

TOWARD REFORMATION IN ECONOMICS

by

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TOWARD REFORMATION IN ECONOMICS

SECTION 1 Introduction

1.1. Two Reasons For A New Critique of Economic Methodology

A number of years ago the sociologist Gouldner wrote a book entitled **The Coming Crisis in Western Sociology**¹. Gouldner attempted to explain that sociology is confronted with a crisis stage because of its restrictive presuppositions. On the one hand, a significant number of sociologists have departed from the conventional underlying presuppositions of sociology, thus undermining the common ground of scientific effort. On the other hand, the traditional presuppositions themselves have led the mainstream of sociology into a number of impasses and inconsistencies. A new, unifying approach is needed, says Gouldner, to prevent the decay of the theory of sociology. But no such approach seems imminent.

In economics the situation seems, at first sight, to be a little better. There appears to be less doubt about the scientific methods used, and the theoretical impasses seem to be few. But a more careful observation reveals here, too, a serious situation, one which is not encouraging at all.

First, a number of difficult *methodological* problems have emerged within the different branches of economic science. For example, in *cost theory*, economists cannot agree on a basis for assessing costs. Supporters of the idea of "objective" cost cannot convince the adherents of "subjective" costs, who, in turn, accuse their opponents of an arbitrary system of value. The distinction between private and social costs is also a source of controversy for economists. How does one find a common denominator in determining the extent of so-called "social" costs? Second, *monetary theory* is another area of difficulty. The dispute between monetarists and realists is not simply a matter of analytic disagreement. A more fundamental problem is at work. The two theories operate with different presuppositions, and, as a result, communication between the two groups is difficult. Third, in *growth theory* there is an ongoing dispute concerning what growth really is, and there is confusion about the distinction between growth and development. Fourth, (new) *welfare economics* is surrounded with a feeling of unresolved doom ever since the writings of Little and de Graaff, especially "The Wreck of Welfare Economics",² which left this branch of economic science in a desperate mood. Both raised the problem of the failure of economists to find sufficient ordinal or cardinal measures of utility which are necessary to cope with external (dis)economics [2] in consumption and production, thus limiting further scientific progress in this realm.

Each of these examples could be dealt with in greater detail, but at present we can see that economic theory is hampered by its own presuppositions. Current economic theory wrestles with its own methodology, but few, if any, suitable methodological alternatives have been suggested.

¹ Alvin W Gouldner **The Coming Crisis in Western Sociology** London 1970

² The title of the last chapter of de Graaff's last book **Theoretical Welfare Economics** Cambridge, 1957. See also Ian M. Little, **A Critique of Welfare Economics** Oxford, 1957.

The second problem with economic science today is closely connected with these methodological problems, namely, the lack of practicality. Economic theory has much difficulty in explaining the emergence of many serious problems in economic life today. These problems require a serious analysis as well as a good therapy, but modern economists are embarrassed by their inability to understand the causes and to suggest effective and lasting solutions. The more serious of these problems include the phenomena of structural, concurrent *unemployment* and *inflation*, as well as the impossibility of indefinite growth in a world with *finite resources*. The problem of finding a suitable distribution of wealth and economic power might also be mentioned here. Each of these problems shake current economic theory to its very foundations.

The severity of these problems, together with the inability of present economic theory to deal adequately with them, has given powerful impetus to the *paradigms-discussion* in economic literature, a discussion still growing in intensity. Many economists are searching for a new economic paradigm, referring to Kuhn's concept of a necessary and consistent framework for all theorizing, which periodically changes through a series of revolutionary "shocks." This search for a new paradigm reaches into various areas of economics, but mostly it is directed to the great unresolved problems of our time and culture, namely, problems of the limits to growth (Herman Daly, **Steady-State Economics**), of inflation (Hirsch, Goldthorpe, **The Political Economy of Inflation**), of the capitalist system itself (on which numerous Neo-Marxists have written), or of income distribution and the returns to capital (the Cambridge Controversy). Often there is a combination of these various directions, as in, for example, Kurt Dopfer's article, "Toward a New Paradigm" (in **Economics of the Future**), or as with the post-Keynesians.

What will be the outcome of this intensive debate? A new, integrated theory of economics? A growing disintegration of theory seems more likely at the moment since any basis for widespread agreement appears to be lacking.

1. 2. The Relevance of World-and-Life View

Both the methodological problems within current economic theory and the difficulty of current theory in coping with real-world problems have already led to renewed reflection on the implicit or explicit relationship between the world-and-life view of the economic [3] scientist and the presuppositions of his scientific activity.³ Many scientists still make a claim for objectivity, while they actually obscure the fundamental assumptions which they bring to their scientific activity. These assumptions operate at a basic level, and have to do with the scientist's view of the ultimate end of man, the meaning of life, and the nature of human society.

A decade ago a thesis denying the objectivity of economics would find few defenders, and even today many dismiss its validity. But the situation is changing; the old dogma of the neutrality of science is fading. Many social scientists today fully agree that it is impossible to explain social and economic phenomena in a neutral, objective way. Value-judgments necessarily pervade

3. See: Herman Daly, **Steady State Economics** 1977, Hollis and Neel, **Rational Economic Man** 1975

the processes of observation, selection and interpretation of economic data and therefore should be made explicit from the beginning.

The importance of an open discussion on the relation between present economic science, with its various presuppositions, and the world-and-life view of the scientist can be illustrated with reference to the current paradigm-discussion between *positivism* and *pragmatism*, prevailing views in the construction of science. Positivism, which still pervades current economic theory, tries to explain economic phenomena in terms of concepts and laws similar to those used in the natural sciences. But when this positivistic base is rejected, the scientist is confronted with an inevitable choice of one or another central point of reference, an archimedean point from which the necessary scientific concepts flow in a mutually consistent way.

Pragmatism offers the non-positivist a solution to this choice. It permits scientists to direct their scientific efforts toward a new fixed base of a concrete, societal engagement, a "pragma" as the ultimate *goal* of all theorizing. Pragmatism grounds this offer in its concept of "operational truth," by which "truth" is seen as instrument for what is deemed to be practically *useful*. The desired outcome of theory measured in terms of the efficacy with which it solves societal problems acts as the new point of reference. The resulting *a priori's* are then no more than crystallizations of the predetermined *a posteriori's* - the "subjective" goals of theorizing.

Examples of this new pragmatic approach are not difficult to find. In **Institutional Economics**, John Commons explicitly states that he wants to contribute to the type of institutional economics that will lead to the preservation of the social order of capitalism. Of necessity, then, his basic concept of "transaction" is mainly oriented to the continuity of the institution of private property. Karl William Kapp also makes a pragmatic choice, but his is a choice for socialism. In his book **Social Costs of Private Enterprise**, Kapp deliberately defines social costs in such a way that social costs emerge only in a capitalistic system. They are, by definition, caused only by private firms. Using this definition, Kapp can easily show that market economies in a capitalist system will always result in a loss of socio-economic efficiency.

[4] It appears likely that pragmatism will gradually fill in the vacuum created by the gradual dissolution of the current positivistic theories of economics. But this infusion of pragmatist thinking will result in sharp divisions within the body of economic theory, subdividing it into as many schools as there are different view-points of the goals of political and societal engagement.

There seems to be only one means of averting this coming disintegration of the corpus economic theory. And that is an open discussion by economists of the relation between their science and their world-and-life view. Such a discussion would not result in a full unity of scientific approach, although it may provide greater possibility for finding a common ground in the choice of presuppositions than the pragmatistic alternative. But it is important that the opportunity for such a thoroughgoing discussion on the nature of the search for "economic truth" not be sacrificed on the altar of present-day ideologies. For *truth* must remain for the scientist as the real normativity to which all of his scientific efforts must be directed, subject to the presuppositions he - explicitly - employs in his search for that truth.

