to the limitations of human rationality that often lead to bubbles and busts; to the problems of institutions that run amok; to the imperfections of markets – especially financial markets – that can cause the economy's operating system to undergo sudden, unpredictable crashes; and to the dangers created when regulators don't believe in regulation. ... When it comes to the all-too-human problem of recessions and depressions, economists need to abandon the neat but wrong solution of assuming that everyone is rational and markets work perfectly." (*New York Times*, September 2<sup>nd</sup>, 2009.)

First of all, quite a few economists saw the crises coming since the so called NINJA – No Job No Income Assets – was discussed several years before the crises and a rather general judgment was that the banks and policy makers were out of mind allowing these kind of 'financial inventions'. That people do not listen to what afterwards were regarded as warnings, is not a sign of lacking rationality but of different agendas, therefore our question above – did perhaps some agents look at a crash as something quite beneficial to them, or was it simply a game of chicken?

Second, the above quote put all the responsibility on the poor humans who are now declared to be totally irrational. It is a huge fall from being perfectly rational to being totally irrational. If we think of an economic theory of totally irrational agents we indeed need a chaos theory.

Third, if some agents are more rational and more informed and more economic powerful than others and use this to their benefits we run towards a fundamental moral and political analysis and then we have to admit that economic structures are part of surrounding social and political structures and *then* the economic theory must realize this fact and include such variables and parameters.

Yes – the market is always right, in a very precise meaning. If you want to sell something to other people to a certain price and you accept the principle of individual freedom to sell and buy then you cannot in an intellectually consistent way claim that other people are wrong when they do not want to buy the thing to your offered price. You cannot claim that they are irrational. In this precise way the market is always right. Whether this can be evolved into an ethical principle other than that force shall not be used in market relations, or not, we will not discuss in depth, but we certainly discuss the need of ethics.

It seems that economics has developed into a sub-structure within the social structure with its own standards of logics, measurements and agents. Social students of other subjects accuse economics of being both 'asocial' and even 'anti-social', but because of the character of economic theory with seemingly precise concepts, a seemingly logically consistent market theory, the neoclassical theory, and a highly technical methodology, students from other social disciplines have difficulties to find the right angle of criticism; it is said that "the proof of the pudding is the eating" and they say it tastes rotten. Often their criticism is aimed at the use of mathematics and critics within the economic discipline often agree with this line of criticism.

We find much of this criticism relevant since we reject the notion that the economic structure is the core of the social structure, we lean more towards the attitude that the working of the economic system is a consequence of, and also reflects, the surrounding social and ethical structures.

With respect to the question of mathematics we partly agree that trotting around with poorly understood mathematical models often contradictory to the proposed underlying axiomatic structure

is not particularly impressive and we partly agree with Krugman. On the other hand logical analysis is indispensable in scientific work and all scientific work must take seriously the question of measurement; mathematics in one or another form is often an excellent tool. But on yet another hand, as Russell & Whitehead showed in *Principia Mathematica*, mathematics is one of several logical languages. Mathematics is an extremely valuable logical tool since it is precise but that requires good understanding of the limits of the mathematical analysis.

It is often claimed that economics, particularly the neoclassical theory, advances Newtonian physics into economics and through that also into the social sciences in general. That has fostered counter reactions built on the opinion that we cannot use physical models for describing the actions of humans. In conjunction with the above mentioned criticism of mathematics there have even occurred opinions in favor of anti-rational and anti-logical scientific research.

We agree that particularly the neoclassical economic theory is a variant of a Newtonian equilibrium system. But our approach is that this has nothing to do with the use of logics or mathematics but with the axiomatic specification of the problem. It is a matter of astonishment that long after physics has rejected the idea of an everlasting general equilibrium, economics, a basically social science, devotes analytical skill on methods based on an à priori axiomatic structure long ago rejected by natural sciences.

Whether this is due to inappropriate traditionalism or to ideological ties it is hard to say. However we will show that such axiomatic structures transform human beings to n-dimensional rigid bodies. Our attitude has nothing principally to do with the use of logical and/or mathematical models per se but deals with the axiomatic structure where we show that the basic axiomatic structure of the neo-classical theory deprives the humans of being *subjects* and as subjects they are, in a local and temporal setting, final causes.

The acknowledgement of Man as a subject will have vital consequences for both economic theory and methodology. The neo-classical theory has provided us with an efficient measure of commodities, and development. By rejecting the neo-classical theory we, so to say, throw economic theory into a theoretical chaos. But more than that: by using two of the majestic paradoxes in mathematical logics, developed during the 20<sup>th</sup> century, Russell's Paradox, and by then implicitly also Gödel's paradox, we show that there does not exist a globally rationality. In fact the idea of a global rationality has to be replaced by a more humble but also more intriguing proposition.

