

# A NEW PARADIGM IN SOCIAL SCIENCES : THE ECONOMICS OF STABLE EQUILIBRIUM \*

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## INTRODUCTION : THE KEYNESIAN REVOLUTION COMING TO AN END

The Keynesian revolution in economic thinking of recent decades is coming to an end, and in a way it has to. The basic reason is that the Keynesian paradigm simply does not provide the adequate tools to resolve effectively and efficiently the problems of social and economic instability under modern capitalism that Keynes so masterfully observed and brought to the attention of the Western world in the 1930's.

Thomas S. Kuhn in searching for the development of modern science, comes to the conclusion that whenever a given paradigm does not supply the tools to resolve existing problems in theory or practice, then that paradigm has to go, no matter how many barriers are in the way, as soon as a new and better substitute has been found.<sup>1</sup> Kuhn defines a paradigm in terms of the conceptual, observational and applicational apparatus accepted and used by the scientific community at a given time.

The Keynesian doctrine has promised now for four decades that with the application of the theorem of the multiplier, government deficit spending, a managed paper-money system, and advice from professional economists, it is possible to tune the economy in such a way as to reach and maintain full employment, price stability and a more equitable distribution of national income. However, the British and the American experience between 1934-1976 disprove a successful application of this paradigm in a modern democratic country. Furthermore, in 1976 we seem to be even more confused about *what is wrong* and *what we can do* to escape further tribulations than we were in 1934!

After World War II when the Keynesian paradigm acquired a sort of absolute monopoly in the market of economic ideas, the Phillips curve taught us for

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\* This is a summary of the conclusions to the book «American Capitalism at a Crossroads!»

a while that complete stability with full employment was not possible. Our choice, according to the Phillips curve, appears to be a trade-off between (1) less unemployment and more inflation, of (2) less inflation and more unemployment. This, however, is a contradiction and not a scientific solution. In recent years the economic situation in capitalist countries, under the aegis of Keynesian policies, became even worse when both inflation and unemployment started to increase at the same time. This last stage of confusion, in addition to the Phillips curve, could be truly called the «Paradox of Despair».

What went wrong with Keynesian Economics? Sir John R. Hicks, as far back as 1937, explicitly pointed out: «The general theory of employment represents the Economics of Depression or the sort of slump economics,»<sup>2</sup> which is the same as «Economics of Disequilibrium». If we want to apply successfully this type of economics, then we must have two indispensable things: *the mathematical formula of how to calculate, and the institutional means and practices of how to implement the equilibrium supply of paper money and monetized bank credit at any given time.* Both of these must be consistent with full employment and price stability, not to mention the other conditions for stability of the economic, financial and social system as a whole. Neither Keynes, nor his disciples and followers, were seriously concerned with this fundamental problem.

The now traditional Keynesian tools of monetary and fiscal policies including the management of the national debt are worthless or, at best, an exercise in futility, as long as the abovementioned formula and the adequate institutional means are not and probably cannot be provided, at least in a free democratic society. This is the basic reason why the Keynesian paradigm does not and cannot work to resolve the very problems of social and economic instability under modern capitalism that Keynes so masterfully observed.

There is further a real but not yet fully explored crisis in Keynesian Economics as a more recent book by Sir John Hicks suggests,<sup>3</sup> but with no hint that the Keynesian paradigm has to be replaced. On the contrary, Hicks attempts to articulate the Keynesian theory with some new interpretations and restrictions to look as if it still could be used with success. With all respect to Sir John Hicks, his proof is rather weak because it does not go to the fundamental problem of an inconsistency between the desired goals of full employment and price stability and the policy means recommended by Keynes.

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My new book provides the basic ingredients of a new paradigm called the «Economics of Stable Equilibrium,» where the Keynesian dilemma of an inconsistency between goals and means is avoided by taking a different route. It is the route of self-regulating mechanisms coordinated by the natural parameter of

Numeraire and competition in a new set of economic and financial conditions consistent with the parameter.