1.3. A Christian Vantage Point

Whenever a Christian world-and-life view is offered as a point of reference, several misunderstandings are likely to arise. Thus, I would like clearly to outline my intention in choosing this frame of reference.

Let me begin by saying that it is *not* my intention to defend efforts to construct a separate economic theory which is labeled as "Christian," and which in all its aspects is opposed to the existing economic theory. There are several reasons for rejecting such an approach.

First, the above approach represents a misunderstanding of the task of Christians in their scientific involvement. There is no such inner guarantee that the intellectual efforts of Christians could deserve such a label (as scientific conclusions) as "true-and-timeless" Christianity. We can never *identify* the rational constructions of the mind with the message of the Gospel itself. Sometimes such an identity is striven for in the professed endeavor to construct a "fully" Christian economic theory, and to use that as a platform to pick a fight with all "other" scientists. The weakness of such an approach is that, in time, it will appear that the chosen theoretical platform may collapse as well, not because of the failure of the Christian message, but because of the imperfection of the scientific efforts of Christian thinkers. There *is* a link between Christian religion and the scientific efforts of Christians, but not in terms of an identification between Christianity and one "perfect" theoretical system. Disobedience and lack of insight are not limited to non-Christians.

[5] The second reason for rejecting the above approach is that it underestimates the capabilities of other scientists in *their* search for truth. The history of economic science should not be regarded as intellectual gibberish in a rational, humanistic cloth. Truth and error are intertwined in the history of economic science. Fine, truthful insights may be found there, despite possible distortions of the truth, or awful interpretations of the meaning of economic life.

I wish to elaborate on this second point from a Christian perspective. According to the Gospels there is one normativity for all people because all share the same world. There is not one normativity for Christians and one for non-Christians. There is one law for all of creation. In this world all scientists are confronted with the same normativity. Without that unifying normativity their science would disintegrate, just as the state which continually denies justice must begin to wither away, or the family which fails to recognize the need for mutual love ends in dissolution. Because of this common normativity of all creation, truthful insights may be found in the writings of even the most atheist scientists.

This latter point is bound up with a third reason for avoiding a narrow "Christian" theory of economics. In economic science as in other areas of life, we should be open to communication, and not expect only disagreement with all statements of secular thinkers. In fact, real confrontation can only take place on the basis of communication. Christian economists should not go out into an intellectual desert to spin out their high thoughts in theoretic monasteries. They must stand in the midst of present-day economic reality and economic theory, testing everything in that forum, and trying to preserve what is good. In addition, however, Christians should not try to *hide* the presuppositions of their theoretic

efforts, especially not if they differ from those which currently prevail. These presuppositions must be made clear, not to make the Christian scientists invulnerable to immanent critique, but precisely to *become* vulnerable, in a crucial way, opening themselves to an evaluation by and communication with the general scientific community.

What, then, is the value or the purpose in making explicit the Christian world-and-life view? In the light of the foregoing discussion this process of making explicit a particular vantage point seems to be an unavoidable necessity in our theorizing. If the legitimacy of scientific presuppositions is involved in a discussion, the religious basis of those "beliefs" must sooner or later come to the fore. One's views on the meaning of life, human destiny, the relation of God, man, and nature, all play a role in determining the character of theorizing. This is also true of "positivistic" economics. In every aspect of human life, whether they are made explicit or not, there exist religious dimensions; such an admission cannot be avoided by any scientist who wants to examine the roots of his scientific endeavors.

[6] But there is also special significance in terms of Christian belief itself. In Western history the relevance of that belief has often been restricted to certain domains, such as that of the soul, the church, or the transcendent. But such a restriction of the relevance of Christianity to these areas alone is a contradiction of the true nature of the Christian belief. For that belief confesses that the world, with all its possibilities for human social and economic development, is a *created* world. The Creator of this world is not a blind and unconcerned spirit, but a personal God who expects from all His creatures obedience to His commandments in all life, including its economic facets. Christians must also acknowledge that man is disobedient in his activity, also as he transforms created elements in this world - human reason, or power, money and material goods - into idolatrous guides to human happiness, in place of the love of God and fellowmen. Moreover, Christianity is a faith that speaks of *redemption*, not only of human souls, but also of our concrete material life. It is not only oriented to a renewal of our feelings, but of our whole way of thinking. And, finally, Christian belief testifies that this world has an ultimate Judge who will require of persons and peoples an account of what they have done--or have failed to do - with all the possibilities and talents given to them, their economic talents and possibilities included.

Such a confession makes it impossible to look at patterns of civilization and society in a "neutral" way, devoid of a relation to obedience and disobedience in economic life. Especially in our day, this statement is of great relevance if we look at the idolatry of Western society's quest for unlimited progress and material abundance, regardless of the consequences to the environment, the poor nations of the world, and even to the real happiness of many of the inhabitants of the Western world.

We have, as a culture, lost the original meaning of the word "oikonomia" - stewardship. It is a word which points to the basic normativity of economic life, not only in popular culture but also within the science of economics. Our society, including many of its economists, prefers not to be confronted with any law or normativity, for these external standards challenge man's claim to total autonomy. But that religious attitude - human autonomy - could well turn out to be the root of many of the overwhelming problems of our age, both at the social

and the scientific level.

Science itself is directly involved here. Economics can serve to create an understanding of what a sane economic life could be. But it can also serve merely to support the status quo, legitimating the quest for human happiness through material abundance, and neglecting care and stewardship as necessary presuppositions for all true forms of human happiness and civilization.

[7]

1.4. Outline of the Study

As previously stated, it is not my intention to try to promote the construction of a distinct "Christian" economic theory. But what Christians cannot and must not avoid is to attempt to lay bare to the community of economic scientists the power and influence of *good* and *bad presuppositions*. For these presuppositions lie at the heart of every scientific enterprise, and determine the course and direction of science itself. Present-day economists are insufficiently aware of the enormous influence of these presuppositions upon their work. It is their common task first to be open about them, but also to be critical of them, and, if necessary, to change them.

Perhaps the best way to promote such an awareness is to begin by identifying the open and hidden presuppositions of the currently predominant economic theory, neo-classical economics (Section 2). Subsequently, we must ask ourselves whether any of these presuppositions should be rejected as irresponsible or too one-sided. The criterion for such a judgment will be our own Christian world-and-life view, but I hope and trust that economists from other back-grounds will be able to share with me the essential elements of that critical evaluation, so that we may search together for a possible improvement or renewal of these presuppositions (Section 3). Perhaps in this inquiry we may find ways to avoid the impasses of current theory and make possible a more fruitful analysis of the great economic problems of our time. Section 4 is reserved for preliminary (and very vulnerable) illustrations of such an alternative approach.

My deepest hope is that some liberation may be found in the midst of our theoretical reflections on the economic discipline. Perhaps in this work the healing power of the Gospel may even become evident. But such a result would not be deserving in any cause-and-effect sense, but rather could be seen only as God's free blessing.

SECTION 2 **The Explicit and Implicit Presuppositions** **of Current Neo-Classical Economic Theory**

In his book **An Essay on the Nature and Significance of Economic Science** (London, 1935), Lionel Robbins offered his now famous definition of economics: "(It) is the science which studies human behavior as a relationship between (given) ends and scarce means which have alternative uses." All Western economics textbooks have since, in some shape or form, echoed this definition. Packed into it, either explicitly or implicitly, are at least six different presuppositions, which are shared by the majority of "conventional" economists.

