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ECONOMICS AND PRAXIOLOGY. OSKAR LANGE'S *POLITICAL ECONOMY*

1. THE ORIGIN OF THE WORK

Oskar Lange's *Political Economy* is one of the most ambitious undertakings in the social sciences in this century. During the fifteen years since the publication of its first volume this work has won for itself a permanent place in Polish and world literature (it has been translated into more than ten foreign languages).

This three-volume work was to be a theoretical recapitulation of contemporary economic science, an exposition of an internally ordered theoretical system¹. This system was to be built on two foundations: on the general theory of social development (on the theory of historical materialism the description of which would go beyond the scope of this paper) and on the theory of rational behaviour (praxiology), not any less general. It is well known that the genealogy of both these foundations is different; they are "at home" in two opposing directions of political economy, and even in two different currents of social thought.

Even for these reasons only, Lange's work belongs both to scientific literature and to social thought; it is a product of an economic theoretician and of a social thinker at the same time. Lange's cognitive perspective has been defined by the vision of scientific socialism understood as a system in which not only material production, but also institutions, forms of social life, are consciously and purposefully shaped by the so-

¹ Lange was able to finish only the first volume. It was published in 1959. Published posthumously as the second volume (1966) were the first four chapters written in 1961-1964. The remaining chapters of this volume were to comprise the problems of commodity production and a comparative economic analysis of different social formations. The third volume was to be devoted to a detailed analysis of the capitalist and socialist formations.

ciety. It is natural then that Lange's *Political Economy* has "two faces" — a scientific one and a creative one, in the sense that Lange himself, after Abramowski, ascribed to these terms, referring them to socialism in general². It is possible that this second layer of *Political Economy* will turn out to be more durable than the purely economic-scientific one. Lange himself emphasized that "In social sciences... works become out of date rapidly"³. This is undoubtedly correct in the sense that in contrast to the exact sciences, social sciences deal with forms and conditions of social life that change with an exceptional speed; this causes that scientific achievements become out of date. However, from a certain point of view works on society are more "immortal" than those which belong to the exact sciences. The former may for centuries, if not for millenia, inspire social thought, arouse continuous or sporadically renewed controversies⁴. This may happen to Lange's *Political Economy* which — even if future development of economics will make it out of date — will continue to be, as a work of a socialist thinker, the subject of long lasting interest.

The first volume of *Political Economy* was written, unfortunately, before Lange's cybernetic-philosophical studies. There is no doubt that after the study *The Whole and Parts* (1962) has been written the exposition of historical materialism given in *Political Economy* would have assumed a different form. Are there sufficient foundations, however, for determining clearly in what direction he would have changed his approach to the theory of social development, beyond the conviction that the form would have been more precise? Would philosophical-cybernetic studies, in particular, have strengthened the elements of a humanistic and activist interpretation of Marx's social theory? This we do not know.

We can only state in general that the climate of nineteen-sixties was more and more conducive to such an evolution. Had Lange lived longer, he probably would not have been indifferent to major disputes concerning the alienation of contemporary man and numerous studies revindicat-

² There terms Lange uses in the dissertation published in 1928: *Socjologia i idee społeczne E. Abramowskiego* (The Sociology and Social Ideas of E. Abramowski), [in]: O. Lange, *Dzieła* (Works) Volume 2, *Socjalizm* (Socialism), Warszawa, 1973, pp. 20–21. It was Abramowski, too, who wrote about the double nature of socialism — science and creation, which not only "studies and explains the existing facts but raises also its own 'should be'; not only envisages further development, the future, but also, being a certain collective and purposefully acting force, attempts to form it". (E. Abramowski, *Filozofia społeczna, Wybór pism* (Social Philosophy, Selected Essays), Warszawa 1965, p. 66).

³ O. Lange, *Pisma ekonomiczne i społeczne 1930–1960* (Economic and Social Essays 1930–1960), Warszawa, 1961, p. 7.

⁴ From this (and only from this) point of view Ptolemy loses in comparison with Plato, who is "eternally" up to date, Copernicus loses with Machiaveli, Newton with Hobbes, Darwin with Marx.

ing Marxian philosophical anthropology. It can also be added that some utterances by Lange, which we quote elsewhere in this paper, seem to portend this very direction of Lange's evolution. However — and this should also be clearly stated — Lange's later scientific achievements in the book form provide no foundations for surmising this. Fragments of the second volume of *Political Economy, Introduction to Economic Cybernetics, Optimal Decisions, Theory of Reproduction and Accumulation*, seem to indicate that being busy with the problem of whether social science is translatable into the cybernetic language, Lange-econometrician kept rather moving away from Lange-socialist-thinker. This incidentally, was inherent in the logic of both praxiology and cybernetics. Let us dwell for a moment upon the latter. Having found applications in such remote fields as technique and biology, and social sciences, having exposed in all these fields certain common patterns tied by feed-back and automatic regulation and control over the course of the processes, cybernetics has laid emphasis on the entity of science. This was noticed by Lange who wrote that the main discovery of this new discipline was "the discovery of the existence of common principles of operation of technical, biological, economic and other systems"⁵. Having asserted that "this is a further development, in a concrete and mathematical form, of basic thoughts of materialistic dialectics of Marx and Engels" that cybernetics is close to Marxian philosophy,⁶ Lange unnoticeably left outside his interest both "Abramowski's problem" and the "philosophy of culture". For the emphasis on the entity of science has its logic in the "nature" of which there is a greater emphasis on those problems that already have some common denominator⁷. From this perspective the rest seems to be metaphysical speculation.

⁵ O. Lange, *Wstęp do cybernetyki ekonomicznej* (Introduction to Economic Cybernetics), Warszawa, 1965, p. 15.

⁶ O. Lange, *Dzieła* (Works), Vol. 2 Socjalizm (Socialism), *op. cit.* p. 448. The quotation is from the dissertation entitled *The Role of Science in the Development of a Socialist Society* (1962). The basis for this publications was the paper delivered by Lange at the plenary session of the Polish Academy of Sciences.

⁷ Worth noting here is probably the most "naturalistic" utterance by Lange in the discussion on his dissertation on "Całość i rozwój w świetle cybernetyki" (The Wholes and Parts. A General Theory of System Behaviour): "...Professor Kulczyński, after having read the chapter on historical materialism in my *Political Economy*, said that the development theory presented there could be used in biology. The traditional theory of evolution is one-sided because its basis is that organisms adjust themselves to changes in the environment while changes in the environment are treated as independent of organisms. But organisms — plants and animals — change the environment and therefore the mechanism of dialectic influence as a basis for development is in biological development the same as the one which describes historical materialism (...) In principle there is no difference between the dialectic-materialistic concept of social development and biological development; it is the same — let us say — mechanism, the same dialectic process". *Studia Filozoficzne*, Nos 3-4, 1963, pp. 14-15.