This new paradigm has many parts refined from the classical heritage, including the Walrasian theorem of general equilibrium extended to comprise not only the private sector of the economy (as in the original formulation of Walras) but also the public sector and the balance of international payments. The new paradigm, however, not only has a strong link with the classical method of analysis but it also has many new features which show that there is a long distance between the position in the argument of a free enterprise system left by the classics and the new battle ground in theory and practice.

There is one other important point to be mentioned. In terms of methodology, this author differs from Kuhn's interpretation of scientific revolutions. Nobody can argue that Newton or Einstein in the physical sciences and Adam Smith, Leon Walras or John Maynard Keynes in the conomic science did not produce a new paradigm and with it a new scientific revolution. Kuhn argues further that a new paradigm by necessity negates the old paradigm in the sense that if you accept the one you must refute the other. This represents a sad destiny for the scientist who struggled to forge a new theorem, that for awhile kindled a scientific revolution to find out in the final analysis that it was useless and that a new paradigm has moved into the prime position.

My book discloses a new interpretation in the development of sciences (both natural and social), namely, that a new paradigm does not necessarily need to negate completely the old. An orientation table in the form of a methodological map containing all possible systems in economics and other social sciences (which could be easily extended into the territory of all natural sciences) is presented in Part Two of the book (p. 167-176 and p. 206-218). This orientation table, among other things, shows that there is an objective instrument to identify the location (methodological habitat) where the validity of a theorem (so far as scientifically true) cannot be disputed. The only problem is to point out the methodological habitat of the new paradigm, where certain problems can be resolved better than before and to let the old paradigm rest in its own habitat, without being negated or declared useless. In this way, the world of scientific ideas becomes richer; the development of science appears, not in broken, but in continuous lines (even though on different levels) and the destiny of a scientist seems to be brighter.

This new interpretation can help clarify the position taken by this author, namely, that even though «American Capitalism At A Crossroads!» represents a direct challenge to the prevailing Keynesian economics of Disequilibrium, the book is definitely not anti-Keynes (in Kuhn's sense) and does not negate the use of the Keynesian paradigm in searching the nature of but not solutions to problems of disequilibrium.

The new message of my book is that in order to reach and maintain conditions



of true equilibrium with full employment and price stability, including a balanced budget, maximum of social equity in the distribution of national income and a balance of payments in equilibrium, we must apply the *Economics of Stable Equilibrium* and not the *Economics of Disequilibrium* as we do today. The shifting from the now old Keynesian paradigm to the new paradigm of stable equilibrium represents the beginning of another revolution in economic thinking, but which does not require the abandonment of the old paradigm as useless. It is only needed to acknowledge that the Keynesian paradigm is no longer appropriate to resolve problems of today which definitely are different from the problems that Keynes was faced with in the 1930's. This does not mean that the Keynesian theory is not true (in its own methodological habitat) but rather that it is not applicable in the new, altered conditions of the 1970's.

What are the main parts of the new paradigm of the Economics of Stable Equilibrium?

## I. THE THEOREM OF THE NATURAL PARAMETER OF NUMERAIRE

*Theorem 1* : Any system composed of parts (in regard to micro and macro-analysis) and with reference to both the physical universe and human societies, in order to reach and preserve a high degree of stability from within or stable equilibrium, must have a very strong (at the limit 100 %) natural parameter. <sup>4</sup>

The natural parameter can be envisioned or represented in different ways, e.g., as the center of weight or an axis of something which exists over a period of time and, in general, is a constant magnitude, which in conjunction with a major force can, and actually does, hold a complex system together in a given set of circumstance.

As far as the physical universe is concerned, the natural parameter is given and the task of a scientist is to discover it and use it properly for the explanation of natural phenomena. In regard to human societies, the scientist is faced with an even greater challenge because the natural parameter is not given in the same way as in the physical universe. The social scientist has to mold it first and give the logical and/or empirical proof that whenever applied rigorously under a consistent institutional framework, it can produce a high degree of stability from within, or stable equilibrium.