[8]

2.1. The Presupposition of Scarcity

The essence of the economic problem, according to Robbins' definition, is that means are scarce. Were this not the case, there would be no reason for concern over the allocation of these means. Thus, the existence of scarce means implies the need to have a science, namely, economics, to examine that aspect of human behavior which arises when mankind is confronted with the "reality" of scarce or limited means. Economics, then, is the study of the human choices necessitated by this scarcity.

Robbins' concept of scarcity involved is therefore a relative one. Scarcity arises in the gap between what people want to possess (ends) and what they actually possess (means). Means are only scarce relative to ends because these ends are assumed to be unlimited.

The economist considers human "ends" to be given factors or data. The economist does not investigate how these ends are formed. He does not try to explain why people prefer one good or service to another. He does not try to explain, for example, why some people like to hang diamonds around their necks. He leaves this task to the social psychologist (Meyers). Rather, the economist assumes these preferences to be given; they are his starting point. The economist studies the efforts of people to employ relatively scarce means to narrow the gap between what they possess and what they desire. Although intuitively this gap could be narrowed through the efforts of people to scale down their desires relative to what they possess, the economist does not examine those possibilities. He is exclusively concerned with the efforts of mankind to enlarge and to allocate the supply of means, as they are produced, distributed, and consumed.

The presupposition of scarcity raises many questions. Three of the most important are as follows:

(1) How does the economist *know* peoples' preferences, their "ends"? In what way or through what mechanism do these ends become accessible to theoretical economic analysis? (Cf. Section 2.2.).

(2) According to the definition, means have alternative uses. Is this claim necessarily the case? Does not a relative scarcity of means exist even without the possibility of using them in various ways?

(3) How are the means and ends interrelated? How is their arrangement such that they can come in contact with each other?

[9]

2.2. The Presuppositions of "Individuality" and "Utility"

Economists shun the study of why humans want the things they do. Such a task would indeed be enormously difficult since it would require an ordering of the seemingly chaotic mass of human desires, considerations, preferences and values. Such a task would be formidable if not impossible. Consequently, the science of economics does not attempt to explain the totality of human desires, motivations, and values. Rather, it considers these factors only in so far as they have already led to an expressed choice, a clearly revealed preference for the

manner in which given means are to be employed. Thus, the *quality* of human desires has to fall completely outside of the economists' inquiry. His domain is restricted to the subjective "urgency" of wants, as they are revealed in the use of means. Only at the point where urgency is expressed in concrete choices, can the economist begin to "predict" what an economic subject will do the next time he is confronted with a scarcity of means for the satisfaction of his (limitless) wants, given his preferences.

The economist must, however, have a standard of measure with which to evaluate the relative urgency of wants. That standard of measurement, or "yardstick," is given in the concept of *utility*. Utility indicates the degree of satisfaction which subject A receives from the use of scarce good X for use in the fulfillment of want Y. Without such a concept, no expression can be given to the significance of the scarcity of various goods, or the urgency-character of present needs. For example, the theory of revealed preference, which tries to explain the behavior of consumers without the concept of utility by looking only at the concrete choices of consumers in the market, ends up either in inconsistencies or in the trivial tautology that the consumer always acts as he acts. In this case, obviously, the economist has not explained anything.

But who experiences or senses utility? Only a living *individual* can have such a sense. Only a full-orbed person can compare a desired "utility" with a received "utility." This presupposition of individuality does not mean that no collective needs exist. Nor does it imply that no state or group can have its own "orderings" or preferences. Rather, the presupposition of individuality means that such "wants" of the state or group are ultimately always rooted in individual feelings and motivations. Collective needs do not *originate* at the level of the corporate entity. They must be derived in their root from existing personal, individual needs.

This framework poses, incidentally, the very difficult problem of how any group can reach a correct expression of its collective preferences. Arrow has shown that, when analyzing any corporate-level decision, there may appear to be conflicts between the personal, component preferences and the over-all decision which was nevertheless arrived at on the basis of those same individual preferences. No one has yet been able to offer a satisfactory solution to this analytic problem. (Cf. Olson in **The Logic of Collective Action** where he [10] posits the thesis that "self-interested individuals will not act to achieve their common group interests" [Harvard University Press, 1965, p. 2]). The criterion of Pareto optimality, in this context, is an attempt to escape this problem of the individual/collective interface in public decision-making. According to this criterion, no action may be supposed to benefit the public if this action diminishes even one person's utility without adequately compensating him for this loss.

So the question "How do we have the knowledge of an individual's preferences or existing ends?" is answered either by referring to what consumers and other economic subjects concretely *do* in the market, leaving the economist with almost nothing to explain; or by referring to presupposed *individual* ordering-schemes in which the urgency of the desire for a good is measured according to its capacity to give utility. Accordingly, the preferences "revealed" in the market are viewed as the result of the weighing-process, by so many individuals, of those pre-ordered utilities.

2.3. The Presupposition of Instrumentality

Robbins' definition presupposes that the "scarce means" relevant to economic theory have "alternative uses." The economic problem of the allocation of scarce means no longer exists if there is one and only one possible use of a scarce means. Some economists view this case as a purely technical problem: the management of means in such a case is directed toward obtaining a maximum of output per unit of input. Only the choice between the *alternative* uses of means is an economic problem. Within that choice-framework, goods are the alternative "means" which are used to satisfy diverse possible "ends." At this point the concept of instrumentality enters in. Instrumentality accords the status of an "instrument" to every scarce thing on the earth which has the possibility of being used in alternative ways. Furthermore, these scarce things have value only in so far as they can be instrumentally employed in obtaining the "end" of the satisfaction of human desires. Economics is a science of subjective ends and of means which have alternative uses. It is a science of instrumentality. It explains *how* to reach certain goals within the context of a necessity of choice.

Means fall into one of two categories: basic or intermediate. Basic means are the "factors" of production, namely, land, labor, and capital. These factors are combined to "produce" a "good," (an intermediate means) i.e., a thing or a service having a capacity to satisfy. A "good" carries this ethically positive connotation because the end - utility - legitimates the use of these intermediate (and, by association, basic) means, sanctifying them as ultimately beneficial, "good."

Economic reality, therefore, can always be divided into two distinct *domains*. The first domain, production, is that of the means. That domain includes the components of labor, natural [11] endowments, the human capacities for organization, and capital. The other domain is that of the ends, which include the possibility of consumption and the use of leisure time. This domain is the realm of satisfaction. Consumption, under all circumstances, legitimates production, for "consumption is the sole end of production" (Adam Smith). As soon as the desire for a concrete way of consumption becomes manifest by means of the process of choice, production is legitimated by the simple fact that production has no economic sense or meaning without having an act of consumption as its end.

2.4. The Presupposition of Priceability

Some contact or interaction between ends and means is a necessary condition for the fulfillment of the ends or wants. Hence the economist is faced with the question of how or through what mechanism ends make contact with means. Because economic theory operates under the presuppositions of individuality and utility, it usually begins with the scenario of *one* person with *that* person's ends as confronted with the availability of some means and the possibility of organizing, combining, and using these means to satisfy the desired ends: the Robinsonade. No intermediary is necessary in this case; the individual himself is the bridge between ends and means.

But as soon as more than one person is involved, the inescapable need for an intermediary arises. Individual utility-seekers need such an intermediary to relate to each other, that is, to relate their mutual preferences to each other. They must relate their means, including labor, to each other, and relate their own means to the preferences of other persons. So there is needed some sort of *interpersonal* expression of the value of the means, i.e., the relative capacity of means to satisfy wants. One possible form of mediation is through a public plan for production, distribution, and consumption. Here the economic value of the means is derived from the central plan, which is commonly agreed upon or enforced by an authority. Other possible forms of intermediation include barter systems, or the institution of the *market*. In each of these cases, *prices*, either explicit or implicit, either in real prices or in so-called accounting prices, serve as an interpersonal, so-called "objective" expression of the value attached to the economic means.