The fact of remaining in the circle of analogy of the development of the society and of nature has also this characteristic feature that it makes a social thinker more sensitive to the most important problems of great historical periods, to observing certain most general patterns. The discovery of such patterns is the result of reflection rather than of systematic research, even though, of course, the basis for this reflection is not only the view-point of a thinker, but also the material accumulated by social sciences. The mere consideration of social or economic life in development categories may, although it does not have to, result in a tendency to treat lightly problems of structure at a given time because it appears to be only a moment in the general development process⁸.

A theoretical justification of the synthesis whose elements Lange presented several times in different periods of his life was his conviction of the complementarity of two basic currents in world economics: the Marxian and the neoclassical one predominant in non-Marxian economics. For Lange has always considered as an essential component of socio-economic science those analyses and theories which were included in works of Marx, Hilferding and Lenin, in more specialized question in works by Kautsky and Krzywicki. He was of the opinion that particularly in the twenty-year inter-war period the development of economics was "strictly related to the use and perfecting of cognition tools created by the neo-classical school"⁹. He included in the latter also the achievements of the

Elements of this type can be found also in Lange's earlier works. In one of his reviews he wrote: "Marx and Engels were naturalists. Man is for them primarily a biological organism, a part of Nature. Every science about man is then part of general science about Nature (...) But man is a specific organism. He is a social organism and not only adjusts himself to the environment but also adjusts the environment, in his collective activities, to his purposes. The latter adjustment is called production. Thus he changes himself and the environment. The part of science about man which studies the process of interaction of man and environment in the process of production is called historical materialism". O. Lange (review) on "Vernon Venable, Human Nature The Marxian view", *New York, Times Book Review*, July 15, 1945.

⁸ Quoting Lange's contention that all structure laws can be reduced to the causal law, Hochfeld correctly notes that "especially when the causes remain unknown, to treat structure laws as the causal law is an endeavour deprived of practical value but, at the same time not indifferent because it prompts one to various kinds of interpretative speculations. The conviction that every theory of social relations is a science about the laws of social development indicates also that the concept of change, is identified here with the concept of development". J. Hochfeld, *Studia o marksowskiej teorii społeczeństwa*. (Studies on Marxian Theory of Society), Warszawa, 1963, pp. 31-32. It is obvious that Hochfeld's remarks refer, *mutatis mutandis*, also to economics, that other and certainly more concrete research directives flow from them.

⁹ O. Lange, *Neoklasyczna szkoła w ekonomice* (Neoclassical School in Economics), *Encyklopedia Nauk Politycznych* (Encyclopaedia of Political Sciences), Volume 4, Warszawa, 1939, p. 23.

mathematical school. The first current created what Lange sometimes called "economic sociology". The second current provided the tools necessary for studying the relations between man and things, i.e., the problem of economic activity, asocial in its essence, which in accordance with Lange's terminology can be defined as "praxiological". The science of economics would consist then of two components: a sociological one and a praxiological one.

Lange gave a detailed description of those two components of economics for the first time in an essay in 1935 under a provocative title: *Is Economics a Social Science?* This essay begins with the statement that, although a positive answer to this question is accepted fairly unanimously, there are serious reasons why the correctness of this conviction should be questioned. The answer given then by Lange should be regarded as ambivalent. To the extent to which economics studies the general laws of economic activity, i.e., to which it is only "a formal theory of choice rationally made", it is not a social science. But economic activity assumes various forms depending upon the nature of social environment, and to the extent to which this science studies the influence of the social environment on economic activity, it is a social science. Since most economic problems belong to the second group, the asocial part of economics forms only its "prolegomena" ¹⁰.

In consequence, Lange has accepted a "two-storey" structure of the science of economics, given as early as 1920's by Friedrich von Wieser, although the Polish socialist conceived differently the social part of economics. One of the sources of inspiration for Lange was the view expressed by Benedetto Croce to the effect that what is usually regarded as Marxian economics is, in fact, economic sociology which should be supplemented by "a pure theory" of economics formed by the subjectivist school ¹¹.

A little later Lange wrote the first dissertation in English whose aim was to give a "measure of value" to neoclassical and Marxist economics, ¹² to prove their complementary nature. The superiority of one or the other turns out to be relative and conditional for each of them manifests its good qualities in different fields since both schools have developed depending on the social tasks which they were meant to fulfil.

The first has to provide a scientific basis for rational measures to be taken in the current administration of the capitalist economy (monetary and

¹⁰ O. Lange, "Czy Ekonomia jest nauką społeczną?" (*Is Economics a Social Science?*), *Czasopismo Prawnicze i Ekonomiczne*, Volume 30, Kraków 1936, p. 248.

¹¹ B. Croce, *Materialisme historique et economie marxiste*, Paryż, 1901. Lange quotes this work in: O. Lange and W. Malinowski, *Socjalizm* (Socialism), *op. cit.*, p. 10.

¹² O. Lange, "Marxian Economics and Modern Economic Theory", *Review of Economic Studies*, Volume 2, No. 3, London, 1935;

credit policy, tariffs, localization, monopoly prices, etc.), the social function of the latter has been to provide a scientific basis for long range anticipations guiding the rational activity of a revolutionary movement directed against the very institutional foundations of the capitalist system. But in providing a scientific basis for the current administration of the capitalist economy "bourgeois" economics has developed a theory of equilibrium which can also serve as a basis for the current administration of a socialist economy. It is obvious that Marshallian economics offers more for the current administration of the economic system of Soviet Russia than Marxian economics does, though the latter is surely the more effective basis for anticipating the future of Capitalism. In so far, modern economic theory, in spite of its undoubted "bourgeois" origin, has a universal significance¹³.

It is quite evident here that modern economic theory is by its very nature asocial and praxiological as well as above the political system, as compared with Marxian economic sociology.

In essays written in nineteen-thirties we cannot find any direct answer to the question: which of the schools was to provide a basis for a synthesis? Reading them one could ponder over what will prevail: a socialist orientation, the attachment to the radical tradition of thought, or the degree of generality of one economics or the other, as well as the degree of precision to which Lange always attached great importance. The decisive element was Lange's conviction that with the help of neo-classical tools a sociological interpretation of economic processes may be both easier and more accurate. Remembering that the main problem in neoclassical economics is that of utilization of scarce resources, and the key problem in Marxian economic sociology is the class structure, Lange maintained that the second problem may be expressed in terms of the first problem.