With regard to a national economy in a free society, the French economist Leon Walras (1834-1910) was the first social scientist who, working on his theorem of general equilibrium, discovered that stable equilibrium was not possible unless there was in the system a constant magnitude which he called «Numeraire» or 100 % covered commodity money. Walras did not call Numeraire a natural parameter, but from the text it is perfectly clear that its function is exactly that of a natural parameter as defined above. Given a system of open markets where pure compe-

tion alone acts (monopoly forces being reduced to zero) and where all prices and income are expressed only in terms of Numeraire, then, concludes Walras, we have the possibility of stable, general equilibrium.

A more careful analysis of the empirical foundation of the Walrasian theorem of general equilibrium unfolds a serious weakness, namely, that it is based on an institutional framework too narrow to justify its prefix «general». Indeed, in its original form, the theorem comprises only the private sector of the economy and excludes government (public sector), and the balance of international payments. In my book, «American Capitalism At A Crossroads!», the latter part has been included so that for the first time we are dealing with a complete institutional framework as a basis for a truly general equilibrium theory.

By doing this more comprehensive work there was no need, however, to change anything in Walras except to point out that his theorem has been extended to include the whole entity of a national economy plus international relations. Theoretically this was possible by attaching a *third requirement* to the *Walrasian theorem*, that *all other institutions and variables in the system (e.g., banking, securities markets, public finances and the balance of payments) must be in their nature and functioning consistent with the natural parameter of Numeraire.*<sup>5</sup>

Keep in mind that all classical economists starting with Adam Smith, Francois Quesnay and Ricardo, J.B. Say and others up to Alfred Marshall, Knut Wicksell and Gustave Cassel, without exception have conducted their reasoning with the *silent* assumption that the natural parameter of Numeraire (in form of gold or silver) was there. They did not investigate more carefully the given financial conditions of their time to discover that free monetization of bank credit in form of banknotes was diluting the natural parameter to an incredibly low proportion. This explains the gap between classical theory and the existing realities of that time. Walras successfully resolved this gap in *theory* by introducing the requirement of 100 % Numeraire, but he left unresolved the *practical* issue of how to achieve and maintain stable equilibrium in a free democratic society.

The main purposes of «American Capitalism At A Crossroads!» is to complete the theorem of general equilibrium by Walras and to resolve the practical issue of the stabilization of the American economic and financial system.

## II. THE LAW OF A DOUBLE CIRCULAR FLOW OF INVESTMENT, INCOME AND EMPLOYMENT

*Theorem 2*: In a system of stable equilibrium with 100 % Numeraire and the other suitable conditions, the total volume of investment, income and employment in a national economy over a given period of time may increase (if necessary) or remain at the same level (if so desired by the people) but will never shrink in large quantities to produce the well-known crises either under modern capitalism or later in the welfare state.<sup>6</sup>

In the system of today with paper money and monetized bank credit, or anti-Numeraire, there is only one circular flow of investment and employment in real terms derived from the production of goods and services. The system has no natural parameter, and therefore it is exposed to all kinds of cumulative fluctuations. Whenever there are difficulties in the financial sector, then the circular flow of investment, income and employment in real terms is disturbed and crises of over or under-expansion are inevitable.

In a system of stable general equilibrium, the concept of Numeraire consists not only of official money 100 % backed (gold or silver) but also the additional issue of *commercial-commodity currency*, or credit money 100 % covered by a special commodity other than gold or silver, selected in each major district of the country. Commercial-commodity currency would serve not only as an opportunity for investment, income and employment, but also fulfills the function of providing a cushion for keeping the 100 % gold or silver standard more flexible and more amenable to the changing conditions of a modern, dynamic economy.