Every economically scarce means, therefore, is subject to expression in terms of prices. Price ratios indicate the relative scarcity of goods. The presupposition that means have alternative uses is, of course, very significant here, for without the possibility of alternative uses of goods, there can be no *interrelation* of values and hence no price mechanism.

Priceability of scarcity is therefore a crucial precondition of economic theory, since supply and demand depend on the price mechanism for their determination. Only through supply and demand are means and ends, respectively, revealed to the economist. There are no [12] *relevant* economic ends without expressed demand, just as there are no *relevant* economic means without available supply. Thus without prices there can be no interrelation of demand and supply, ends and means.

2.5. The Presupposition of Closed Causality

Out of Robbins' definition emerge the contours of the present neo-classical theoretic edifice. It is founded upon a number of distinctive presuppositions: scarcity, individuality, utility, instrumentality, and priceability. The result is a theory which attempts to explain economic reality as a confrontation between individuals who have given preferences and who live within a given social order (e.g. a market or a planned economy), and a number of prices set for or by them. These prices make it possible for each individual to maximize his satisfaction through production and consumption, on the basis of a given set of scarce, basic means.

In this description, the word "given" is used three times. This repetition is by no means accidental. In order for one to develop a satisfactory explanation of the economic process, one which gives the reasons for the present (and predicts the future) prices and quantities of all goods produced and consumed, one must start from a set of given factors or *data*. Every economics textbook usually gives a list of them. The economist's set of given factors or data includes subjective preferences, the condition and composition of the soil and of various ecosystems, the current population and its capacity for labor the existing social and economic order, the state of technology for production, etc. Some economists also add to this set the stock of capital at the beginning of the

period which is analyzed. In the economic process all personal preferences and desires interact with the available "factors of production" in a given political and institutional context. A study of the economic process therefore, is completely *fenced in* by a set of data - the so-called *data circle*.

The data circle makes the economic process comparable to a closed arena in which many individuals are engaged in a completely predictable fight with each other. The outcome is certain because the given motives and desires of each individual will program him to do what he has to do. Only if one of the "data," the given factors, is changing, will there be a shift in the predicted outcome.

The final presupposition of present economic theory, then, lies behind the closed circle of data. The economist presupposes that he can trace, in one way or another, any change in price or quantity of any good produced or consumed back to a particular change in the data circle or constellation of data. Ultimately, either a change in human motives or preferences or a change in ecosystems, or labor, or capital, or the political situation, or social institutions, or the state of technology causes every change in the outcome (results) of the economic process. No other ultimate cause can possibly exist.

[13] The reason for this is not difficult to find. It is that economic theory, on the basis of its presupposition, is constructed precisely' to guarantee such "objective," predictable results!⁴ The data circle consists of carefully-chosen "given" factors. These factors are selected in such a way as to enclose fully the economic process. Hence, for every event in that process, a complete, scientific, causally-determined explanation can be given. And the word "explanation" means here the tracing back of every specific event to changes in the data, which are considered to be the event's *final* cause. So a full analogy arises between the methodology of economics and the methodology of the natural sciences (positivism).

SECTION 3

A Critique of the Presuppositions of Neo-Classical Economic Theory

In the previous section, we noted the existence of the following six explicit or implicit presuppositions of neo-classical economic theory: scarcity, individuality, utility, instrumentality, priceability, and closed causality. Before we examine to what extent these presuppositions are compatible with a Christian world-and-life view, we must make two preliminary remarks.

First of all, economic theory is more than just neo-classical theory. Furthermore, neo-classical theory itself constantly evolves and changes over time. Thus, the presuppositions of economic science as delineated above do not fully describe the situation with respect to the presuppositions of economic science as a whole. More remains to be said. On the one hand, the list of presuppositions formulated here is certainly not an exhaustive one. On the other hand, the character of some of these original presuppositions has changed over time. Some economists have offered broader interpretations; others have completely rejected some of them.

4 Cf. the careful study of Walter Eucken, **Die Grundlagen der National okonomie** 1947.

Secondly, we must note that these six presuppositions are nevertheless interdependent and internally consistent. Every effort to reject a certain presupposition or to broaden one will, in some way, probably lead to a number of specific difficulties and contradictions with others. These presuppositions *together* have formed the foundation of economic theory since 1870. Despite the objections one may have to this foundation, we may not deny that these presuppositions give a certain consistency and coherence to the framework of economic theory. As soon as one or more of these presuppositions are attacked or rejected, the internal consistency of economic theory in its entirety is at stake.

[14]

3.1. An Appraisal of the Presuppositions of Scarcity

In Section 2 we observed that scarcity in economic theory is a relational phenomenon. Scarcity must always be viewed relative to existing human wants. Economic scarcity exists if and only if the means for satisfying needs cannot completely fulfill these economic desires, as defined by the conscious activity of economic subjects. Since economic wants are subjective, the concept of scarcity is itself a subjectivistic one.

This subjectivistic approach leads to a number of difficulties, and also some "ethically unacceptable" conclusions. Some examples are:

(1) Only living beings can express subjective needs. But future generations yet unborn have, without a doubt, real basic needs. Certain provisions must be made for these generations in the present pattern of production and consumption of means. But the methodology of economic theory can reckon with the provisions necessary for future generations only to the extent that the present generation is willing to take into account the possible needs of these future generations in its own current subjective preferences. Scarcity is constituted only by presently living economic subjects, and the strict rules of economic methodology permit the economist to recognize no other criteria for human needs.

(2) These subjective needs are supposedly unlimited. This formulation of the economic problem appears to be a methodological trick to construct a situation of enduring "scarcity": desires always are unlimited, but the means are available only in restricted quantities. But what is the real basis of this presupposition of the unlimited character of present subjective wants? A specific view of man is no doubt involved here. The economist's implicit view of man is certainly not that of an individual who is willing to accept restrictions to his wants, for instance, according to the biblical admonition to acknowledge that one has "enough" at a certain point. ("If we may have food and covering we may rest content. Those who want to be rich fall into temptations and snares and many foolish harmful desires which plunge men into ruin and perdition," I Timothy 6:9) Nor does the economist view man as willing to reckon, for example, with the claims of future generations. Rather, his view of man is predicated upon the Enlightenment ideal of the autonomous individual. Man is on his own path to eternal, unlimited progress, progress which only he himself makes possible, a progress encompassing his capacities as well as his desires. It is a promethean view, hidden in the very midst of economic methodology.

(3) This subjectivistic approach leads, moreover, to the attitude that care

for nature and for health, for example, is relevant to economic theory only insofar as it can be reflected in existing subjective wants and preferences. The concern for nature and human health becomes of importance to the economist only when certain economic subjects are obviously willing to let it play a role in [15] their allocational behavior. At times this approach leads to absurd conclusions. We know, for example, that some harmful consequences to nature and to human health caused by particular industrial technologies ("social costs" or "external diseconomies") reveal themselves only after a certain duration of time. The consequences are not, therefore, apprehended at the moment of their inflicting (upon unknowing "victims"). A subjectivistic approach leads to the conclusion that such social costs do not *exist* until the moment of their subjective observation and appraisal. Only at that moment, not the moment or interval in which the harm is done, can costs be determined. Our science is thereby condemned to deal with the effects, and not the causes.

(4) Subjective wants are, according to current economic methodology, given. They are the expression of the autonomous choice of economic subjects. But in reality, the pressure of advertising and selling campaigns at least partially molds and influences these wants. Thus economic actions within the prevailing economic system do not take place only on the basis of economic wants, but they also shape these same wants. They do this in a circular, non-linear manner. Preferences are artificially expanded even to the point of seeming to have the characteristic of unlimitedness which the theory presupposes. But can these subjective preferences then really be considered as "given," as "data" for the economist? Are all economic subjective wants of equal economic relevance despite the fact that some may be partially created in an artificial way?