A treatment along these lines will undoubtedly absorb the major contributions of Marxian theory, but it will not be shortcomings and limitations of the latter, and it will leave open the road to further developments¹⁴.

In the very interesting letters¹⁵ concerning the attitude outlined here Lange used also arguments of the socio-technical nature — an easier approach the reader in a modern language; especially in Anglo-Saxon countries where Marxist tradition is lacking. There is no doubt, however, that of decisive importance then was Lange's cognitive attitude. In the book on the sociological foundations of economics,¹⁶ planned during the

¹³ *Ibid.*, p. 190.

¹⁴ O. Lange, The Review of book by P. M. Sweezy, *Theory of Capitalist Development*, [in]: *Journal of Philosophy*, 1943, Volume 11, p. 384. Polish translation in: O. Lange, *Dziela* (Works), Volume 3, Warszawa, 1974, p. 154.

¹⁵ Cf. *ibid.*, p. 861.

¹⁶ Such a book Lange planned in two research programmes — at the beginning of 1940 and 1941 — presented to the University of Chicago. In addition to the theory of economics and econometrics Lange announced continuation of research in the field of relationship between economics and sociology. Earlier he tried to answer the question whether and to what extent contemporary economic theory

war, and in the conspectus entitled *Economics and Sociology*, written at that time, Lange envisaged the translation of the problems of the class structure of the society into the language of marginal (neoclassical) economics. One of the more general theses of the conspectus provides a basis for a closer insight into Lange's intentions: "all propositions of economic theory hold with approximation corresponding to closeness of actual behavior to perfectly rational behavior. Closeness is a historical product, i.e., depends on type of social relations"¹⁷. Both economic and social progress are interpreted here as substitution of rational activities for emotional and traditional ones. And the praxiological principle of economic rationality was to be a basic tool for explaining the whole history of mankind. It makes possible the "measuring" and comparisons of the particular socio-economic systems by the degree of approximation of the actual behaviour to rational behaviour. Let us note then that if this conspectus was the first articulation of the book on the sociological foundations of economics, then even in the first step toward its realization it has changed rather into a book on the praxiological foundations for economic sociology.

However, perhaps the view-point described above was not a result of very deep thinking. Perhaps one of the reasons for dropping the intention to write this book was related to the fact that after a closer consideration the question of synthesis thus conceived turned out to be difficult. In this way one can look upon the content of the first chapter¹⁸ of *Theoretical Economics* which Lange wrote when he was still in the U.S.A. at the beginning of 1945. It is noticeable here that, even though Lange still maintained the two-storey structure of the exposition of economics, he abandoned the contention that "pure theory" pertaining to the general

may be useful for a socialist economy. He was interested also in the possibility of "extrapolation" of economic theory into the past. Having announced that he will soon write a book whose tentative title was to be *Sociological Foundation of Economics*, he wrote that this book would present the results of his research in three parts: (1) the influence of social and legal institutions on different degrees of "rational behaviour" in economic activities and the question of modifications which economic theory should undergo in order to be able to find application to studies of different socio-economic systems; (2) the influence of economic changes on institutions and on the way of thinking; (3) economic foundations of social stratification. Lange wanted to precede the writing of this book by joint research with anthropologists on the economy of primitive people because he felt that anthropological studies so far have not produced sufficient generalizations that could be used by theoretical economists. Lange's intention has not been realized and its only result, it seems, is a conspectus, several pages long, entitled *Economics and Sociology*.

¹⁷ Cf. *ibid.*, p. 888.

¹⁸ This chapter (or actually its basic part) was published under the title "Scope and Method of Economics", *Review of Economic Studies*, Volume 13, No 33. Polish translation in: O. Lange, *Dziela* (Works), Volume 3, *op. cit.*, p. 158.

theory of economic activity is social in nature. Economics is now divided on the basis of methodology into theoretical economics and applied economics. The latter consist, in turn, of economic history and "institutional economics" which studies the influence of institutions broadly interpreted on the way in which scarce means are used. It is interesting, however, that the reverse influence of economic activity on social relations was to be, in Lange's interpretation at that time, the subject-matter of economic sociology being a specialized division of sociology. Thus, such questions as the sociology of industrial relation, the bureaucracy in corporations and trade unions, would belong not to economics but to a border-line discipline included, however, in sociology.

Having assumed that theoretical economics is of a deductive nature Lange emphasized very strongly its empirical character. However, the most important change in Lange's views concerned the interpretation of the principle of economic rationality understood as economic activity aimed at the objective of maximization of a given quantity. While in his essay in 1935 he assumed that man's economic activity "is always based on the principle of economic rationality",¹⁹ ten years later the function of this principle has become primarily the simplification of research procedure. It is noticeable here that — as manuscripts and typescripts of his work in 1945 show — Lange replaced in his writings the notion of the "principle" of economic rationality with a less obligatory notion of a "postulate" of rationality. In his reasoning on this subject he emphasized the hypothetical and methodological-auxiliary nature of this postulate. The following excerpt is important for understanding the nature of the later turnabout that Lange made in the first volume of *Political Economy*.

Though a short-cut designed to save elaborate empirical investigation, the postulate of rationality, is nevertheless, but an empirical assumption. It is a hypothesis which, in each case, must be verified by confronting the logical deductions obtained from the postulate with the observations of experience. The use of the postulate is justified only when the logical deductions agree with the results of empirical observation with an acceptable degree of approximation. Otherwise, the postulate would lead us to make predictions which fail to be born out by observed facts. This needs to be stressed because some economists believe that the postulate of rationality can be used as an *a priori* principle, not subject to empirical verification²⁰.

It is not difficult to notice here that the last sentence has also the connotation of self-criticism. It is also very characteristic that Lange was then very cautious in his utterances on the subject of the usefulness of the rationality postulate in its application to the analysis of enterprises operating on the principle of public service. He thought that it is permissible to accept this hypothesis with respect to these enterprises only

¹⁹ Cf. *ibid.*, p. 842.

²⁰ O. Lange, *Scope and Method of Economics*, op. cit., p. 30.

when it has been found that it is possible to arrange according to a certain scale the preferences (or the representation) of the society concerning the allocation of resources and the distribution of products. Since, however, the society rarely has such preferences, Lange thought that the analysis of the operations of these enterprises "has to be based on the observations of institutional economics and economic history rather than on logical deductions from the postulate of rationality"²¹.

It is obvious that although scepticism with respect to the extent of applicability of the rationality hypothesis is not tantamount to expanding the range of social problems in economics, it would have to result in such an expansion. This scepticism, incidentally, can be looked upon as drawing conclusions from the statement in the first sentence of this dissertation that economic activity always takes place in a society. It makes little sense then to formulate economic laws in application to an abstract individual.