Another fundamental concept upon which we lean hard is the concept of innovation, as developed from a Schumpeterian approach. Our rejections of the neo-classical theory, in fact, opens up a more systematic analysis of the growth process, but as we also show appropriate measures must be developed.

Neoclassical mainstream economics has been the object of a quantity of criticisms even if largely different in content than those in the present book. A number of schools of thought has proliferated, aimed at remedying the main 'irrealisms' and shortcomings of mainstream economics. The most relevant alternative approaches are represented by Schumpeterian and neoAustrian teaching. Evolutionary and institutional economics and a nebula of theoretical developments denominated heterodox economics, have provided a fragmented alternative thought, each component of which, while emphasizing some relevant aspect of the economic reality, forgets some others, not less relevant, aspects. The main cause of the resulting confusion is methodological poverty and equivocation. A method founded on the most relevant contents and behaviors of the economy, able to unify and fertilize the plurality of contributions, is absent; this grants, even today, some attraction to neoclassical economics as provided by a more stringent methodological architecture. This situation suggests an accurate deepening of the main alternative and heterodox tools, with the aim to delineate a more rigorous and comprehensive theory mainly with the support of a methodological approach able to capture the main features of the modern dynamic economy.

A fundamental effect of the rejection of the neo-classical theory is however the necessity of introducing the question of ethics. We show that the stability of the social system in general and the economic system in particular requires a generally accepted ethics. Our discussions of ethics have

nothing to do with metaphysical spheres, but are a requirement for the stability of the society. We show a method to derive objective values, in addition to subjective-relative values that contemporary social thought emphasizes and show the crucial importance of an objective ethics, which is strongly opposed by relativism. The neoclassical model of thinking has sometimes produced the idea that the economic system controls and remedies moral deficiencies among the agents via the price system. This attitude is consistent with the axiomatic structure, which transforms the agent into an automaton. We emphasize the innovatory process which will have a definitive effect on our discussions of ethics. In general ethical discussions focus on preserving the conditions of existence for the individual, an ethics for *being*; however when we introduce innovation as a fundamental concept, the ethical discussions must also allow for an ethics granting the innovatory ability of the individual, an ethics of *doing*.

What has happened during recent years in the world economy culminating in the breakdown of the credit system has shown the inability of the market economy is inherent in its structure. From a scientific point of view it is a mystery how economic science, after the violent 20<sup>th</sup> century, still can advocate that the pure market economy is stable and that public policies are generally destabilizing. It is clear from the neoclassical theory that such conclusions are viable to draw but to us it seems equally valid as the Marxist claim of the benefits of the communist economy. Some economists even say that the break-down of the Soviet Union is a proof that the Marxist claim is invalid. How shall we then comprehend the unwillingness to understand the instability of the market economy? We may answer that we have not seen the pure market economy, but then we can equally well answer that we have not seen the pure communist economy.

The fundamental purpose of this book is to show that the market economy is a part of a social and cultural structure and thus share all the strengths and weaknesses of such a structure. In economics this is actually the basic measure of J.M. Keynes; there are also many others but Keynes may be regarded as the intellectual antipode to the neoclassical theory. Attempts have been made to unify the two theoretical approaches but that only shows ignorance of the basic lessons in Keynes' work, not only *General Theory* but *Treatise on Probability* and particularly *The Economic Consequences of the Peace* and also other works.

Someone has said once that in order to be a good economist you should at least know three good stories about Keynes, so here is one:

It is said that during the 30s the treasury was to decide whether or not to support a certain currency. Almost all members of the board were in favour of not supporting it. But at the decisive meeting Keynes participated and he needed 15 minutes to persuade the rest of the participants to vote for support. When all were prepared to make the formal decision, Keynes raised his hand and said: "On the other hand I could be wrong." What did he mean by saying that? If you advocate an opinion you should really know if you are right or wrong. How much better is it to have -or not have- a well established model of let us say 75 000 equations covering all the most important causal relations? Well, this is actually the very gist of our analysis and the reason why we rather carefully link our discussion to basic philosophy and the philosophy of science.

### **The structure of the book**

We can see the book as four parts with two chapters in each part, of which one chapter analyses the general problem and suggests ways out of it and the second chapter deals, on the one hand, with the logical problems with respect to the current main-stream methodologies and, on the other, the logical difficulties with proposed revisions.

Thus the first part (Chapters 1 and 2) deals with methodological questions: Chapter 1 contains, at first, a critical review of a number of important and meaningful schools of thought, starting from positivism and hence insisting on the fragmented galaxy that, from the beginning of last century, has tried to remedy the shortcomings of positivist and mainstream economics. Then the chapter

deals with general problems of methodology in social sciences and the problem of modelling Man in a social context.