It appears that the presupposition of relative, subjective scarcity has to be rejected, as it stems from such an autonomous view of man. But can we substitute an alternative? We cannot develop an "objective" criterion for scarcity. In every approach to the problem of scarcity, elements of evaluation inevitably creep in.

In my opinion the only solution is for us to abandon the concept of scarcity and to substitute for it the concept of *entrustedness*. God has entrusted to us the creation in which we live. Our task is to care for it and to preserve it. The ecosystem of this world is entrusted to us, including all its possibilities and potentialities for production. All people are divinely charged to carefully administer everything that has been given to them. Economic objects are always objects of entrustedness. They are a part of our patrimony.

We must note immediately that this concept of entrustedness includes not only material goods but also, for example, human health. Entrustedness includes not only the use of space but also the use of time. It includes not only the fruits of production themselves, but also all the *possibilities* of the earth and of man to bring forth fruit. Entrustedness includes not only the possibilities for livelihood for this present generation, but also the same possibilities for future generations. Even the possibilities for communal and family life are entities for which we must exercise care, entities which we must preserve in a stewardly way. Hence they too, fall within the domain of entrustedness.

[16] Within this framework the concept of entrustedness is much broader than that of scarcity. It includes those objects or entities which are not, in the

subjective opinion of the present generation, scarce, but which are nevertheless entrusted to us. Furthermore, many of these "objects subject to administrative concern" do not even enter into the market process, since they do not have a price. For example, human needs as they are represented in the market lay many claims on economic objects. For one thing, they lay a registered claim (i.e., registered in the market). But they also lay unregistered claims, claims on economic objects *outside* of the market. Examples of such claims include human health, the environment, the possibility of satisfying the basic needs of future generations, the possibility of satisfying the basic needs of people in developing countries, and the preservation of possibilities of cultural continuity within a society. This class of claims is without a price; for some of the entities within this class it is even impossible to attach a price. But nevertheless these claims are of *economic* relevance.

The economist neither is nor can be a final judge of all human needs, for those needs always command economic objects which are entrusted to *all* of mankind. But the economist is no doubt called upon to expose the final economic consequences of existing patterns of production and consumption, especially if those consequences violate what is "entrusted" to us, and thus may be an indication of a possible economic "over-development" of production and consumption in present societies (cf. further the remarks on instrumentality).

3.2. An Appraisal of the Presuppositions of Individuality and Utility

In **The Ethics of Competition**, Frank Knight wrote:

By the nature of its fundamental conceptions, theoretical economics is an individualistic science.... The economic man is not a social man, and the ideal market dealings of the theory are not social relations. The science takes its economic individual as a datum, in his three aspects of wants, resources and technical knowledge, ignoring all questions of his origin; it abstracts from all his relations with other human beings, except of those of the perfect market, which are really relations to commodities as such (London, 1936, p. 337).

Knight's analysis harmonizes well with the critique of the French economist Francois Perroux who wrote of the "forgotten aspects of economic theory" - let us say: those aspects which relate man to man, instead of those which reveal themselves through the contact of men with the things" (**Les mesures des progrès économiques**, Paris, 1956).

[17] Man in economic theory is also a hedonistic being. He is a subject whose only desire is to satisfy his wants within the constraints of positive law. Man is viewed in an individualistic context. Such a view of man does not imply that the economist perceives all his subjects as egotists who look only after themselves. For altruism may be a source of individual satisfaction. But this individualistic view of man does mean that the economic individual is the ultimate factor, the cornerstone of all economic actions and wants. Only the individual can sense, feel, and perceive utilities and disutilities. Therefore, the orientation of economic theory toward utility necessarily leads to the conclusion that the individual is the final economic subject and agent.

A detailed critique of utilitarianism and of its consequences for economic

theory is not necessary here (for further information on utilitarianism, see Myrdal, **The Political Element in the Development of Economic Theory**). From a Christian point of view, utilitarianism as a system of ethics must be completely rejected. Orthodox utilitarianism holds, for instance, that the distinction between good and bad motives is entirely irrelevant. Only the "useful" outcomes of actions, never the motives behind them, are decisive for the question of good and evil. Because of its link to utilitarian ethics, economic theory ignores even today all distinctions between good and bad (or economically responsible and irresponsible) motives or desires. The sole motive of economic man is the desire to satisfy his wants, to obtain "useful" results, "usefulness" being defined in terms of utility.

The link between human wants and the concept of individual utilities and disutilities is not a necessary one, but a break with this presupposition would undoubtedly have important consequences for the structure of economic theory. For it is the transformation of the totality of human motives, norms, and values into the status of individual feelings of utility and disutility - a grey mass without any qualitative distinction - which alone has enabled the rationality principle to become the central, unifying principle of economic theory. Rationality is to be understood here as that ordering principle in the chaos of perceptions, emotions, and feelings which leads to predictable (utility-maximizing) economic decisions, whether individual or collective. (Economic theory echoes Kant on this point; cf. section 3.5. on causality).

But we must immediately point out that this principle of rationality, of the "rational economic man," is really the economic norm or principle in disguise. Economic rationality is a residual of an economic normativity which, in the midst of positive economic theory, has been reduced to one dimension.

Human economic activity, however, is far too complex to be understood simply by the concept of rationality in the ordering of (dis)utilities. The Institutional school of economic theory has correctly stressed that human desires and patterns of economic actions originate in a human culture. From the outset they are [18] social phenomena. Moreover, and perhaps even more importantly, the formation of human needs and the development of patterns of economic behavior take place in reaction to or as an (appropriate or inappropriate) answer to creational norms for the totality of life. These norms include justice, love and stewardship, among others. In one way or another human institutions such as families, corporations and governments, since they are a part of human culture, are structured in response to those norms. A knowledge of the normativity of justice, for instance, is essential to the understanding of governmental behavior and the "essence" of the state. Likewise the normativity of mutual love and truth is essential to the understanding of the behavior of a family. By the same token, one cannot speak of a corporation as an instrument of production apart from its subjection to a basic economic normativity; that is the key to its style of economic behavior.

In order for us to understand economic actions we must therefore examine the way in which norms are interpreted and worked out as values in an existing culture by different social institutions. This will explain the way people in a given culture will formulate their wants and develop their patterns of economic behavior. (We recognize that this unfolding of human activity takes place in different ways in different cultures, which can be referred to as cultural style).

No doubt we may speak of the existence of personal economic wants. But we will gain much more insight if we recognize that most of the existing economic needs have the characteristics of familial needs, corporate needs, governmental needs, and so forth. What does a family need within a given culture to continue its existence as a family, that is, as a household with loving care of parents for children? What does a government, in the economic realm, need to enable it to ensure public justice within a society? Questions such as these demand that value-bound social needs, the needs of social, corporate entities, become a basic category of economic theory. We cannot overlook this basic category if we want to have any understanding of the path of the formation of economic ends within a culture. Current economic theory, with its essentially a-historical, a-cultural framework, unwisely ignores this aspect of economic life.

3.3. An Appraisal of the Presupposition of Instrumentality

In his **Ethics of Competition** the aforementioned Frank Knight also makes the following important remark:

...(T)he ordinary meaning of the verb "to economize" ...is...to use resources wisely in the achievement of given ends. Insofar as the ends are viewed as given, as data, then all activity is economic. The question of the effectiveness of the adaptation of means is the only question to be asked regarding conduct: and economics is the one and all inclusive science of conduct. From this point of view, the problem of life becomes simply the economic problem of how to employ the existing and available supplies of all sorts of resources...in producing [19] the maximum amount of want-satisfaction. The assumption that wants or ends are data reduces life to economics.... (p. 34).