In 1945 Lange was more reserved also in assuming a uniform maximization objective for a capitalist enterprise:

Although in the present economy, money profit is the chief objective of most units engaged in production, some other objectives are always co-existent. Among these other objectives are, for instance, prestige, social standing, desire for a quiet life, social responsibilities, and most important of all, desire for safety, i.e., dislike of decisions involving risk. Strictly speaking, the empirical units called firms or business enterprises are households which desire to satisfy these specific wants alongside with making money profit; they are ready to sacrifice some money profit to attain the other objectives. The pursuit of money profit, however, dominates over the other objectives to such an extent that the units mentioned conform approximately to our theoretical concept of a firm... However, the desire for safety may be of a such prominence that it sometimes becomes necessary to introduce it from the very beginning in the analysis of the firm²².

Lange took into consideration these "non-profit" objectives of a capitalist enterprise, being probably influenced by Schumpeter and the modern American organization theory (mainly behavioural) coming to life at that time. If this was so, it was the first, very early and only manifestation of Lange's interest in this theory.

2. PRAXIOLOGICAL UTOPIA

The most important changes that occurred in Lange's views on the subject of the place of praxiological problems in economics can be reduced to three basic directions²³.

²¹ *Ibid.*, p. 31.

²² *Ibid.*, p. 28.

²³ We confine ourselves here, in principle, to Chapter 5 of the first volume of *Political Economy*. This chapter is entitled: The Principle of Economic Rationality. Economic and Praxiology.

In *Political Economy* Lange returned again to the "principle" of economic rationality, instead of the abandoned concept of the "postulate" of rationality. Moreover, the object now is to determine not only the place of one praxiological principle, but the relationship between two sciences — economics and praxiology. For in this form Lange returned to his early conception of "a general theory of rational activity". To a large extent this was a manifestation of the process of separating praxiology from other disciplines. Lange emphasized the pioneering nature of works by Tadeusz Kotarbiński in this process. It is worth noting here, however, that Lange has always conceived the subject and the tasks of this new discipline differently from Kotarbiński who has never accepted the approach proposed by Lange. We shall confine ourselves here to pointing out the most important differences.

Lange wanted to see in praxiology a descriptive-explicative science; this can be gathered from the very definition of the origin of its formation:

In view of the fact that rationality of action is now a feature of many fields of human activity, there arises the problem of discovering what it is that is common to all fields of rational activity. This led to the general study of rational activity, praxiology²⁴.

Accordingly Lange interpreted the relationship between economics and praxiology so that he indicated in what sense the scope of the former is narrower (economics deals only with a certain field of human activity), and to what extent it is broader (deals also with social relations, and not only with the relationships between man and things). Praxiology is then, in contrast to economics, an asocial science. In both these questions this approach was opposed by the creator of praxiology.

Here is the essence of opposition by Tadeusz Kotarbiński.

Professor [Oskar Lange, T. K.] presented the problem in this way: in a certain respect economics is broader than praxiology, in another respect praxiology is broader than economics — this resulted from the concept of tasks for the former and for the latter. I have experienced difficulties in accepting these distinctions because I understand the terms involved as follows. Problems of the praxiological type are those of a practical nature. And what are practical problems? They are problems (...) what should be done, or what is sufficient to be done, in order to obtain a particular result. They are problems that, let us say, an engineer poses for himself when he asks what should be done in order to cross a river (...). On the other hand, problems concerning how it happens, how it actually comes about, that people use some and not other methods of activity, for instance they specialize more and more — these problems are not strictly praxiological, they are problems, let us say, in the field of some philosophy of history, some sociology...²⁵

²⁴ O. Lange, *Political Economy*, Vol. I, Warszawa 1963, p. 188–189.

²⁵ Tadeusz Kotarbiński, "Participation in the Discussion in Connection with O. Lange's Paper on the Importance of Praxiology for Political Economy (June 1963)", *Materiały Prakseologiczne*, Warszawa, 1965, No. 20, pp. 27–28.

On another occasion the author of the *Treatise on Good Work* raised his objections against treating praxiology as a theory of rational activity, i.e. methodologically efficient and not only really effective,²⁶ and against reducing the subject of this discipline to studying the relations between man and things, excluding cooperation relations²⁷. It should suffice to peruse basic positions in Polish praxiological literature to find out that reservations raised by Kotarbiński were reservations of his whole school²⁸.

In the light of this very specific understanding of praxiology that we find Lange's works we can regard his concept of the theory of rational economic activity as a result depending only slightly on "the Polish praxiology movement". It was primarily a manifestation of the return to Lange's former concept, and this was a reflection of the climate at the time which it was reborn and shaped.

Another change in Lange's views concerned the approach to the rationality of pre-capitalist economic formations and the capitalist system. Since in initial parts of *Political Economy* a theory of historical materialism is exposed as a general basis for political economy, it is striking to find out in this work that these formations are set against capitalism more sharply and more strongly than perhaps in any earlier work by Lange. In old social systems "economic activity was a customary-traditional activity",²⁹ while capitalism has made money earning activities more rational. In a capitalist enterprise Lange sees now "the first historical triumph of the principle of economic rationality"³⁰ because, owing to a full commensurability of objectives and means, it maximizes profit as the only objective. The principle of rationality finds in this enterprise "a full application"³¹. This, of course, is a limited triumph because this principle finds its application only inside the enterprise, and not in the whole country. For this reason Lange writes about private economic rationality.

The approach to economic irrationality of former systems and rationality of the capitalist system presented here has been criticized by Witold Kula³² and Edward Lipiński³³. Both have emphasized that these

²⁶ Tadeusz Kotarbiński, "Oskar Lange, Sojusznik prakseologów" (O. Lange — An Ally of Praxiologists), *Prakseologia*, Warszawa, 1966, No 23, p. 6.

²⁷ *Ibid.*, p. 6.

²⁸ *Ibid.*, p. 6.

²⁹ O. Lange, *Political Economy*, *op. cit.*, p. 152.

³⁰ *Ibid.*, p. 173.

³¹ *Ibid.*, p. 172.

³² W. Kula, *Teoria ekonomiczna ustroju feudalnego*. (The Economic Theory of the Feudal System), Warszawa, 1962, pp. 198–199, 202.

