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The Health of Nations: Reflections on the Analogy Between the Medical Science and Economics

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I. INTRODUCTION

This essay is built upon an analogy. I examine the similarities between medical science's fighting for the health of the human organism and economics' striving for the health of nations, for the good functioning of economic systems[1]. I deal exclusively with the analogy between the two *disciplines*, and compare the researcher physician to the researcher economist. However interesting it would be, I do not discuss in detail the similarities between the general practitioner's treating the patient and the economic politician and manager's controlling the economic system.

Although the analogy almost tempts to irony and witticism, I should like to refrain from them. I am an economist; and I put the question to myself and my colleagues: '*What can we learn* from another discipline?' We have every reason to look at medical science with due modesty and respect. It has a past of many centuries; ours is only two or three hundred years old. Mankind spends incomparably more intellectual capacity, labour, material means and technical equipment on medical science than it does on economics.

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1. Address delivered at the acceptance of the *Frank E. Seidman Distinguished Award in Political Economy* at Southwestern at Memphis, Tennessee, U.S.A., the host college of the Award, on September 23, 1982.

Thanks are due to the physicians Dr. TIBOR FAZEKAS, Dr. HEDVIG GRABER and Dr. ÁRPÁD SZÉKELY, and to the economists TAMÁS BAUER, ZSUZSA DÁNIEL and ANDRÁS NAGY for their valuable advice on reading the first draft of the manuscript. My study has been inspired by several works: I should like to mention especially the volume *Diagnózisok* (Diagnoses) by ELEMÉR HANKISS, eminent Hungarian sociologist and social philosopher [Magvetö, Budapest, 1982]. Of course, the author alone is responsible for the remaining defects of the essay.

Perhaps the most important difference between the two disciplines is that, in medical science, the relationship between research and its 'object', the suffering man wishing to recover, is more immediate than in our trade. Success and failure are much more obvious. The pain and death caused by the illness, or the relief of the pain, its elimination, and the postponement of death, are alternatives which make the struggle of medical science dramatic. This direct and dramatic nature of the consequences of medical work is a strong propelling force. The gratitude of the patients and their relatives, or, on the contrary, their despair and disillusion, exert great social control and pressure. The impact of the successes and failures of economics is much more indirect and much less spectacular. There is also another important difference. Medical science, like many other natural sciences, can experimentally test most of its hypotheses whereas economics is deprived of this possibility, apart from some of its narrower fields of examination.

These differences cannot be explained by the personal qualities of the staff of researchers of the two disciplines. Rather, the explanation lies in the objective differences between their positions. Medical science is more mature than economics. This is true even though medicine cannot yet answer many great, vitally important questions. I do not idealize the present state of medicine; but even with all its shortcomings, it has come much farther than our own discipline. It is thus worth while to reflect on what we can learn from its philosophy, research methodology, and the manner in which it approaches the problems.

I would not like to overshoot the target; far be it from me to develop some kind of 'bio-economics'. The essential differences between the objects of the two disciplines, and, in consequence, between their methodologies, are obvious. No discipline can base its approach on analogies, on the mechanical adoption of the experiences of other branches of science. But the danger that an analogy driven to the extreme might lead to foolish conclusions should not deter us from trying to analyse, with due caution, the analogy between the two disciplines[2].

2. Several economists have noticed the importance of biological analogies; among others are MARSHALL, BOULDING and GEORGESCU-ROEGEN. See the article by H. THOBEN: 'Mechanistic and Organistic Analogies in Economics Reconsidered', *Kyklos*, Vol. 35 (1982), pp. 292–306.

II. SHORT PATHOLOGY

Let us start the line of reasoning with a short *economic pathology*. I should like to keep this survey within narrow limits. I do not undertake to evaluate the economic history of thousands of years, to list and classify all sufferings and agonies that accompanied mankind on its way to accumulating material welfare, to developing technologies and organisation. Let us restrict ourselves to the present. Even considering this age, I should like to deal exclusively with the diseases of the medium and highly developed economies. The developing countries are struggling with partly similar, partly different, maladies; and these will not be dealt with here.

I will list seven *main groups of diseases*. The grouping is arbitrary. I apply several *criteria of classification*, as is done in medicine. There, individual concrete diseases are included in a common main group because they may be traced back to identical or similar causes (*e.g.*, bacterial infections). Or, the criterion of grouping is the organ the disease attacks: the heart, the gastrointestinal system and so forth. Other groupings are based on similarities in the course of the sickness or its symptoms, or its consequences. For example, the various kinds of malignant tumors may be classified in a common group of diseases, although their causes are not uniform and they may attack several different organs.

Another arbitrary element of the classification is what we consider as *main* groups of diseases. Many other grave illnesses of the economy are known. But this much is certain, the diseases listed below are considered to be grave by both experts and the majority of laymen. Precisely because they are well known phenomena, I need not review at length any group of diseases. Almost their mere name is enough to know what kind of trouble of the economic system we have in mind.

1. Inflation. Its mild form is the slow, creeping inflation. Its graver form is the galloping inflation. Its fatal form is the ever-accelerating, rushing hyperinflation. There is no unique, obvious frontier where the 'healthy' rise in the price level (perhaps an unavoidable necessity for flexible price movements) ends, and the inflationary 'disease' begins. The delimitation comprises value judgements, economic policy *evaluation*. And this is true not only in this case, but also with the other six main groups of diseases as well. This much is, however, certain, every main disease has a degree of intensity which would be classified without hesi-

tation as a deviancy, a functional disturbance, a 'disease', by a large part of the experts.