Here we find indeed one of the consequences of the presupposition of instrumentality. The good life, the happy life, is identified with the possibility of fulfilling one's own ends or wants. This goal directs all economic decisions, decisions which treat scarce resources and their possibilities purely as *means*, as instruments to fulfill the goal of maximizing want-satisfaction. The creation, then, has a fundamentally instrumental character.

This instrumental view, which stems from a synthesis of teleological, scholastic thought and the dynamic Renaissance view of man, leads to consequences contrary to the normativity for economic life. Although we make a distinction between economic norms (such as the norm for stewardship) and non-economic norms (such as the norms for justice, friendship, charity, and truth), we must note from the outset that all of these norms are valid in the realm of the choice of the ends as well as in the realm of the choice of the means. For example, the choice of the ends is not *only* an ethical choice, just as the choice of the means is not *only* an economic choice. All normative aspects of life play a role in the choice of the ends as well as in the choice of the means.

Economic theory, however, travels a different route. It considers the ends to be given. In these ends are concentrated the ethical and psychic considerations of economic subjects. As such they are outside of the realm of the economist's research. But as soon as one chooses his ends, only one norm prevails: that of "efficiency," the optimal combination of means for the

achievement of pre-selected ends - doing more with the same, or doing the same with less. The economist accepts no other type of normativity to serve as guide and tool, since these other norms are assumed to be concentrated, packed into, the choice of the ends. (The economist recognizes, of course, the authority of positive law as a possible limit to the way in which means are allocated. But law is only an external restraint. The efficient combination of means is dominated *internally* only by the criterion of rationality or efficiency).

More than thirty years ago Macfie wrote:

Perhaps the dominant reason for the insulation of economic life from moral and social criticism was just the acceptance of economizing as a merely instrumental service, a technique which was therefore outside moral considerations. When we decide that efficiency is essentially of full-grown moral stature, we realize that it ought to sustain the full blast of moral criticism. (Economic Efficiency, and Social Welfare, 1943; An Essay on Economic Value, 1936, p. 129).

Macfie prefaced this remark with the statement: "In reality the ends are never given they merge inextricably with the process of using the means."

[20] Does Macfie's statement mean that we must reject all talk about "ends" and "means" in economic theory? I think not. For us to speak about economic ends and means may be a useful, perhaps even a necessary, device. But two qualifying conditions are obviously needed here:

(1) We must recognize that in the choice of the means as well as in the choice of the ends, non-economic considerations play a role along with economic considerations.

(2) We must recognize that there can be a constant interplay or trading off between means and ends, such that what in one instance can be perceived as an end may, in another context, be a means. There are not two pre-ordered, mutually exclusive categories of "means" and "ends."

Condition (1) has enormous theoretical consequences. It implies among other things⁵ that the economist must abandon his intention to give, in economic theory, closed explanation for the behavior of consumers and producers (cf. section 3.5. on causality).

Condition (2) has great practical significance. For example, economists always treat labor as a *means* to be used as efficiently as possible toward the end of a maximum production output (as evaluated by the market). The economist's view of labor and of the significance of productive results (growth) is in complete agreement with the existing economic system, a system which promotes continual increases in "productivity" in order to attain the overall social goal of an abundance of economic goods. Such an abundance provides for private consumer satisfaction in the present and in the future (investment), as well as for public needs (highways, medical insurance, etc.).

But in a wealthy society such as we live in today, we must notice that a

⁵ It also means that economists must view the allocation of labor and the choice of working conditions as economic decisions which need additional tests beyond the criterion of efficiency; Even Max Weber spoke in this context of the "Eigenwert der Mittel," the intrinsic value of the means themselves, which is now an almost forgotten element in economic theory.

plethora of harmful side-effects, including environmental degradation, depletion of natural resources, and depletion of non-renewable energy sources, accompanies the growth of productive results, a growth which we hold in such high esteem. Furthermore, the rising "productivity" of labor, which is made possible by a maximal efficiency in the use of labor as a means of production through the increasing use of "labor-saving" machinery, leads both to intractable structural unemployment and to monotonous, often bad, working conditions. From the vantage point of the norm for stewardship, we [21] may therefore wish to reformulate the economic problem in rich societies in precisely the opposite manner. We would then prefer to treat the stabilization of the production of consumption goods as a *means*, to further the *end* of growing possibilities for meaningful employment of labor. Of course, such an approach is not without its consequences for the "productivity" of labor (as an inverse of the percentage input, of final output) and the (monetary) rewards of labor, both of which might diminish.

But the crucial point remains, that economic theory's division of reality into a pre-chosen set of ends (e.g., consumer goods) and means (e.g., labor) needs the "full blast of moral criticism" in rich (and perhaps over-rich) societies. Such an initial choice of ends and means has made and continues to make economic theory a servant of an economic system which has growing production as its real and ultimate economic focus, and prevents economic theory from serving any other.

3.4. An Appraisal of the Presupposition of Priceability

The presuppositions of scarcity and priceability are closely linked. There can be no scarcity without priceability. Economic theory recognizes scarcity only if a price is attached to it as such. The fact that industries pay taxes for the pollution they cause indicates that clean air is indeed scarce and that a price can be attached to this kind of scarcity.

The concept of scarcity was already discussed to some extent in Section 3.1. The proposal that we substitute the concept of entrustedness for the concept of scarcity already led us to the conclusion that economic valuation does not necessarily depend on the possibility of attaching prices to economic entities. Time, health, and some qualities of the environment, for example, need our economic care. Therefore we must value them as economic entities even though we cannot express them adequately in terms of prices. We may express economic concern and valuation not only through prices but also through recognition of the existence of restraints--restraints, for example, which will preserve the life of species of animals or preserve a minimum quality of air and water. Only with an extremely narrow view of economic decision-making can one contend that only through *prices* an economic valuation can be made.

Economists feel secure, no doubt, as soon as they are dealing with scarcity that can be priced. For then "objective" reasoning seems possible, reasoning which need not consider the "real" economic value of economic entities. Enormous problems arise under circumstances in which prices are absent and yet one is unable to deny the existence of scarcity for such unpriced goods. What price should be attached to those scarce elements which do

not yet have a price (perhaps because of no organized market-demand or market-supply)? Is it possible under such conditions to avoid subjective "value-judgments"? In welfare economics this problem has become inescapable.

[22] It has led, for example, to Mishan's effort (in **Costs of Economic Growth**) to construct an imaginary market for environmental goods. The state would make such a market possible through the provision of "amenity rights" which must be compensated for in money terms as soon as they are infringed upon or violated. This construction, made possible by the use of the Pareto-optimality criterion, is a brilliant attempt to bridge the gap between priced and non-priced scarcity. The problem remains unresolved, however, as long as those amenity rights do not exist in the current economic system.

As a consequence of its inability to resolve the problem of transforming non-priced scarcity into priced scarcity, economic theory usually restricts itself to the latter category of scarcity. This restriction has, no doubt, contributed in past decades to the general Western opinion that something without a price can be perceived and treated as something without intrinsic economic value. At any rate, their own theory has hindered economists from warning Western society of the consequences of its harsh and wasteful treatment of the biosphere.

3.5. An Appraisal of the Presupposition of Closed Causality

The presupposition that economic theory must strive for a closed, complete explanation of the economic (market) processes from which prices emerge and from which the quantity of stocks and streams of goods are determined is not fully comparable with the previous pre-suppositions. This presupposition can best be seen as underlying and supporting all of the other presuppositions of neo-classical theory. The other presuppositions are all rooted, to varying extents, in this presupposition.