³³ E. Lipiński, *Na marginesie ekonomii politycznej Oskara Langego*. (On Oskar Lange's Political Economy), [in]: E. Lipiński, *Teoria ekonomii i aktualne zagadnienia gospodarcze* (Economic Theory and Current Economic Problems), Warszawa, 1961.

formations differ only by the degree of rationality, that in every actual activity there appear both traditional and rational elements. Kula argued also that price, even in a free enterprise capitalism, provides a very imperfect basis for making decisions aimed at the maximization of money profit. Lipiński, on the other hand, emphasized the prime importance of social dynamics of a given system, as compared with the question of rationality. "Changes in production techniques and methods take place under the pressure of dynamics rather than rationality motivation. It is the external pressure of multiple stimuli and needs, and not a search for rationality that induces man to make inventions, to change the scale of production, to seek new markets, etc. The notion of economic effectiveness is broader than the concept of rationality (...)"³⁴. Both these authors emphasize then unanimously and more strongly the social aspects of economic activity. Lipiński expressed this briefly: "Social formations and cultures differ less by the degree of economic rationality and incomparably more by the relationship of the spirit of tradition and of the spirit of expansion, of dynamics"³⁵. There followed from this, of course, a different concept of the tasks of political economy as a truly social science.

The crowning achievement in changes in Lange's views on economic rationality is his interpretation of a socialist economy as an economy being rational by definition. As we remember from his essay written 1945, Lange not only emphasized the necessity of checking every time whether and to what extent the rationality hypothesis refers to a given social or economic system, but he also stressed — with reference to public service — difficulties in finding out whether a society has a definite scale of preferences. He advised therefore that at least at the beginning socially owned enterprises should be studied by induction methods. He assumed then that to that extent the development of institutional economics will be ahead of the development of theoretical economics.

The first utterances by Lange in 1956–1957 seem to confirm this research attitude. He emphasized in them the accumulation of practical social experience. Writing about problems "on the Polish road to socialism"³⁶ or a Polish economic model³⁷, Lange refuses, in a sense, to get involved in too general theoretical considerations, emphasizing that:

³⁴ *Ibid.*, p. 241.

³⁵ *Ibid.*, p. 242.

³⁶ O. Lange, *Niektóre zagadnienia polskiej drogi do socjalizmu*. (Some Problems on the Polish Road to Socialism), Warszawa, 1957. Compare: *Dzieła* (Works), Volume 2, *Socjalizm* (Socialism), *op. cit.*, p. 490.

³⁷ O. Lange, "Jak sobie wyobrażam polski model gospodarczy?" (How Do I see a Polish Economic Model?), *Trybuna Ludu*, No 363/1956 and 1/1957. Compare: *Dzieła* (Works), Volume 2, p. 483.

the building of a new economic model must be based on the dynamics of the working class and socialist intelligentsia³⁸.

The first volume of *Political Economy*, however, seems to contradict this attitude. With respect to socialism there disappear from it all those theoretical difficulties that Lange pointed out in 1945. It is true that Lange even now reminds us of the necessity of preceding the procedure of formation of economic theories by considering whether and to what extent a given field, or a given economic system, is characterized by economic rationality; he also points to the "need for empirical determination of the scope of methodological knowledge used in practice". It is puzzling however, that his description of socio-economic rationality in socialism is of an exclusively deductive nature.

The way in which Lange has solved the difficulty of determining the general social objective sanction, mentioned in his essay written in 1945, is highly intriguing. Lange has simply assumed that the objective function which the central plan decides that it should be maximized is this sought-after quantity. "The social economic plan sets the end in the form of a quantitative measurable target; normally in the shape of national income"³⁹.

A concrete institution existing in economic life has simply been identified with the theoretical construction sought-after (on this base only could Lange write interchangeably; "social economic planning, that is the realization of social rationality..."⁴⁰).

³⁸ The title of the paper in: *Nowe Drogi*, Nos 11-12, 1957. Compare: *Dzieła* (Works), Volume 2, p. 474.

³⁹ O. Lange, *Political Economy*, *op. cit.*, p. 178. Doubts were expressed with respect to this contention by Włodzimierz Brus who wrote: "Can the criteria of socio-economic rationality be expressed in quantitatively measurable terms, similarly as the criteria of private-economic rationality based on setting money capital against money profit? Some authors answer in the affirmative. Among them is primarily Oskar Lange who thinks that rational economic activity is possible at all only when the ends and the means are quantified and expressed in uniform units of measurement. I have my doubts regarding the correctness of such a view. It seems that the expression of the objective of economic activity of a socialist society in a uniform quantitative indicator (e.g. the size of the national income) is rather of an approximate nature. This results, I think, from the fact that, viewed from a sufficiently great height, the dividing line between economic and non-economic factors loses in clarity. After all, all economic activities in socialism serve defined social purposes and it is very difficult, especially so far as the perspective is concerned, to distinguish strictly economic moments from social moments, broadly interpreted. I even disregard the circumstance that in contemporary conditions the long run economic importance of fields traditionally regarded as non-economic ones is increasing more and more (all problems of so-called investments in man)". (W. Brus, *Ogólne problemy funkcjonowania gospodarki socjalistycznej*. (General Problems of Functioning of a So-

⁴⁰ cialist Economy), Warszawa, 1961, p. 220).

⁴⁰ O. Lange, *Political Economy*, *op. cit.*, p. 178.

But it was here that consideration should begin concerning the consistency of the quantity maximized by the plan with this theoretically conceived concept of the objective that implements in the best way the political premises of socialism: considerations on the subject of what the rationality of a socialist economy is, how it differs from the rationality of a capitalist enterprise. For a mere expansion of the field of operation of the principle of rational economic activity from the particular enterprises to the whole social economy is only the first and the most external, and therefore most visible, manifestation of these differences. It should suffice to realize that the national income may be, and even in certain period was, maximized to the simultaneous neglect of elementary social needs, destruction of the environment, etc., to make it difficult to be satisfied with the approach in which major problems of "limits" of economic growth are disregarded ⁴¹.

It is true that in his other works Lange did not omit social difficulties in a socialist economy. It is true, too, that also in this work, or more strictly in this chapter, Lange did not omit difficulties of a certain type. Writing that in a hierarchical structure of goals, typical of economic planning in socialism, the goals of the particular economic units, are integrated by the overriding goals set in the central plan, which is to be a manifestation of the socio-economic rationality of the socialist mode of production, Lange emphasizes that the rationality "does not appear fully-fledged together with socialist relations of production. It develops slowly and laboriously, together with the socialist mode of production" ⁴². The sentences following this statement, however, leave no doubt whatsoever that Lange had in mind the development of economic planning techniques. This is corroborated by a historical outline of the development of planning, social accounting techniques in the form of socio-economic balance-sheets which after commercial accounting are "the second great historic step in the development of methods of rational economic activity" ⁴³. A third step is supposed to be the application of achievements of such new areas of science as operations analysis and programming science (which Lange regards as divisions of praxiology) and cybernetics ⁴⁴.