2. Unemployment. In mild form it is present in every system. Because of the frictions in the information and decision processes of the labour market, the existing demand and supply do not meet. But the graver forms of unemployment undoubtedly count as diseases; they cause material harm, and put the unemployed in a humiliating situation, undermine the feeling of security of those still employed, and cause economic losses to the economic system as a whole. Large unemployment is usually accompanied by a partial underutilization of other material resources: superfluous stocks accumulate, the fixed capital is not fully utilized, and so on.

3. Shortage. In this disease, supply regularly lags behind demand. The buyer – a household, an enterprise or a public agency – does not get the desired commodity or service and is forced either to substitute for it something worse or more expensive, or to delay the purchase or give it up altogether. The usual accompanying phenomena are queueing, black markets, corruption and the indifference of the producer and the seller towards the quality of the product and satisfying the needs of the buyer.

4. Excessive growth of foreign debts. To incur a foreign debt is not bad in itself if it is well used. We may speak about a disease if the credits are not adequately used and the country drifts – through a self-generating process – ever deeper into indebtedness. A milder form of the disease is the burden of heavy debt service with which exports cannot keep pace. Its fatal form occurs when the country becomes insolvent.

5. Growth disturbances. This is a broad group of diseases with many types. One of the types is abnormally slow growth, or stagnation, or even a decline of production and consumption. The opposite type is overambitious, forced growth. A particular mixed case, accompanying mainly the second type, is disproportionate, disharmonious growth. The development of some sectors runs ahead, while others degenerate and stagnate, or even get into a catastrophic situation. We may classify the cramps of economic processes among the disturbances of growth into partial crises versus those extending over the whole economy, and periodic accelerations and decelerations.

6. Inequitable distribution. A certain inequality in the distribution of income and wealth, and therefore in the consumption of goods and services, is not only compatible with the healthy functioning of the economy, it is even its condition. It is debated where the necessary, healthy

inequality ends and where the degeneration starts: degeneration into inequality of an extent and type that hurts the sense of justice of a large part of the population and hinders the functioning of the economy. But even if this is debated, almost every one agrees that extravagance and pauperdom live side by side in many kinds of economic systems. There are quite a few who, on account of their individual fate owing to their origin, the colour of their skin, their family situation, health, age or other reasons, live in unjustly disadvantageous situations, while others receive excessive income without merit or performance.

7. *Bureaucratization.* This comes to expression in the fact that an ever increasing number of allocative and distributive decisions pass from the hands of the directly affected, materially and morally directly interested persons, into the scope of the impersonal authority of the apparatus of large offices and organizations. Simultaneously, dependency relationships come about. Those personally affected, afflicted or raised by the allocative and distributive decision, get into a position of depending on the bureaucracy. The disease becomes particularly dangerous if a cancer-like proliferation appears and the cells of bureaucracy start to divide irresistibly, squeezing out the healthy tissue.

It may be stated that *we cannot find a single country among the medium and highly developed ones that would be completely free from each of the above seven main diseases.* The situation of a country may be said to be relatively favourable if it is tormented only by a single main disease and this is complemented at most by two or three other ones in some milder form. The situation is worse in many economies; they are gravely hit by two or three or even more diseases and to a lesser extent by quite a few other ones as well.

This situation causes difficulties in defining the 'health' status of economic systems. For the medical science, health is a basic concept that can only be explained by circumscription, tautologically. The human organism is healthy if its every organ functions well and adjusts to changes well[3]. Description of the healthy organism is made easier by the fact that its characteristics can be empirically observed and measured. Accord-

3. The constitution of the World Health Organization of the United Nations laid down the following palpable (though, as a matter of fact, similarly tautological) definition: health is a state of complete physical, mental and social well-being. [*Glossary of Health Care Terminology*, WHO Regional Office for Europe, Copenhagen, 1975, p. 163.]

ing to the rules of representative sampling, a large number of healthy people can be observed and the distribution of the most important parameters of, for example, their heart action, can be taken into account. Finally, a statistical inference can be drawn from the fact that the heart of a healthy man in a state of rest beats at a rate of 60–80 per minute in an even rhythm. Those whose hearts beat more quickly, or arrhythmically, are, presumably, not healthy. The statistical description of the healthy heart beat becomes the more unambiguous the more we succeed in excluding from the sample those who suffer from either heart disease or any other disease; that is, only the heart action parameters of people qualified as healthy are registered in order to empirically delimit the healthy domain of the parameters. Every concrete statement of anatomy and physiology about the characteristic properties of the healthy human organism relies on the premise that there *exist* healthy people whose *entire* organism, not just one or another organ, is healthy. It was not given to economics to base the concept of 'health' on a similar premise and on the empirical statistical observation of healthy systems. Since history has to this very day not created an economy that is healthy in every respect, for our discipline 'health' is merely a *hypothetical* category. We only have a *partial* empirical background. If, for example, we consider the economy lastingly free from unemployment as healthy, we can only refer to such existing – not hypothetical, but empirically observable – economic systems, which, though having eliminated unemployment, are plagued by other grave diseases such as shortage, bureaucratization, etc. The perfectly healthy economy is thus an *idealization* which puts together the model of a complete system from the, in themselves, healthy subsystems of different existing real systems[4].