In order for us to understand the nature of this presupposition of causality, we must examine the philosophical foundations of modern economic theorizing. We must look, then, to Immanuel Kant and his successors, the Neo-Kantians (Strigl, Weber, *et al.*), who are in large part responsible for the laying of these foundations.

Throughout his life Kant wrestled with the question of how scientific truth could be acquired. He stated that the human capacity to obtain knowledge of this world is analogous to a mirror, one which but imperfectly reflects reality. He believed that it is impossible in any case for us to obtain an adequate image of reality. This is true not only because reality resists this, but also because it is unexplainable in its essence (*Ding an sich*). But this elusive character of reality as such does not imply that knowledge is totally impossible, since experience is not necessarily the sole source of knowledge.

At this point Kant's "Copernican revolution" enters the picture. Although reality presents itself to us in a chaos of perceptions, as human beings we are endowed with faculties which can bring order to this chaos. We categorize our perceptions, for example, by making [23] chronological distinctions or by making distinctions pertaining to spatial relationships. Our capacity to order our perceptions, which leads to the use of categories, is not and cannot be a mere fruit of experience. Rather, it is a fruit borne by the human *ratio* or intellect. The

human *ratio* is that great power which orders the chaos of our perceptions. *Causality* is one of the ordering categories in the structure of the human intellect, for it is not found in nature itself.

Kant's followers have drawn out the consequences of this philosophy for the various scientific disciplines, including the science of economics. For Kant's disciples, the delineation of the borders of economic science is primarily achieved through the use of human, rational "categories." Strigl, for example, thus arrived at the concept of a cluster of data, the given factors for economic theorizing. This cluster of data functions to order and reserve a domain for economic theorizing. Strigl called the cluster of data, these ordering principles, "economic categories" (**Die ökonomische Kategorieen**, the title of his main work on this subject). He stated that economists had to choose economic categories in order to organize and delineate the bounds of a set of given factors (i.e., to determine what must be "given"), thereby creating a realm for economic study within which economists could reach "objective" scientific conclusions. "Objective" here refers to statements having a degree of certainty and a capacity for prediction equal to those of the natural sciences. In this manner, Strigl believed himself to be constructing a value-free system of economic science. He worked with the same idea of causality as did the natural scientists, attempting to trace economic events back to their causes in a completely mechanistic way. In order to obtain such results he had to eliminate all forms of uncertainty existing within economic processes, for as long as uncertainty exists one may not legitimately adhere to the idea of economic outcomes which are fully and objectively predictable, outcomes which are based on irrefutable general laws. So he removed all forms of uncertainty from the economic scene by placing them in the category of a data cluster, making them into "given" factors for the economist. For example, the behavior of the rational consumer confronted with a rise or fall in the price of a good is initially uncertain. But the economist can predict the behavior of the rational consumer as another "given" as soon as the consumer's preferences (ends) are arbitrarily fixed. Then the consumer's behavior in the market follows simply as a natural, predictable outcome from these given preferences.

On this Neo-Kantian foundation, together with Walter Eucken in Germany, Lionel Robbins has formulated the standard methodology for economic theory, a methodology still adhered to in textbooks today. When the ends of the economic agents, all natural endowments, and the social and political structure of society are given to him, the economist can devote himself fully and without hindrance to the task of explaining the *economic process*, the process of the workings of markets. His domain is restricted to that process. Standing atop his pile of givens, the economist can observe prices and their [24] movements. Every economist can observe them in a neutral way, without any value judgment. In this way a neutral economic theory emerges, one which is outside of the realm of "values."

The economist thereby separates facts from values. He works in an intellectual vacuum; he erects an artificial laboratory environment in which a mechanical type of causality rules. The economist adopts the equilibrium concept as the arbitrary starting point for the analysis of his data cluster and, with the aid of the *ceteris paribus* clause, studies the consequences of a shift in the position of one of the data in an "objective" deterministic way.

Interestingly enough, this methodological component of economic theory - the data circle, which functions as one great *asylum ignorantiae* surrounding a domain of predictable, priced facts - is very compatible with the modern *systems-approach* to social reality. Within this framework the economist need specify only one *desired* outcome of the market process, e.g., full employment, stable prices, etc., and then determine what shift(s) in the datum of governmental preferences (with the consequent use of governmental policy instruments--taxes, interest rates, etc.) is (are) necessary to obtain the desired results. Positivism in economic theory then becomes operationalism. All of social-economic reality is thus transformed into a mechanical system which economic engineers or political agents can direct to a desired economic outcome.

It is on such a mechanical operational concept of the economy that Keynes built his theory for full employment policy. He stated, "For my part, I think that capitalism wisely managed (!) can probably be made more efficient for attaining economic ends than any alternative system yet in sight." Capitalism thus becomes a system - a mechanical term - which can be managed and steered by economic expertise to the desired economic ends. Tinbergen's modern "inversion method" for economic planning also has operationalistic roots. Instead of founding the theory of economic policy upon the premises of existing preferences and government measures and moving from there to predicted economic outcomes of various policies, Tinbergen proposes that the economist who has to advise political agents should begin at the point of desired economic and social outcomes and then determine which changes and which measures are necessary to obtain those ends⁶. This method no doubt appears sane, and it is no doubt of some use in the practice of concrete economic policy. But the price of such a method as a *full base* for economic-political advice is the reduction of social-economic reality to a manageable, piloted system in which economic agents are no longer addressed in terms of their economic *responsibilities*. Tinbergen's system, as such, could be made to work; while all the agents can remain the same, their [25] style of behavior would require no changes. The invisible hand of the state could substitute for Adam Smith's invisible hand of self-interest. It would thus be a hand which steers economic life to the optimal outcome despite - or in co-operation with - the self interest of all individuals.

But perhaps the real root of such insoluble economic problems as structural unemployment and structural inflation lies exactly in this view of economic reality as *merely* a manageable system. Its consequence is that it removes the obligation of business enterprises, labor unions, and consumers to act in economically *responsible* ways. By their very nature economic problems are always human problems, social problems. But the economist's data-circle approach in the context of a manageable market system eliminates precisely those elements of humanity and sociability. The economist deals only with facts not with "data" - and so he ignores the existence of sin and any element of economic irresponsibility,

John Hicks recently wrote an important book, **Causality in Economics**. In this book he makes an important distinction between two types of causality,

⁶ Cf.. J. Tinbergen **Economic Policy, Principles and Design** Amsterdam, 1956.

which he calls the old and the new⁷. The new type of causality is that which economic theory has adopted from its classical beginnings. The new causality explains economic events from their causes in the same fashion as the natural sciences do. This adoption of the "new" causality represented in the view of Hicks a break with the old type of causality, which originated in the Middle Ages and the core of which was human responsibility. In the old causality the crucial question was not *what* caused an effect but *who* caused it and who could be held responsible for it.⁸ Hicks argues that the old type of causality is a concert which has correctly been rejected. But in the midst of our present theoretical and practical economic problems, we must seriously ask whether that "old" concept of causality does not contain a kernel of truth which at its root level makes it preferable to our mechanical concept of causality today.

Such a question becomes even more urgent when we realize that all of the presuppositions of economic theory depend in one way or another on precisely this basic presupposition of mechanical causality flowing from a predetermined choice of data. The concept of mechanical causality forces the economist to start from "given" ends because ends are themselves subject to change. In order to make economic behavior [26] predictable, the economist must presuppose rational behavior on the part of economic subjects based on subjective, individual preferences which are ordered in a utility-preference scheme. Otherwise the economist could not derive "rational choices" on the basis of what people wish, want, and feel. One may therefore view the whole cluster of presuppositions of economic theory as a tightly-knit, closed unit formed around the basic presupposition of the - feasibility of an objective, value-free science which deals only with facts and mechanically-predictable outcomes.⁹

⁷ The new causality may be thought of as "the search for laws, or generalizations on the basis of which we can assert something about the causes of events."