Thus the problem of integration of goals of economic units is considered here from the technical-praxiological point of view only, and not as a process of social interactions. The question of determining social preferences is disregarded completely.

⁴¹ In one of his older papers Lange distinguished the socialist from the collectivist system in such a way that even though the latter was supposed to be based on the social ownership of the means of production, it would not realize social welfare. Compare: *Dziela* (Works), Volume 3, p. 113.

⁴² O. Lange, *Political Economy*, op. cit., p. 180.

⁴³ *Ibid.*, p. 186.

⁴⁴ *Ibid.*, p. 207.

Two main dangers of distortions in socialist production relations: anarcho-syndicalistic and bureaucratic degeneration,⁴⁵ pointed out by Lange elsewhere but at the same time, do not play in an analysis of the problem of economic rationality any role at all. From this point of view the notion of socio-economic rationality has remained as a notion accepted *a priori* and without justification. Contrary to the "spirit" of the theory of socialism created by Lange, wherever the notion of socio-economic rationality appears, the adjective "socio" means only that it pertains to the whole country, can be used on a macroscale⁴⁶.

Big steps forward in the progress of rationalization of economic life in socialism are accompanied, as if automatically, by a permanent influence of economic life on the rest of social life, by rationalization of other areas of human activities in this system. Economic rationality must strengthen, in all areas of human activities, the tendency toward rationalization of behaviour. "Moreover, the superstructure of the socialist formation has no need for those numerous irrational and even anti-rational constituents which are necessary in social formations based on antagonistic relations of production. On the contrary, in a socialist society these constituents are an obvious hindrance to social development and activity attempts are made to get rid of them"⁴⁷.

Worth noting is especially the logic of the last sentence. Its reformulation in the sense: "Since they are evident obstacles to social development,

⁴⁵ O. Lange, *Dziela* (Works), Volume 2, *Socjalizm* (Socialism), p. 329. Reference is made here to Lange's paper entitled: *The Political Economy of Socialism*; it was delivered in Belgrade in November 1957, i.e., probably a year before he wrote the chapter on the principles of rational economic activity. In Lange's paper two different concepts of the political economy of socialism can be found. One conceives its subject, which lends itself to materialistic-historical analysis, as a process of development through contradictions; the other one is based on the conception of "harmonious economic development" the condition of which is that incentives be designed "in such a way as to make the personal and collective interest of the employees of which the enterprise consists identical with the fulfilment of the social goal which the enterprise serves". (*Ibid.*, p. 327). Speaking of the possibility of distortions in the transition period and in the first stages of a socialist society Lange excludes their appearance in a mature socialist society ("The degree to which these distortions disappear is ... a measure of the degree of maturity achieved by the socialist society"). *Ibid.*, p. 329.

⁴⁶ Here is one of many examples: "A small business man, even if he knows about the possibilities of programming, does not take advantage of them because the cost of expert consultants is too high. Further more, economic relations may make it impossible to utilize the methodological knowledge available. A considerable proportion of our knowledge of programming is not used in capitalist enterprises or capitalist states because its application demands a co-ordination of the activities of individual enterprises, which is only possible when the means of production are socially owned". (O. Lange, *Political Economy*, *op. cit.*, p. 204).

⁴⁷ *Ibid.*, p. 188.

there is an active tendency to remove them...”, seems to be in line with Lange’s intention.

The socialist system appears here as a final embodiment of a praxiological utopia and, at the same time, a border-line of history, at least of social history. And this is what this utopia has been accused of⁴⁸.

In line with the praxiologization of economics there developed also Lange’s concept of economics as a phenomenon so highly rationalized that it ceases to be also a subject of the sociology of science. For in this way one can understand his view that in striving for cognition the working class and the socialist society are free from conservatism, not only of the class type, but also of the “stratum or social group” type, that they are “interested only in a full and unlimited development of the economy and of culture”⁴⁹. Fortunately Lange’s attitude is full of inconsistencies and they force him to repeat after Marx, in conclusion of the analysis of the goals of the political economy of socialism, a well known verse by Dante that “At the entrance to science, as at the entrance to hell one should get rid of all one’s fears, let all timidity die down here”⁵⁰.

A contemporary critique of Lange’s *Political Economy*, however, should not overlook the important fact that in this work Lange by no means said his last word, as he himself ever more strongly stressed. I shall quote here a testimony that was most far reaching. When asked for advice in the summer of 1964 concerning the concept of socio-economic rationality on a supranational basis, Lange emphasized in his answer the low usefulness of abstract theoretical constructions of this type if they disregard the sociological background. “The whole problem of rationality in a socialist (or capitalist) economy is exaggerated. The problem of a so-called optimal allocation is secondary; of prime importance is the question of stimuli to the growth of the production forces

⁴⁸ The accusation came from the side from which Lange expected it least. In the critique of Lange’s work by a well known French anthropologist and — let us add here the information not without significance — a Marxist working at the research centre of the Communist Party, Maurice Godelier, there is quite a lot of exaggeration. This exaggeration causes that the nature of his critique is more ideological than scientific. But it is not without reason when he sets even in the title the vision of a rational burgeoise society of Adam Smith against a praxiological utopia of socialism of Oskar Lange. In summarizing Lange’s view the French anthropologist writes hardly concealed irony that Lange’s socialism “realizes the complete victory of reason, freedom and truth”.

“In consequence we return again [concludes Godelier] to the apology which, however, this time splits into a limited apology of capitalism, transformed into a far reaching complete apology of socialism. We are faced here then with a great ideological design aimed at a justification of the superiority of a certain economic system over all previous ones”. (Maurice Godelier, *La rationalité et irrationalité en économie*, Paris, 1967, p. 25.)

⁴⁹ *Ibid.*, p. 25.

⁵⁰ *Ibid.*, p. 25.

(accumulation and technical progress). This is, if such a word may be used "true" rationality. In discussing more specifically the problem of supranational rationality Lange indicated the following "sociological difficulty": "the establishment of the Common Market proceeded the crystallization of West European international monopolistic oligarchy (...) Later, institutions of the Common Market (...) created an international administration apparatus which has vested interests in the development of integration. The Council for Mutual Economic Assistance does not have such a sociological base (...) After all, a utopia could be constructed scientifically, but there are difficulties with its sociological base; to what social forces should an appeal be made to implement it?"⁵¹.

This document indicates that Lange himself was not far from describing his own concept, formulated only a few years earlier as a utopia. Lange was induced to limit this utopia, among other things, by his own mathematical-praxiological studies in the light of which he viewed in a different way the very essence of rationality. I shall point out here several striking points of theses in *Optimal Decisions* (published in 1964).