Under conditions of stable equilibrium with 100 % Numeraire and additional commercial-commodity money, a national economy would possess therefore a second flow of investment, income and employment to run parallel with the first one. If for some reason the opportunities for investment begin to slacken in the first flow of the production of goods and services (a case of general affluence), then the extra capital accumulated in the previous period will be invested in the production of Numeraire or of those commodities which serve as backing of the commercial-commodity currency. This means that the second circular flow functions like a safety valve in a complicated design where disruptions (instability) may arise unexpectedly. In such a device the possible disruptions can be corrected immediately by the normal functioning of the system. Whenever there is too much or too little investment income and employment in one sector-flow, the other sector automatically provides relief from such strains.

This is the *true* natural foundation of the *theorem of full employment and price stability* that Lord Keynes was looking for and could not find since his system lacked the natural parameter of Numeraire and its corollary, the double circular flow of investment, income and employment.

### III. THE POSSIBILITY THEOREM AND THE METHODOLOGICAL UNIFICATION OF ALL SCIENCES

*Theorem 3* : The Possibility Theorem says that it is possible to achieve and maintain a free, just and stable economy with a social welfare function at the optimum and minimum government intervention, once an existing capitalist or socialist system has been converted into a system of stable equilibrium with 100 % Numeraire and has fulfilled the other conditions of equilibrium. <sup>7</sup> The term «ca-



pitalist» here refers only to the private ownership of the means of production as distinguished from the «socialist» or collective ownership.

In its larger sense, the Possibility Theorem can be applied in both natural and social sciences, but here the main emphasis is on its application in economics and finance. There are two basic assumptions included in this theorem.

**Postulate 1 :**

The nature of the real economic, financial, social and political world in a similar fashion to the physical universe in which we live, is dual in the sense that it is composed of *stable* and *unstable* elements, particles and forces. <sup>8</sup>

**Postulate 2 :**

Any system composed of parts, whether in the physical universe or in human societies, requires a very strong natural parameter (as previously defined) which in conjunction with a major force can hold the system together and persist in tending toward a position of stable equilibrium. This is true for both micro- and macro-analysis.

Given postulates 1 and 2, we can easily construct a methodological map of all possible systems, starting with stable equilibrium, moving through a vast territory, first of minor disequilibria, crossing the singular system of static unstable equilibrium and passing again through a vast area of major disequilibria until finally we reach the system of total disequilibrium. <sup>9</sup>

This methodological map can be used for orientation in two directions. *First* to identify the nature of any economic, financial, social and political system from the present or past, in a given country, in terms of stability or instability (hidden or open). *Secondly*, the orientation table can be used to locate the validity of any economic, financial, social or political idea, concept or theorem that has ever been formulated or could be formulated.

As mentioned above, this methodological map can be extended in terms of stability (equilibrium) and instability (disequilibrium) to include all natural sciences and thus to open the road for a methodological unification of all sciences. <sup>10</sup>

#### IV. THE ECONOMICS OF STABLE EQUILIBRIUM AND FURTHER CONSEQUENCES

##### 1. The Marginal Utilities are Measurable.

The condition of stable equilibrium with 100 % Numeraire gives the opportunity to have marginal utilities measurable in objective terms both in static and dynamic analysis. *Numeraire* is the *objective and common standard* to measure

values (individual and social) so that no conflict may arise between individual and social ordering of preferences.

Whenever somebody is faced with a limited amount of income (the budgetary restraint) and decides to buy commodity  $C_1$  instead of commodity  $C_2$ , it must follow that the marginal utility to the buyer of the first commodity was greater than that of the second. The very decision to buy  $C_1$  implies that cardinal utilities are measurable, no matter how crude the rational tools of an individual may be.

If we do not explicitly assume 100 % Numeraire in the economy, the problem of measurement of marginal utilities, and therefore of values, becomes insoluble and we are left with no choice but to rely on the problematic results applying the theory of games.