The picture of a completely healthy economy can only be drawn in the framework of normative theory. For example, a theory can be worked out in axiomatic form which derives from definite ethical and political postulates, *desiderata*, what properties a system should have to satisfy these postulates. In this essay I do not undertake such a theoretical analysis. It seems sufficient for my reasoning if I approach the problem in a pragmatic manner. Those processes are considered to be 'diseases' of the economic system if (1) they cause direct or indirect physical and

4. It is food for thought that the Hungarian language has no independent noun corresponding to 'health'. The Hungarian noun (*egészség*) is formed from the adjective 'whole' *(egész)* and thus it literally means something like 'being whole' or 'complete'.

mental suffering to many members of the system, and economic losses to the whole of society, and (2) they can be shown *not* to appear in some economic system of the present. Therefore, in accordance with the second condition, in this essay the processes involving losses and suffering which are present in our day *in every system and at every time*, without exception, are not considered to be 'diseases'[5].

The question might now be raised: 'How big is the role of the study of diseases in the two disciplines to be compared?' Let us first consider medicine. If we think only of the literature now used throughout the world and neglect the older works, hundreds of general textbooks on pathology are in circulation; and the number of partial pathological works certainly runs into thousands, if not more. Medical students, at the beginning of their studies, learn at least as much about the anatomy and physiology of the sick organism as about those of the healthy one. Then, in the individual clinical subjects, the proportions are similar when an organ or a system is treated.

As against that, in economic research and education the proportions in the examination of 'health' and 'disease' are quite different. If we examine any one of the comprehensive American textbooks on economics we discover that most of the material is devoted to how the economy would function if it functioned well. The situation is similar with the textbooks from which the political economy of socialism is taught at the East European universities of economics. In these books too, there are, at most, a few pages devoted to the characteristic illnesses of the economy.

True, there are economic researchers in both West and East who specialize in the analysis of one or another illness. There are diseases which are discussed in a huge literature (*e.g.*, inflation or unemployment). Important works were published about a few other evils (*e.g.*, unequal distribution of income), but they are less in the focus of interest. And, finally, there are also maladies which have hardly been studied as yet (*e.g.*, bureaucratization or shortage)[6]. And, what is most characteristic

5. Other definitions of the health and disease of economic systems are also conceivable. For example, in other works of mine I, too, interpreted the 'normal state' of economic systems in a different manner. In this essay, however, for the whole line of reasoning which relies on the analogy to medicine, the above definition seems to be the most appropriate one.

6. It is, rather, sociologists who discuss bureaucratization. See, *e.g.*, the works of MERTON, CROZIER, GOULDNER and, from among the Hungarian ones, those of HEGEDÜS

of the state of our discipline in this respect is that there is no single economic work that *comprehensively* discusses the diseases of economic systems[7]. As a matter of fact, their mere systematization, classification, and a methodological summary of the causes, symptoms and consequences, would be highly instructive.

III. EFFECT AND SIDE-EFFECT

One of the basic problems of medical treatment is to weigh the desired effects and the adverse side-effects of the therapy. Be it medicinal treatment, or surgical intervention, or any other kind of therapy, the desired main effects are accompanied by adverse side-effects. Let us consider the example of the *corticosteroids*. These are hormonal preparations which are applied in the case of many illnesses. They are used for treating asthma, arthritis, dermatitis, and many other diseases. The patient sometimes feels it is a *panacea*; in long-lasting pathologic processes a quick improvement ensues and tormenting pains cease in a short time. He would like to persuade his doctors to use the preparation not only temporarily, but for some longer time. Yet the side-effects are as strong as the main effects. In cases in which the *corticosteroid* preparations are taken for a longer time, they might disturb the functioning of the hormonal system, the sugar metabolism, the salt and water household, the skeletal system, *etc.* The physician has to reflect with great circumspection upon, and consult with the patient about, what kind of side-effect the desired main effect is worth incurring.

Treatment with the *corticosteroids* is a particularly sharp, but not a unique, example. Perhaps in less extreme form, a similar problem emerges with every kind of therapy. The opinion is widespread among physicians

and KULCSÁR. Although the problem frequently emerges in economic works as a side-issue, to my knowledge, no major economic work has been published as yet which has chosen the bureaucratization of economic processes for its main subject.

It was the author of the present lines who wrote the first monograph about the chronic shortage appearing in the socialist economy. [*Economics of Shortage*, Amsterdam: North-Holland, 1980.]

7. Sociology already has a few general works on social pathology. See, *e.g.*, B. WOOTON's book: *Social Science and Social Pathology*, London: Allen and Unwin, 1959. For the interest of sociology in pathology see HANKISS, *op. cit.*

that no true effect can be hoped for from a medicament which has no side-effect.

A physician friend of mine handed me one of the standard books of the huge literature on side-effects: *Meyler's Side Effects of Drugs – an Encyclopaedia of Adverse Reactions and Interactions*[8]. The work has reached its ninth edition and the international editorial board continually rewrites it using the latest scientific achievements. For me, an economist by profession, even the structure of the volume has been highly instructive. It reviews the field by groups of medicaments and classifies the informations with each group of medicaments according to the following subtitles:

(i) *Adverse reaction pattern.* The adverse side-effects are summed up here.

(ii) *Organs and systems.* This section examines in turn all parts, starting with the cardiovascular system and the respiratory system, through the liver and the kidney, and ending with the skin, and presents in detail all side-effects of the drug in question on these organs and systems.