(1) Lange continued to devote a great deal of attention to praxiology and the principle of economic rationality (he based his *Optimal Decisions* on the theory of programming which he regarded as a division of praxiology), but he never used the concept of socio-economic rationality. He did this as if he were careful to avoid misunderstandings connected with the ambiguity of the notion: "social". But he wrote much more precisely that in socialism the principle of economic rationality "covered the whole national economy"⁵².

(2) In the book there is a chapter on programming under the conditions of "manifold objectives". The task is reduced then to the "elimination of inefficient processes". As if going back to his view-point in 1945 Lange said that "the problem should be treated as typical to a socialist economy if it is recognized, as some economists maintain, that a socialist economy has multiple objectives"⁵³.

(3) In almost half of his book Lange dealt with programming under the conditions of uncertainty, including also full uncertainty; he was searching not so much for optimal solutions (decisions) in the meaning accepted so far, as decisions that would be the least harmful. He dealt with this more extensively not only because this problem was one of those less extensively dealt with, but also because he recognized its weight, especially "for planning in socialism"⁵⁴.

⁵¹ Lange's letter to T. Kowalik dated August 14, 1964.

⁵² O. Lange, *Optymalne decyzje, Zasady programowania* (Optimal Decisions, The Principles of Programming) Warszawa, 1971, p. 4.

⁵³ *Ibid.*, p. 164. Lange refers here to the critical remarks by W. Brus, already known to us, concerning *Political Economy*.

⁵⁴ *Ibid.*, p. X.

The conclusion of this "mathematical" book is as if a critical gloss to a rational vision of socialism. Speaking of the possibilities of applying the matrix of the results of erroneous decisions, called also a matrix of alternative losses, for the purpose of improving the decision making processes in social groups, Lange describes the possibility of using this newest technique as a tool of socialist democracy.

It makes possible the automation of the process of management in a socialist society. In accordance with the postulate of socialist democracy all members of the society record their preferences (which can also be mechanized) and the decisions are calculated by an 'electronic brain' on the basis of the minimax principle. Such a decision is an objective, logical consequences of evaluation by particular individuals, it is free from possible bureaucratic deviations of the authorities making the decisions. The prospect of collective decisions being made by 'electronic brains' opens new arenas for the implementation of a socialist democracy. It is beyond the scope of this book to discuss the importance of such automation in collective decision making with the help of electronic computers for the process of decay of the state in a communist society⁵⁵.

3. BY WAY OF CONCLUSION. SOCIAL CONDITIONS FOR THE PRAXIOLOGIZATION OF ECONOMICS

When one returns to reading Lange's works after fifteen years perhaps a more striking impression than before is that Lange emphasizes so strongly and on many occasions the social nature of economics. He stresses that not only its certain part or certain problems, but all of it, was intended to be *par excellence* a social discipline. In this very way the author explained the adjective used in the name of this discipline. "Political" was to mean exactly the same as "social" and on top of it the latter name, according to Lange, „gives perhaps a better idea of the subject matter of the science”⁵⁶.

In the first chapters of *Political Economy* Lange repeats many a time that this is a science about "the social laws of economic activity"⁵⁷. In discussing economic laws Lange distinguishes, in addition to technical and balance laws of production, also the laws of behaviour of men and the laws of interplaying of human activities. All this indicated that Lange will take into consideration, to a large extent socio-economic problems and the achievements of sociology. However, an economic historian must ponder over one fact. All books by Lange that were written at the same time as, or after, the first volume of *Political Economy* are almost completely devoid of sociological problems. This applies

⁵⁵ *Ibid.*, p. 284.

⁵⁶ *Political Economy*, p. 13.

⁵⁷ *Ibid.*, pp.1-12.

to *Wstęp do ekonometrii* (Introduction to Econometrics 1958), *Teoria reprodukcji i akumulacji* (The Theory of Reproduction and Accumulation 1961), *Optymalne decyzje* (Optimal Decisions 1964), *Wstęp do cybernetyki ekonomicznej* (Introduction to Economic Cybernetics 1965). All these books deal with problems which only assume specific socio-economic institutions. This applies also to the second volume of *Political Economy* which, apart from certain fragments in Chapter 1 (entitled: Social Process of Production and Reproduction), is devoted entirely to problems of technical and balance laws of production. This is indicated even by the titles of the remaining chapters.

The matter could be explained very simply — his death interrupted Lange's writing at the moment when he was to engage in extensive studies of socio-economic problems. But his writings were only a fragment of the general expansion of technical and praxiological aspects of Polish and world economic literature. For a historian of economic thought, educated mainly on Lange's works, this was a striking phenomenon, even in early sixties.

... the programme theses put forward in Lange's book were in the meantime not so much directives defining the current directions of research as a summing up of the stage already passed through; not so much a programme of action as the estimation of the chances that could be taken advantage of the political economy of socialism.

The programme of the Second Congress of Economists witnessed its perverted fulfilment in the positivist (or shall we say Yaroschenko-type) conception of economics as a science in itself, which made the dialectic of the dependence of the theory of economics on social relations forcefully evident. The quite but fast flowing stream of Polish economic literature of recent years contains many valuable items, although they are not so much the expression of the development of the theory of the political economy of socialism as of the development of other economic sciences (econometrics, economic cybernetics, the theory of programming, etc.). Of course, it is not a question of checking this stream. There is no danger at the moment anyway. The specific community of interests of narrowly understood practice (practical economic experts) and the economic theoreticians is the best guarantee for its continued development. But it is the historian's duty to point to its narrow character⁵⁸.

The processes mentioned above created in the following decade a situation in which a sociologist accepts as given the fact that economics gives up studies of sociological problems of the socialist society. For this reason he suggests that a new specialized part of sociology called economic sociology should be formed⁵⁹. The Hegelian cunning of the

⁵⁸ T. Kowalik, *Three Conceptions of the Political Economy of Socialism*, [in]: *On Political Economy and Econometrics, Essays in Honour of Oskar Lange*, Warszawa, 1964, pp. 317-318.

⁵⁹ Here is what Winicjusz Narojek writes in consequence of several years of studies on the economy and scientific literature in Poland: "To the degree to

mind, which Lange liked to quote, caused that political economy, "programmed" as a science of social production and distribution relations, developed in a different direction. It developed those of its branches which are a negation of its social nature.

We have pointed above to some of Lange's genetic premises and methodological assumption which were conducive to the praxiologization of Political Economy. Let us look upon *Political Economy* as a social phenomenon, as a product of certain conditions. Let us refer to the American fragment of Lange's scientific biography.