There is a growing difficulty of managing the problems in the societies of our age, mainly due to the growing intensity of technical progress. This necessitates a fairly general analysis, the development of social theorizing into the current state of art. The fact that social thought concerns both *what is* and *what should be* implies that organizational rationality requires what must be termed a constructivist standard of rationality, i.e. one that includes the interpretative and normative aspects. Important is also the character of its initial hypotheses. They must not consist in nominalist postulates, as logical-formal method does, but must consist in realistic premises. A main aspect of the proposed method is the distinction between necessity and choice possibility in the organization of human societies .

The second chapter deals with the problem of a priori modelling in general and the neoclassical theory in particular, which is the core of economic theory in the sense that it is seen as *the* theory for the free market economy. Furthermore it is often claimed that the political side of the society, although perhaps necessary, nevertheless creates inefficiencies in the working of the economy. Theoretically this is expressed in the very wording of *first best* and *second best* in relation to social optimization. Thus we have to scrutinize the axiomatic structure of the neoclassical theory with reference to its precise content of restrictions with respect to the everyday perceived reality of human beings. Thus we will also focus on Arrow's paradox which results in the claim that this is not a logical paradox since it concerns two different definitions of the economic agent. To set for a different kind of theorizing the economic reality we suggest a different definition of rationality consisting partly of the traditional neoclassical rationality but only in a specific *epistemic cycle*. The latter concept is taken from the physicist and mathematician Thomas Brody. With the help of this concept we show that there cannot exist a global rational model, thus there does not exist a global optimum for any aggregate economy implying that each agent in it will reach also an individual optimum. The fundamental reason for this is that we must treat the individual agent as a subject.

The second part (Chapters 3 and 4) consists of an analysis of ethical standards for the market economy.

In Chapter 3 we analyse the problem of social dynamics with respect to the necessity of an ethics of *being*, that is the necessity of protecting the individual agent, and an ethics of *doing*, which is the necessity to grant the creativity, inventiveness and lust for entrepreneurship of the agents. Thus we have to distinguish between *necessity* and *choice/possibility* in social organisations. This also means that uncertainty must be seen from the aspect of protection but also from the aspect of possibilities.

The fourth chapter is a logical discussion of the connection between ethics and the social space-time since we must have both an ethics for being and an ethics for doing and this is a consequence of treating economic agents as subjects. We start with an analysis of the ethical consequences of a Newtonian time concept and also of a time concept á la Einstein/Minkowsky. This leads us to a definition of a social space-time concept which underpins a general formulation of an ethics for the democratic society. Applying our reasoning from Chapter 2, we however show that there cannot exist a general aggregate optimum at the same time as all agents reach an individual optimum.

The third part is a discussion of economic growth and development. Differently from the two previous parts, the analysis here concerns purely economic analysis, and seeds the previous part as a method of social thought. Chapter 5 is devoted to the analysis of the structural, institutional and, more in general, organizational *necessities* of modern dynamic economies, i.e. the main organizational features strictly required by the functioning and the same existence of a modern economy. The attention is centred on the role of innovation, radical uncertainty attached both to innovation and to other factors exogenous to the economic process; entrepreneurship is analysed which is, at the same time, the main actor of innovative process and the bearer of the uncertainty attached to them or due to other causes. We shall see that a crucial engine of the whole dynamic motion of the economy is the search for profit through innovation, the diffusion of this and the adaptive action promoted by disequilibria or, more precisely, the connected opportunities in a world

deeply permeated by uncertainty. We do not consider here income distribution and hence the appropriation of profits. A significant representation of economic dynamics is provided through the notion of *dynamic competition* that expresses the interaction of innovation, uncertainty and entrepreneurship. In a critical review we point out the shortcomings of the different schools of economic thought in representing the above interaction between innovation, uncertainty and entrepreneurship and hence the dynamic process of the economy.

A formalised general model referable to dynamic economies is then set out and used for simulations Chapter 6 deals with growth and what happens when we abandon the neoclassical growth models, based on Maurice Allais' *equimarginal principle* we bring in the demand side and its structure as a key aspect of economic growth.

In the first chapter of the last part, Chapter 7, we discuss some fundamental economic problems, such as permanent unemployment and the distribution of income and wealth, which we also links to the working of the financial side of the economy.

The last chapter deals with a tentative suggestion of a non-capitalistic market economy. Here the *choice-possibility* aspect is at the centre stage, an aspect expressed by civilization and other less important choices consistent with a dynamic economy. Some considerations are devoted both to the spontaneous and voluntaristic forces that have favoured the birth of capitalism; this is considered a peculiar historic feature of the modern dynamic economy and society. Then we investigate the possibility of alternative kinds of income distribution and, more in general, of non-capitalistic forms consistent with a dynamic economy, that is, consistent with the structural and organizational *necessities* considered in the previous part.

A saying displayed in St. Mary Redcliffe church of Bristol and entitled "Sheep, ships and slavery", which were the main sources of the town wealth, warns: «Church communities, like all human institutions can be imperfect. It is well for each age to examine its activities and values». This book is aimed at improving the possibility to found such examination on a scientific basis.