(iii) *Risk situations.* The drug might, perhaps, be given to a patient who, in addition to the disease for which the drug is intended, also suffers from another disease or from another anomaly, or with whom age (infant, child, aged) or pregnancy might cause additional problems. In considering the side-effects, particular attention has to be paid to these various risk situations.

(iv) *Interaction.* What is the effect of the drug in question if it is administered along with other drugs?

In connection with each statement the book gives short information about the expected frequency of the side-effect and the sound foundations of the observation. It also raises such problems of side-effects which have not yet been satisfactorily clarified, but also points to the necessity of further investigations.

I turned the pages of the book with no small embarrassment in the name of my profession. How far we are from having systematically collected the adverse side-effects of therapies!

And now let us pass to the main diseases of economic systems. For the time being, I shall discuss the scope of problems treated in said encyclopaedia under (i) and (ii), that is, the primary problems of the inter-

8. Excerpta Medica, Amsterdam, 1980.

relations between effect and side-effect. We shall later return to the subjects of risk situation and interaction.

Let us take in turn the seven main diseases of the medium and highly developed economic systems of our day, for the treatment of which economists suggest various therapies. (The figures in parentheses indicate the serial number of the diseases emerging as side-effects.)[9]

Main disease No. 1; inflation. Inflation may be slowed down or eliminated with one of several instruments, or perhaps with the combined application of various instruments. If the main instrument of the therapy is restriction of the money supply or of public expenditures, that is, in the final analysis, a restriction of demand, then the typical side-effects are declining production (5) and increasing unemployment (2). The present state of the U.S.A. and several other developed capitalist economies shows well this interrelation. And if, for the purposes of anti-inflationary therapy, the administrative control of prices and wages is applied with great force, then the usual side-effect is the disturbance of the regular course of market processes, the proliferation of bureaucracy (7). This is perhaps also accompanied by shortage phenomena (3). In such cases in a capitalist economy, repressed inflation takes the place of open inflation; and with it the usual symptoms appear: bottlenecks, queueing, forced substitution caused by shortage, the black and the grey market.

Main disease No. 2; unemployment. Let us first look at the capitalist economy. The main side-effect of the Keynesian measures applied to fight unemployment is, as has been stated a hundred times in recent years, the acceleration of inflation (1). As regards the socialist economy, it is capable of permanently eliminating unemployment; in fact, the labour market shifts into a state of chronic labour shortage. This is guaranteed by the operating mechanism of the economy, by the interests of the decision makers, and by the growth strategy of economic policy which create an incessant expansion drive, investment hunger, and an almost unlimited demand for production inputs. All that absorbs the previously unused resources, including massive unemployment. At the same time, however, these processes are in every case accompanied by the side-effects of chronic shortages (3), the bureaucratization of economic processes (7)

9. I illustrate my message at times with examples taken from the capitalist system, at times with those from the socialist system, and at times from both systems. For reasons of space restrictions I cannot touch in every case on the problems of both systems.

and, if not in every case, yet in rather many cases, by an excessive increase, and perhaps even an accelerating increase, of foreign indebtedness (4). We can witness this in several East-European countries.

Main disease No. 3; shortage. For a long time it was Yugoslavia that supplied the most illustrative example of the side-effects of reforms aimed at fighting the shortage economy. They allowed a wider role to the market and the price mechanism. In its wake, unsatisfied demand, queueing and the black market ceased in a wide scope. But, together with this, there emerged inflation (1) which, at times, accelerated rapidly. There is considerable unemployment (2) in the country, which is partly open and partly hidden because the excess supply of labour is drained by the export of guest-workers to the developed European capitalist countries. Foreign indebtedness is excessive (4).

In Hungary, too, similar problems emerge, if in less distinct form. In some sectors of the economy successes were achieved in fighting chronic shortages. Partly as a side-effect, and partly under the impact of other factors, several other difficulties have emerged. Among others, the inflationary tendency gathered momentum (1) and the stock of debts has grown rapidly (4). We shall return to the problems of Hungary in the context of disease No. 7.

Main disease No. 4; excessive growth of foreign indebtedness. This disease is spreading in our day like a plague. Except for some oil rich countries, hardly any country is free from it. It is treated with several therapies, by devaluing the national currency, protectionistic tariff policy, the administrative restriction of imports, export subsidies, *etc.* Several side-effects appear: a slowing down of growth or perhaps an absolute decline of output (5), and as a symptom accompanying the latter, the growth of unemployment in the West (2), or the increase of domestic shortage phenomena in Eastern Europe (3). The therapy frequently leads to the acceleration of inflation (1). Insofar as administrative measures are resorted to either for restricting imports or for the forced securing of exports, this entails the bureaucratization of certain economic processes (7).

Main disease No. 5; growth disturbances. As an example I cite here merely the typical growth disturbance in the capitalist countries, cyclical fluctuation, and within that, particularly the phases of recession. Their therapy is linked to the treatment of unemployment. Accordingly, the side-effects are also similar. The most important among these is the acceleration of inflation (1).