## **2. A Dual Alternative in the Decision Making Process.**

Individual citizens in a free society in their decision making process face dual alternatives in life in which they must pass either a positive or negative value judgment.

A customer in a store is faced daily with the problem of choosing between (1) to buy or not to buy, or (2) to make a choice between product  $C_1$  and product  $C_2$ . If he decides not to buy any of the two products, it means he has in mind another product,  $C_n$  (or no product), the marginal utility of which is greater than the products in question.

A citizen going to the polls to cast his vote will be facing a similar problem : (1) to vote or not to vote, or (2) to make a choice between candidate A and B. There may be many candidates for election, exactly as there are many products on a market, but in the final analysis the voter is faced with a dual alternative, i.e., the choice between two most preferable candidates.

This is the basis of the market system (even though biased to a large extent whenever the natural parameter of Numeraire is diluted or missing altogether) and of political democracy (also often distorted through the lack of education and misinformation of the electorate) under modern democratic capitalism. But no matter how diluted, the individual in a free society is faced with dual alternatives in both economic and political matters.

## **3. The Private Sector is Completely Separated from the Public Sector.**

Under conditions of stable equilibrium with 100 % Numeraire, government is concerned only with social problems and it is separated from the private sector. Since the economy as a whole is under conditions of full employment, price stability and the maximum of social equity in the distribution of national income, certainly a restructured government would be faced with less problems than under welfare state capitalism. In addition the government would be receiving its income at the same time with the other factors of production.



The private and the public sector taken together under conditions of stable equilibrium cannot spend more than the available real income in the economy. In fact, both sectors will work under the same basic rule of financial stability, namely, first income and then spending. The government as well as the people can borrow from each other but not more than the available real income in the economy and in this way the phenomenon of inflation-deflation is made impossible.

Only under this system can the public budget as well as the private budget of citizens be balanced, more often with a surplus, representing the normal accumulation of capital based on voluntary savings. There will be no monetization of bank credit, but credit as such will be used to the maximum allowed by the total volume of real income in the economy. Finally, taxes will be drastically reduced and the citizens in general would not object to paying taxes because in this unique set of equilibrium conditions, the marginal utility or the value of \$1 invested in the production of public services will be equal or very close to the marginal utility or the value of the same dollar invested in the production of private goods.<sup>11</sup>

#### **4. A Balance of International Payments Continuously Tending Toward Equilibrium.**

Under conditions of the same system of stable equilibrium with 100 % Numeraire, the balance of international payments will be continuously moving toward equilibrium in the same tempo as the domestic economy.

This is not utopia but rather the results of rigorous analysis which cannot be refuted either in theory or in practice. As far as the theory of the balance of payments is concerned there is in this system not one but a complex interrelated set of five self-regulating mechanisms that are at work at the same time and in the same direction with the main purpose of attaining and maintaining stable equilibrium. These self-regulating mechanisms are : (1) the foreign exchange rate, (2) the import- and export gold points, (3) the rate of interest, (4) the general price level, and (5) the income mechanism. These mechanisms are known and well-treated in the classical and neo-classical literature. What is not known or not stressed enough is the fact that all these marvelous instruments do not work accurately, or at all, whenever the natural parameter of Numeraire is diluted or pushed aside altogether.<sup>12</sup>

From the practical point of view, we have enough experience from the past to confirm the theoretical predictions. On the positive side, during the second half of the 19th century, as long as the British pound remained freely convertible at home and abroad (i.e., Numeraire), its internal value was very close to its external value and the British balance of payments and the foreign exchange rates enjoyed a position of equilibrium. There were some internal difficulties over the same period of time, but these were not the price or the sacrifice to be paid in order to have stability of the foreign exchange. Rather they represented inevitable negative

effects because the internal value of the pound was exposed to more than normal fluctuations. Indeed, the parameter of Numeraire inside of Great Britain was diluted very much by the practice of monetization of bank credit in form of demand deposits after the Robert Peel Act of 1844 forbid private banks to issue banknotes.