One of the leading critics of contemporary economics, Benjamin Ward, contends that in Western, and especially in American economics a formalist revolution took place in nineteen-fifties and nineteen-sixties. Its essence is supposed to consist in the mathematization of both theory and applied research⁶⁰. The effect of this revolution was not only the appearance of econometrics, a science dealing with programming and activity analysis, but also the shaping of a new type of theoretician who uses in his reasoning a mathematical-logical or statistical proof. One of the secondary effects of this revolution noticed by Ward is the process of a further "desocialization" of economics. A reaction to this process

which modern economics differs from other social sciences as a method of seeking optimal economic solutions in achieving given social objectives, and sociology, coming closer to social psychology or culture anthropology, (...) the problems of interests, structures, and social relations produced in the economic mechanism become a separate research field". W. Narojek, *Spółeczeństwo planujące, Próba socjologii gospodarki socjalistycznej* (A Planning Society. An Attempt at a Sociology of a Socialist Economy), Warszawa, 1973, p. 15. And further on: "If we view the processes of integration of objectives and of coordination of economic units as a specific kind of interest play in the system of economic relations, then it will be possible to apply the basic premises of Marxian economic sociology to the analysis of social relations in an economy in which the means of production are socially owned and the allocation of resources and the distribution of commodities are based on planning". *Ibid.*, p. 20. The need for creating economic sociology that would constitute an indirect link between economics and other branches of sociology, the need motivated in a similar way, was pointed also by Andrzej K. Koźmiński. Compare his: "Socjologia a ekonomia" (Sociology and Economics), *Studia Socjologiczne*, No. 1/39, 1969. He correctly pointed out that "economists, for understandable reasons, frequently lacked this knowledge, (the general knowledge about human behaviour — T. K.); hence numerous examples of an awkward and sometimes even erroneous use of sociological material". *Ibid.*, p. 21. In his most recent work Koźmiński defines contemporary economics as an "engineering science". Compare A. K. Koźmiński, *Zarządzanie. Analiza systemowa procesów i struktur* (Management — a System Analysis of Processes and Structures), Warszawa, 1974, p. 22 and 25.

⁶⁰ B. Ward, *What's Wrong With Economics?*, London, 1972. This nature of revolution was sanctified by the Nobel Foundation. So far almost all its award winners in economics: Frisch, Tinbergen, Kuznets, Samuelson, Hicks, Arrow, Koopmans, Kantorowicz and Leontieff were mathematical economists. Exception were Myrdal and Hayek.

was the formation of two new economic associations in the U.S.A. in recent years: institutionalist and radical economists.

Ward stresses that the beginning of this revolution goes back to nineteen-forties and is connected with the pioneering role of two American schools: Chicago University and MIT at Cambridge, Mass. He adds also that the role played in this revolution by newcomers from Europe was much more than proportional. This observation applies indirectly to Oskar Lange, one of the co-founders of mathematical economic theory and econometrics, recognized in the West. Let us remember that the Polish economist, professor of economics and statistics in Chicago up to the autumn of 1945, was the actual editor of the quarterly *Econometrica* — an organ of this formalist revolution⁶¹. Lange left the United States at the end of 1947, that is, at the time when the “revolution” could have appeared to be even more promising. The first years of his stay in Poland, the period of “errors and distortions”, could have emphasized even more its attractiveness. Later processes, however, have led Lange to the conclusion that the popularization of achievements of this “formalist revolution” has become a task of prime importance. In addition, Marxism was so deeply rooted here that Lange did not have to fear that in Poland the achievements of this revolution would contribute to desocialization of economics.

The conclusion that Polish economists should urgently familiarize themselves with the achievements of contemporary economics struck Lange in consequence of his practical experience as an expert. Beginning with 1955 in India and since the middle of 1956 in Poland (formally since January 1957, i.e., from the moment of his appointment as chairman of the Economic Council) Lange has been in touch with economic practice as a government counsellor. He then saw in a new light the tasks of economists and the role of theory. The idea of shaping consciously social life in the new system preached by socialists has appeared now not as a task of “a great transformation” of the system, but in a more pragmatic form — as a task of a more efficient management of the national economy and of shaping its branch structure.

⁶¹ This periodical is an organ of the International Econometric Society which was formed in 1930. Let us note here the essential content of the first section of the Society's Rules and Regulations: “Its main objective shall be to promote studies that aim at a unification of the theoretical-quantitative and the empirical-quantitative approach to economic problems and those that are penetrated by constructive and rigorous thinking similar to that which has come to dominate in the natural sciences”. This program of the Society shows clearly that its objective was not to create a special discipline within the framework of economic sciences, but to make economics, in a positivistically intended way, more scientific. Let us add that almost all the award winners mentioned above were members of this Society even as early as nineteen-thirties.

This is not the place to engage in a detailed analysis of Lange's "adventure" as an expert. There were in it both great hopes and bitter disappointments. We just confine ourselves here to recalling the basic difficulty, frequently stressed by Lange, which he had encountered in practice. It was the difficulty of finding a common language with economic politicians; it was due to their deeply rooted thinking habits — depending upon the situation — either extremely deterministic (fatalistic), or extremely voluntaristic; their inability to think in terms of choice from among different variants, in terms of competing objectives and the means required for their realization. Under these conditions the popularization of contemporary techniques of economic activities was bound to appear to Lange as especially promising. One could even risk the contention that under the conditions of Poland's emerging at that time from the period of dense mythology, the shaping of „praxiological imagination” of Polish economists was a humanistic task. The teaching of problems connected with technical and balance production laws indicated technological limitations which an economist has to take into consideration, marked the strict boundaries for the actual area of choice; and the teaching of the formal „theory of optimal decisions” perfected the art of making the choice. Lange's prime task, thus understood, was convergent with the nature of an enlivenment which started in Poland in 1956. After all of two breezes, the “romantic” one has turned out to be short lasting. Much more durable was the “rationalistic-positivistic current. Although even in the former Lange marked his presence in the programme sense, his participation in shaping the latter has turned out to be much longer lasting and more absorbing. He had strong support in such social phenomena as an exceptional fascination with technique in the years 1957—1967 (it begins with the year in which the first Soviet sputnik was sent into space), with cybernetics, computers, business boom in many Western countries, the development of scientific futurology, etc ⁶².

⁶² Perhaps a future historian of economic thought will notice in Lange's scepticism in the last year of his life one of the early portents of a different atmosphere that has developed in late nineteen-sixties owing to Western contestation movements the degenerating impact of the Vietnam War, the brakedown of the belief in the myth of unlimited economic growth, turning toward “the quality of life”, the protection of the environment, etc.