Main disease No. 6; inequitable distribution. In the capitalist world it was the Scandinavian countries that started most energetically to cure this grave illness, first of all by means of heavy and steeply progressive taxation, with the free or almost free provision of several services (education, health service, etc.), and then with extensive insurance against sickness, disability, old age and unemployment. While in these countries great progress was made towards equality and economic security, several adverse side-effects have appeared. Part of the economic processes has become bureaucratic (7), shortages emerged in some subsidized services (3), the expansion of public services put a heavy burden on the state budget whose deficit contributed to accelerating inflation (1). In addition, other negative consequences emerged (*e.g.*, the weakening of incentives for work performance) which have not even been listed among the major diseases.

Main disease No. 7; bureaucratization. Its main therapy is deregulation, the handing over of control by administrative institutions to control through the market mechanism. We can observe this therapy in several developed capitalist countries such as the U.S.A., Britain, *etc.* And, even if the starting point is essentially different, the direction of change is similar in the reforms of some East-European countries, among them, Hungary. Several kinds of side-effects appear. Since some of the redistributive bureaucratic regulations served egalitarian-levelling purposes, removal of these regulations leads to increasing inequalities in incomes and wealth (6). A similar effect is entailed by the liquidation or reduction of state subsidies previously given to enterprises and social groups or strata. This will obviously deteriorate the material living standards and economic security of those affected, and increase the income differences between enterprises earning profits and those incurring losses. A further characteristic side-effect is that the elimination of the bureaucratic regulation of prices and wages allows a freer way for the, up to then, repressed inflation (1).

We have reached the end of our list. The space available for the essay does not allow dwelling on any trade-off. While I could indicate very grave problems with but one or two sentences, this brief survey leads to sufficiently depressing conclusions. It seems reality does not even pose the question how an economy, healthy in every respect, can be attained. It is possible that the real decision dilemma facing countries, peoples, parties, governments, statesmen and, ultimately, citizens, is: 'Which kind of disease do you choose if perfect health is unattainable?'

Is this conclusion not too pessimistic? I wish from the bottom of my heart that science could refute this statement. The proof or the refutation can be made in one of two ways. The first is a *theoretical* investigation of the trade-offs between the diseases of economic systems. I am afraid that the more carefully and circumspectly the model-builder takes into account every effect of some therapy, the nearer he will come to the above reasoning, according to which, for radical cures, we pay with new and grave ills. Unfortunately, theoretical literature discusses the interrelations between two, at most three, main diseases. A comprehensive theoretical analysis devoted to investigating, methodically and in full depth, the interrelations among the seven main diseases listed by me, and even further side-effects, has not yet been done.

The debate is decided much more readily by the study of *historical experience* than by pure theoretical analysis. I venture the following proposition: *In the course of history, whenever an advanced stage of some main economic disease came to prevail in an economic system, and a radical therapy was started, at least one other main disease developed to a conspicuous extent.*

I would call attention to the restrictions on the above proposition. I speak only about those cases in which some main disease already plagues one or another system in a *grave* form and the therapy used for fighting it is *radical.* Mild treatment of a slight illness does not necessarily entail these inevitable shifts from one great trouble to another one.

It *does not* follow from my line of reasoning that one must never undertake radical treatment or that it is never worth while to do so. Medical science proposes in several cases definitely grave surgical intervention, strong drugs, or radio-therapy, although it knows only too well that these involve perhaps serious adverse side-effects. But it can only do so if it weighs the ensemble of the remedial and harmful effects of the therapy with circumspection and finds that the expectable advantage is worth the disadvantages[10]. It has to share the responsibility for decisions with the patient, or, if he is in a state incapable of decision, with his relative. Let

10. Medical science and practice, for a long time, regarded the principle of *nil nocere* (do not do harm) as an ethical postulate. Modern medicine has recognized that the application of this principle is wrong since it would restrict the opportunities for healing. In its present approach it weighs the benefit-risk ratio and the benefit-cost ratio. To this extent it has then come nearer to the rationally calculating approach of decision theory and normative economics.

us sincerely confess: this kind of approach is not infrequently missing from the advocates of the revolutionary transformation or radical reform of economic systems. They usually emphasize exclusively that in the prevailing situation this or that disease is unsupportably tormenting society, that unemployment or inflation, the injustice of distribution, or bureaucracy, are intolerable. The 'patient', society or at least a considerable part of society, deeply feels the sufferings caused by the evil in question and agrees with the proposed radical changes. The mistake is made when the scientist proposing the therapy does not disclose (*i.e.*, he suppresses, or perhaps has himself not thought it through sufficiently) that although the turn eliminates the hitherto pressing evil, it might perhaps cause the appearance of new diseases[11].

It may happen that the majority of society would accept the proposed therapy even if it knew the expected adverse side-effects. (The patient, too, always wishes most urgently to recover from that disease which torments him most at the moment.) But it also might happen that society would rather put up with the well known old trouble than suffer from a new one. The choice of the radical therapy and the accompanying adverse side-effects is, in the final analysis, a decision which implies a value judgement, a political and ethical choice.

IV. RISK SITUATION AND INTERACTION

Let us return to the chapters of the encyclopaedia of side-effects, to the items (iii) and (iv), not yet treated. Let us first consider item (iii), the problem called by the physician a '*risk situation*'. The same medicament that can be taken without fear by an otherwise healthy man, might cause grave troubles for someone who is suffering from, *e.g.*, some disease of the liver or the kidney. The operation which a surgeon safely carries out on a young or middle-aged patient, will not be undertaken with an aged one.