The same thing is true for the American dollar. As long as it was freely convertible at home and abroad, the U.S. balance of payments was in equilibrium. Once the convertibility of both currencies was suspended within their respective domestic economies during the 1930's, a gradual gap developed between their internal and external value with the final result that the balance of payments of both countries went into a longstanding disequilibrium (the British facing a perennial deficit and the American facing a surplus for awhile and a deficit thereafter).

Even in a system of stable equilibrium with Numeraire there will be fluctuations in the balance of payments, but these fluctuations will not be cumulative. Rather they will be simple and finite and tend to restore and maintain equilibrium.

## V. THE POSSIBILITY THEOREM VERSUS THE IMPOSSIBILITY THEOREM (ARROW)

Finally, a word may be necessary for clarification in a great battle of models which may emerge as a result of the publication of my book. The Possibility Theorem as developed in «American Capitalism At a Crossroads» appears as an overt challenge to the well-known Impossibility-Theorem which brought a Nobel prize in Economics to Prof. Kenneth J. Arrow.

This is not the place to untangle this famous argument. In another manuscript not yet published,<sup>13</sup> I dealt with this issue more thoroughly. For the moment and as a point of clarification, I will mention only the main features of the argument.

Prof. Kenneth J. Arrow argues that a free market system with an optimum social welfare function or a free, just and stable economy, as well as a truly political democracy based on the voice of majority in the tradition of Western society, are not possible by definition because in his view, a logical scrutiny of the assumptions required by such systems uncovers inevitable contradictions.<sup>14</sup>

Obviously, there are two opposing views here, one *affirming* and the other *negating* the possibility of having, at the same time, a truly democratic form of government and a truly free enterprise system. It is not the first time in science that we are exposed to such contradictions. However, in this particular case there is some truth in both theorems, and the real task is to show first that the basic differences are derived from the model of analysis and method of reasoning used by author.

The Possibility Theorem used in «American Capitalism» is based on the following assumptions (models) and method of reasoning;

- (1) Assumption 1 : The system has a natural parameter of Numeraire which is 100 % strong, associated with pure competition (monopoly forces reduced to zero at the limit); all prices and incomes without exception are expressed in Numeraire.
- (2) Assumption 2 : All the other variables and institutions in the system are consistent with the natural parameter.
- (3) Assumption 3 : As a corollary to assumption 1, marginal utilities and cardinal utilities in general are measurable.
- (4) Assumption 4 : As a result of assumption 3 interpersonal comparisons in terms of measurable individual welfare are possible.
- (5) Assumption 5 : Citizens in a free democratic country participating in an open, competitive market or at the polls, are faced with a dual alternative.
- (6) Assumption 6 : The problem of value judgments in science has a positive solution if we consider only those impersonal values shared by a large number of people (social values) and in terms of equilibrium versus disequilibrium
- (7) Assumption 7 : Classical logic and natural philosophy of thinking were used all the way. They are based on consideration not only of the *form* but also of the *content* of a statement, and therefore seem to be more suitable in dealing with problems of equilibrium versus disequilibrium related to a modern economy, society and form of government.

Applying this model of thinking combined with classical logic and natural philosophy, I came to the clear conclusion that a free and normally functioning market system and a truly democratic form of government are possible to be realized in practice up to a high proportion (95-97 %) of perfection.

Professor Arrow reached the opposite result for the obvious reason that his model and method of reasoning are just the opposite of mine. Arrow's model is based on the following (reciprocal) postulates :

- Assumption 1 : The parameter of Numeraire is completely neglected and thus his system implies anti-Numeraire, i.e. paper money and monetized credit or inherent instability.
- Assumption 2 : No concern about the consistency between different elements and institutions in the system analyzed.
- Assumption 3 : Marginal utilities are assumed to be unmeasurable.
- Assumption 4 : Interpersonal comparisons in terms of measurable individual utility (welfare) are assumed to be impossible.
- Assumption 5 : Citizens in a free democratic society participating in an open, competitive market or at the polls are faced with three alternatives instead of two.
- Assumption 6 : The problem of value judgments has no positive solution in science.
- Assumption 7 : Professor Arrow is using with explicit indication the contemporary, nominal form of logic and philosophy as developed by Bertrand



Russell and Ludwig Wittgenstein which is concerned mainly with the *form* of a statement, neglecting or pushing aside the question of *content*.

Judging by the form of his assumptions, Professor Arrow's performance is a masterpiece of *nominal thinking* which is ingenious and attractive at first glance as an exercise in logical reasoning. Judged, however, by the *content of the assumptions*, i.e. under classical logic and natural philosophy, the same performance becomes questionable in terms of application to reach a better understanding of the modern world and its problems and to develop the skill of forging effective and efficient solutions to those problems. In view of classical logic, Arrow's results resemble the product of renewed sophistic reasoning used in ancient Greece. In any case, there is complete justification of the two diametrically opposed theorems and the explanation is clear if we consider the model of thinking and the method of reasoning used by each author. In the end the acceptance of one or the other theorem depends upon the application and result of two different types of logic and philosophy of thinking.

Finally, in the same book I came to the formulation of an *Impossibility Theorem*<sup>15</sup> but entirely different from that of Arrow. My Impossibility Theorem is composed of three parts : (1) It is impossible to develop one single general theory to include the explanation of all possible cases or constellations, as Lord Keynes tried in Economics and Einstein in Physics. The basic reason lies in the dual nature of the physical universe and human societies.

(2) It is impossible to have a free, just and stable economy or a functioning free enterprise system with an optimum social welfare function if we do not construct in the system a very strong (if possible 100 %) natural parameter of Numeraire.

(3) It is impossible to develop and maintain political, economic and social dictatorship (right, left or center) if the system has 100 % Numeraire at the basis of its finances. This is also consistent with Karl Marx No. 1 as theoretician of stable equilibrium as distinguished from Marx No. 2, theoretician of disequilibrium.<sup>16</sup>

It is up to the reader to decide which of the two Impossibility Theorems is more useful or meaningful to understand and resolve problems of today and tomorrow, because actually that is all that counts in the end.

## FOOTNOTES

1. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (1962). Second Edition enlarged. *Foundations of Unity of Science*. Vol. II No. 2, University of Chicago Press, 1970.
2. John R. Hicks, *Keynes and the Classics : A Suggested Interpretation in Econometrica* No. 5, 1937.
3. Sir John Hicks, *The Crisis in Keynesian*. Economics Basic Books, Inc. New York, 1974,
4. Anghel N. Rugina, *American Capitalism at a Crossroads! Where Do We Go From Here?* Exposition Press, N.Y. 1976 p. 18-19,43, 56-59, 70-71.
5. » » *ibid* p. 16-20, 206 ff.
6. » » *ibid* p. 18-20, 56-59.
7. » » *ibid* p. 17-21, 206 ff.
8. » » *ibid* p. 161-176.
9. » » *ibid* p. 208 ff..
10. » » *ibid* p. 206-227.
11. » » *ibid* p. 252-258.
12. » » *ibid* p. 51, 99-100, 114.
13. » » *The Possibility Theorem and its Application. The Development of an Orientation Table for a Methodological Unification of Both Natural and Social Sciences*. Duplicated, March 1974.
14. Kenneth J. Arrow, *Social Choice and Individual Values* (1951) Second. Edition. New Haven and London, Yale University Press, Fourth Printing, 1970.
15. Angel N. Rugina, *American Capitalism* p. 226-27.
16. » » *A Monetary Dialogue with Karl Marx. Its Significance for Both Capitalist and Socialist Countries*. in : *East European Quarterly*, University of Colorado, vol. VIII, No. 3 and 4.