11. This kind of neglect was committed by Marxist social scientists, when, seeing the evils caused by the market, they did not analyse what new and different troubles may be caused by the elimination of the market. Or, when the Keynesians, proposing the well known therapy for the troubles caused by unemployment, did not throughly reflect on the dangers involved in inflation and bureaucratization accompanying government interference.

Many economists are less cautious and give less consideration to the concrete situation of the patient. They bravely propose their cherished recipes, without weighing carefully what the particular situation of the economy in question is and how it is economically, socially and politically endangered. Characteristic examples of this approach are the most rigid, most orthodox exponents of the monetarist school. They propose the same recipe for the U.S.A., Britain, Chile, Israel, and even for China, Yugoslavia and Hungary, irrespective of the huge differences among the economic development levels, social systems and political structures of these countries, and irrespective of the attitude of the government, the employers and employees, the state bureaucracy and the trade unions, to the monetarist policy. The same economic policy that serves well in some country in a definite historical situation, may fall in another country or lead to the sharpening of the internal social conflicts of the system. Or, it may be that it simply cannot be implemented because of the resistance of society[12]. Just as the cooperation of the patient is needed in curing his own disease, in the same manner, or even more so, the support of the population is needed in curing the diseases of the economic system.

I would like to illustrate problem (iv) listed in the encyclopaedia of side-effects, the economic analogy of *interaction* among the drugs, by means of experiences in Hungary in the last one and a half decades.

For a long time economic policy was used in an attempt to combat two troubles simultaneously: the weakness of economic stimulation and the injustices of social distribution. The medicaments of the former were the introduction of the profit motive in state enterprises and permitting private ventures in several fields. The medicaments of the second evil were wage policy and taxation measures promoting the levelling of incomes. But these are drugs which mutually deteriorate each other's effect.

12. Although in the Introduction I promised to refrain from irony, I cannot resist here recalling the physician's examination from MOLIÈRE's *Le malade imaginaire*. The candidate is examined in turn by the learned doctors, how he would cure oedema, colic, asthma, the disease of the spleen or of the lungs, and so forth. The candidate answers the same, word for word, to every question in Latin: '*Clisterium donare – Postea seignare – Ensuitta purgare*'. (In rough translation: 'First irrigation, then venesection, ultimately purgation'.) This monotonous answer is sufficient for being admitted to the learned order of physicians.

The quotation is from MOLIÈRE: *Œuvres Completes*, Vol. 8, Paris: Société des Belles Lettres, 1952, p. 238.

The many kinds of egalitarian measures, the guaranteeing of the survival of enterprises, and the maintenance of every job, blunt the stimulating power of profit. Some stronger interference with the distribution of income may deter private initiatives from pursuing a long-term business policy and making major investments. At the same time, the introduction of market relations, the profit motive, and private initiative, was enough to increase the inequalities in the distribution of income and wealth and thus hurt the sense of justice of many people.

V. THE ORIGIN AND ENDURANCE OF THE DISEASES

Medical science classifies the diseases from several points of view. It is worth while to reflect on some of these points of view for the sake of the economic analogy.

One of the important distinctions is whether we have to deal with a *congenital* disease or with some disorder *contracted* in the course of life. Part of the former is not considered a disease in medicine; rather, it is qualified as an anomaly. These are the cases of deviation from the normal, from the healthy, with which the human organism in question lives throughout his life.

Insofar as a congenital trouble is faced, the question arises: 'Is it an *inherited* disease or has the anomaly resulted from effects suffered during the embryonic period or birth, or from other causes?'

In many cases, because of inheritance or for some other reason, the individual was not born ill, but has a congenital *predisposition* to some definite illnesses. He whose parents were both diabetic has a greater likelihood of contracting diabetes. The illness may then break out with growing age, or under the impact of other circumstances, *e.g.*, faulty nutritional habits.

A further important distinction, 'Is it an *acute* disease of which the patient may be unambiguously cured with the aid of his own internal defensive mechanisms and eventual medical interference, or is it a *chronic* malady from which the patient cannot completely recover in the remaining part of his life?' In the latter case, the gravity of the illness might still be influenced through a proper way of life and medical treatment, and therefore we might ask, 'Will the disease deteriorate rapidly or can the deterioration be slowed down?' or even 'Can the state of the patient be

perhaps substantially improved?' In any case, the chronic illness requires constant attention, adjustment and careful treatment.

In some cases the acute form of some contracted disease may be fought, but *a predisposition to the renewal of the illness persists.* It is well known, *e.g.*, that the skin of someone who once contracts a fungal infection will be inclined to new infection even after it is healed. True, in such cases the predisposition is insufficient for the outbreak of the disease. The primary cause of the new infection, in our case re-exposure to the fungi, is absolutely necessary. But fungi which cause infection of the skin are found in great abundance in many places. It is thus a question of primary importance to what extent one or another individual is predisposed to infection.

And now let us return to economics. The main weakness of economic pathology consists in the fact that it does not delimit the various maladies adequately according to the above classification. Is inflation some acute contracted disease caused by external infection? This kind of causal explanation may be found behind the theory of 'imported inflation'. Or is it the truth that a modern economy, particularly in its periods of rapid growth, has a congenital inclination to chronic inflation? Is massive unemployment caused exclusively by the anti-inflationary policy of conservative governments or is it a congenital anomaly of the capitalist economic system? Or in other words, is it perhaps a malady which can be eliminated for some longer time only by means of artificial stimulation, which, however, 'over-stimulates' the blood circulation and nervous system and leads to inflation, grave indebtedness and other negative consequences? Are the shortage phenomena merely *ad hoc* disturbances in the socialist economy, or is this, too, a congenital anomaly of highly centralized and bureaucratic economic management?

The physician has to face the phenomena of congenital anomaly, inherited malady, chronic illness and predisposition to some definite disease. Just because he wishes to cure, or at least to alleviate, the trouble and the pain, he must not brush aside the idea of the chronic nature of some disease; and he does not have the right to comfort himself or the patient by claiming that it is merely a passing and easily healed problem. Let us confess that the economist, precisely because of the political and ideological nature of his profession, frequently gives a biased and distorted picture of the problem. Though he believes of the patient of *another* doctor that his illness, or at least his predisposition to the illness, is con-

genital, or that the contracted anomaly is chronic, he comforts his *own* patient and himself by saying that the patient will soon recover if he accepts his recipe and the treatment.

VI. SOME PROFESSIONAL AND ETHICAL CONCLUSIONS

From what has been said, a few more general conclusions follow. Some are of a professional nature in the closer sense, others are related to the ethical problems of scientific research.

We usually distinguish between positive and normative economic analysis. With some simplification one might say that the first examines what *exists*, the latter what *should be*. I must confess that as long as I have been engaged in economic research, I have felt again and again some suspicion, and frequently even aversion, to most of the normative theories. Now, having reflected about the analogy between medicine and economics, I better understand my own suspicion and aversion. A large part of the normative theories in economics – and the bulk of the theories based on the most diverse ideologies and political faiths may be classified here – tries to outline the *ideal* economic system or its individual parts. In the medical science too, there exist both positive and normative analyses. But these are separated from, and linked to, each other in a different manner. Anatomy and physiology describe the structure and functioning of the healthy human organism, but those of the actually existing man, and not of some ideally perfect one. The human organism is a marvelous machine, but it is far from perfect; it is full of clumsy and fragile elements. It is a good thing that we have reserves of a few important organs. We have two eyes, two ears, two lungs. It is a pity that we do not have two hearts. But a reasonable physician does not ask whether or not this is an ideal state of affairs, whether an optimal human organism should not possess even two hearts. The human organism is such as it is, and we have to set out from this fact and not from some phantasm of perfection[13]. It is also a part of positive reality that people may be tor-

13. At this point some readers of the manuscript of my essay made sharp objections. They emphasized that the human organism is a creation of nature and thus its biological properties are fundamentally given and can be little changed. As against that, the structure of society is brought about by men and may be changed by men. I acknowledge that; and I would not like to drive the analogy to the extreme at this

mented by a thousand kinds of disease. Therefore, *the intelligent posing of the normative problem does not set out from the ideal state, but from the reality of the disease. How can some concrete disease be cured; or, if this is impossible, how can its course and its consequences be alleviated?* Although this formulation of problems is not unknown in our profession, it is mostly not in the focus of research and education.

The normative theories of economics are deeply interwoven with a *naive optimism.* According to one normative theory, the individual makes decisions that are optimal for his own self-interest. The advocates of this normative theory, trusting the perfection of the market, add that if we allow the market, and only the market, to harmonize the atomized individual decision makers, the functioning of the national economy as a whole will be equally optimal. The protagonists of the normative theory based on a belief in the almightiness of planning, however, reach the no less optimistic conclusion that the foresight of planners is capable of optimally coordinating the activities of every member of society.

Sometimes an exceptional scholar appears, one who has the courage to state that there exist *insoluble* dilemmas. Although today belittled by many, in my opinion, PHILLIPS has earned great merit. True, according to the present state of macroeconomics, the PHILLIPS curve requires much complementing for precision; and it only partially shows the interaction between unemployment and inflation. But even so, PHILLIPS belongs among the first ones who sharply exposed the deep dilemma referred to in the present study as the general scope of problems of effect and side-effect. Another classic example is ARROW's work on social choice. ARROW pointed out that it is impossible to satisfy simultaneously every desirable and rational postulate of social choice[14]. Some of the postulates will be unavoidably infringed upon. A third example is LINDBECK's argument that it is naivity to long for an economic system in which there is neither the market, with its particular negative social consequences, nor bureau-

place, either. Indeed, great thinkers, politicians, mass movements, parties, may have a deep impact on the structure of society. But let me add, precisely in this essay, that their effect may assert itself *within certain limits only.* There are changes which, using a medical term, are capable of 'becoming organic', which the society amalgamates deeply and lastingly. And there are artificial, unnatural changes, which society sooner or later eliminates, just as certain transplanted organs are rejected by the immune system of the human organism.

14. K.J. ARROW: *Social Choice and Individual Values*, New York: Wiley, 1951.

cracy, with its other kind of harmful social side-effects[15]. But even if there are such works, it is not these that give the basic tone to our profession; instead, the tone is the blind optimism of VOLTAIRE's Doctor Pangloss.

Medicine is, in a sense, 'pessimistic' because it boldly faces the fact that the overwhelming majority of people will sometimes fall ill in the course of their lives, perhaps even several times, and usually die, in the end, from some disease. But this pessimism does not hold it back from action; in fact, this is what prompts it to scientific research and to the application of the achievements of science. This is staggeringly expressed by the physician hero of CAMUS' *The Plague*, Rieux, in his conversation with this friend, Tarrou, who helps him in fighting the plague. 'Oui, approuva Tarrou, je peux comprendre. Mais vos victoires seront toujours provisoires, voilà tout.' – Rieux parut s'assombrir. – 'Toujours, je le sais. Ce n'est pas une raison pour cesser de lutter.'[16]

It is foreign to medical science and to its responsible and ethical application to act at any price, irrespective of the consequences. But no less foreign is passivity, reliance on faith that everything has to be left to nature which will cure every malady by itself. The economic protagonists of the latter view in the West are those who proclaim that the market will solve every problem in due course if only it is not disturbed by government interventions. Even if there are troubles, let the natural forces of the market overcome them. There also exists a symmetrical statement in the East: If there are problems, let planning solve them one by one. There is no evil that would require a reform, a deeper interference with the structure of society. We must not accept such conservative inertia. We must fight with the forces we have for healing the diseases of society.

The faith and the illusion of the strictly rational man, the perfect market, the perfect planning, or the optimal social system are not necessary for economics to do honest work. The world economy is in a dismal state. There is no reason for us to believe that in the near future everything will turn for the better. I think that the economist researcher of the late

15. A. LINDBECK: *The Political Economy of the New Left*, New York: Harper and Row, 1971.

16. In rough English translation: 'Yes', agreed Tarrou, 'I can understand you. But your victories will always be temporary and that is that.' Rieux's eyes darkened, 'Always, I am clear about that. But this is no reason to abandon the fight.' (The source of the French quotation is this: A. CAMUS: *La Peste*, Paris: Gallimard, 1947, p. 147.)

twentieth century has every reason for anxiety, desperation and anger. But this should not reduce him to inactivity and capitulation. The state of the world economy, and of our own discipline, should at least prompt us to exhibit due modesty, to refrain from the cocksureness of the fanatical quacks, and to sincerely confess to the limits of our knowledge. We must take a stand in the name of our science more cautiously, more considerately, more circumspectly, when giving advice in matters relating to the healing of the sick economy.

SUMMARY

The essay is built upon an analogy examining the similarities between medical science and economics. A short economic pathology is outlined. Seven main diseases are discussed: inflation, unemployment, shortage, excessive increase of foreign debts, growth disturbances, harmful inequality, and bureaucratization. We cannot find a single country that would be completely free from each of the above seven diseases. Medical science studies the relationship between desired and adverse effects of a therapy. Similarly, economic therapies have also adverse side-effects. Whenever radical therapy of a main disease was started, at least one other main disease developed. The paper analyses the differences between congenital and contracted, acute and chronic economic diseases. Finally some philosophical conclusions are drawn. Normative theories in economics often reflect naive optimism. Only few economists admit that there exist insoluble dilemmas. We must admit the limits of our knowledge, and exhibit more caution and modesty when advising policy-makers.

ZUSAMMENFASSUNG

Der Aufsatz beschäftigt sich mit Analogien zwischen der Medizin und der Wirtschaftswissenschaft. Der Autor skizziert eine ökonomische Pathologie und analysiert sieben Hauptkrankheiten: Inflation, Arbeitslosigkeit, Knappheit, übermässiger Anstieg der Auslandsverschuldung, Wachstumsstörungen, Ungleichheit und Bürokratisierung. Kein Land ist frei von allen diesen Krankheiten. Die Medizin untersucht die Beziehungen zwischen erwünschten und unerwünschten Wirkungen einer Therapie. Auch bei ökonomischen Therapien ergeben sich negative Nebenwirkungen. Immer wenn eine radikale Politik zur Heilung einer der sieben Krankheiten eingesetzt worden ist, hat sich zumindest eine andere Krankheit entwickelt. Der Artikel stellt ausserdem die Unterschiede zwischen akuten und chronischen sowie zwischen angeborenen Krankheiten und solchen, die das Wirtschaftssystem sich zugezogen hat, dar. Schliesslich werden einige philosophische Schlussfolgerungen gezogen. Normative Theorien in der Ökonomie reflektieren oft einen naiven Optimismus. Nur wenige Ökonomen anerkennen, dass es unauflösbare Dilemmas gibt. Die Grenzen unseres Wissens müssen erkannt werden und in grösserer Vorsicht und Bescheidenheit bei der Beratung von Politikverantwortlichen resultieren.

RÉSUMÉ

Cet article essaie d'établir des parallèles entre la science médicale et l'économie. L'auteur définit brièvement une pathologie économique et étudie sept maladies principales: l'inflation, le chômage, la pénurie, l'augmentation excessive de la dette extérieure, les troubles de la croissance, les dangers de l'inégalité et la bureaucratisation. Il est impossible de trouver un seul pays où n'apparaisse aucune de ces sept maladies. La science médicale étudie la relation entre les effets positifs et négatifs d'une thérapeutique. De la même façon, les thérapeutiques économiques ont leurs effets secondaires négatifs. Ainsi chaque fois qu'une thérapeutique radicale a été appliquée à un trouble important, on a vu se développer au moins un autre trouble aussi important. L'article analyse également la différence entre les maladies congénitales et contractées, aiguës et chroniques. L'auteur termine par quelques conclusions philosophiques. Les théories normatives en économie reflètent souvent un optimisme naïf. Peu d'économistes admettent l'existence de dilemmes insolubles. Ils doivent admettre les limites de leur connaissance et montrer plus de prudence et de modestie dans leurs conseils à ceux qui font les choix politiques.