⁸ The old type of causality is a framework within which "causes are always thought of as actions by someone...." Kant made clear "that the old association between causality and responsibility had to be rejected."

⁹ One should not be misled here when the modern economist -prefers to speak of interdependence in preference to causality, and stresses the uncertainty of economic predictions, leaning heavily on modern probability and game theory. For, in the first place, at the root of this concept of "interdependence" lies nothing more than the recognition that causality between economic events can and often does-run in more than one direction. But it remains a causal view of reality. In the second place, when the economist stresses the element-of uncertainty, he is not referring to uncertainty which is inherent in his theory, but only uncertainty about the behavior of the subjects in his economic model, i.e., a fluctuation of the data themselves. But the element of uncertainty was present in the methodology of economic theory from the outset. Economists have never argued that data always remain constant. So the economist's uncertainty is a conditional one. He is not certain that the conditions from which his theory is developed will hold in practice. The theory itself, however, remains completely "true" and "certain" under the given conditions it is fully "true," in a hypothetical sense.

SECTION 4 An Alternative Approach

4.1. A Summary of Gained Results

In the critical appraisal of present economic methodology, the following conclusions were drawn:

(1) A more acceptable concept than scarcity could be the concept of entrustedness. Entrustedness refers to the stewardly administration of all economic objects. These economic objects, or objects of entrustment, include nature, time, health, the possibilities of future production, and the possibilities for cultural and communal life. These entrusted objects should not be seen as freely disposable.

(2) Human economic subjectivity is not restricted to individuals. Subjectivity refers to being subject to, or being placed under, the dominion of economic normativity. This means that not only individuals but family households, labor unions, corporations, governments and all other agents in the social sphere are subject to these economic norms.

[27] (3) The formation of economic ends or needs, based upon economic subjects but also arising out of an existing culture in general, is a decision which entails economic responsibility. A choice of ends can be made in an economically responsible or an irresponsible way. These needs may be "material" or "non-material," by which we mean, for example, the need for employment and the need for being employed in a meaningful way (i.e., having the possibility for creativity and social cooperation).

(4) Not all economic objects - i.e., those entities which have a possibility for economic disposal--have prices or can be evaluated by "the measuring rod of money" (Pigou). The economic relevancy of such objects may also be made clear through the use of "restraints".

(5) Causality must primarily be related to economic responsibility. Therefore, it is legitimate for the economist to ask who, or which institution, is responsible for specific economic effects. The economist needs measures of economic accountability in order to be able theoretically to deal with human responsibility.

(6) Human behavior in the selection of means and ends is accountable to non-economic as well as economic norms, and these former demand a simultaneous realization. That is, no one norm (economic or non-economic) should have precedence over any other, so that some are realized and others are not. The economist must accept, therefore, the possibility that in his study of economic behavior a non-economic norm (love, justice, aesthetic harmony) may at some point be of more importance for the institution which he studies than an economic one, even though the activity in question is of an economic nature.¹⁰

If these conclusive elements are combined, they point to the possibility of

¹⁰ For example, the present-day economist could be tempted to label as "irrational" the decision of a husband to remain at home with his wife for the first month after their new child has been born, rather than to continue working at his \$15-an-hour job. But such a decision must rather be seen as a simultaneous realization of the norms for love and stewardship, assuming the family is financially capable of doing without one month's income.

developing an alternative way of economic theorizing. But such an alternative is only imaginable if more insight is gained into the normed, economic aspects of reality itself. Without an insight into the nature of the "economic," we stand lacking in theoretical unity. In that case the concept of economic causality will remain too vague, while concepts such as "costs," "needs," and "gains" will lack the necessary delineation. What then is meant when we speak about the "economic" from a normative point of view?

[28]

4.2. What is "Economic"?

In answering this question we must be aware of the fact that every economic, societal system, such as "capitalism" or "communism," tends to have its own interpretation of what belongs to the realm of *economic* life. Such interpretations could be called "system-interpretations." In our capitalistic society, the system-interpretation of the term "economic" refers to every action which deals with money, whereas the word "economical" refers to every action which leads to a surplus of or gain in money. There is no doubt a degree of similarity between this system-interpretation of "economic" and "economical" and the basic interpretation given these terms by economic theory.

But economic theory must be more than "common sense made difficult," and may not restrict itself to present system-interpretations. For economic systems are *subject* to economic normativity, which they can obey but can also violate. Hence the existence and continuity of any one economic system is not an economic norm in itself. When present economic theory judges any critique which economists make of the workings of our economic system as a reflection of hostile political attitudes toward that system, one can perceive that economic norms are no longer recognized as having an independent validity for both persons and systems. This means that the deepest choice which economic theory (and economists) make is no longer discerned as one between truth and non-truth, but as a choice between loyalty and disloyalty to the existing economic system, a system which is given an almost religious sanctification, claiming the hearts, thoughts and words of its academic citizens.

To avoid these system-interpretations, we would do better to return to the original meaning of the word *oikonomia*. This word did not mean the use of money or the making of profits (which was instead referred to by the word *chrematistike*), but pointed to a stewardly activity, a care for one's patrimony.¹¹ The elements involved in our own use of this word *oikonomia* or "stewardship" are:

(1) *Preservation*. By this we mean the careful administration of all that has been entrusted to the steward. I have already said that entrustedness refers not only to the natural resources of this earth, but all aspects of creation. The world's ecosystem is entrusted to us, meaning we are obliged to a stewardly care for the environment. Human beings also need economic care. They should have the possibility of living and working without undue threat to their health.

¹¹. See for example, Karl Polanyi, "Aristotle Discovers the Economy," in Karl Polanyi, Conrad M. Arensberg, and Harry W. Pearson eds **Trade and Market in the Early Empires**.. Chicago, Henry Regnery Company, 1971, pp. 64-96.

The mental health of human beings is also an object of economic care and concern. Therefore production techniques which allow laborers [29] to do only monotonous work should be discouraged. It is a harmful disposition of their (human) capacities, a damage which is no less real even in those who feel at home in the assembly-line environment. The preservation of the possibilities for a responsible family and social life, in a specific cultural setting, is yet another matter of economic concern in our stewardly mandate. It involves proper use of available goods, natural surroundings, educational facilities, communication-time, etc.

All these aspects of our task of preservation can only be fulfilled if a "disposition stock" is present and is maintained. This stock includes such entities as the totality of available time, space, working capacities, and types of economic goods: all these entities which have to be disposed of for the preservation of human and animal life and the ecosystem and for the supply of the basic provisions for the developments of culture in its multi-faceted responsibilities.

(2) *Fruitful disposition.* In order to preserve human life and health, and to provide for the social and cultural needs of a society, the "disposition stock" must be maintained and can only be maintained through the economic activities of "production" and "consumption." The "objective" elements or entities of disposition - space, time, natural resources, etc. - are ordered in a specific way by economic subjects through the use of their human energy, intellect, intuition and technical knowledge. In a *productive* setting this economic combination of disposable elements and human, subjective faculties can result in the creation of new goods and services. In *consumption* situations, produced goods and services are again re-ordered (either directly or via income distributions) and combined by the use of human intellect, energy, emotion, etc. This latter kind of activity permits the "preservation needs" of the various social institutions to be at least partially fulfilled, and must allow for the maintenance of the disposition stock mentioned earlier.

When production and consumption are viewed in this way a problem emerges - the basic problem of "economy" itself. If we as stewards are required to preserve what is entrusted to us, and at the same time to dispose of "nature" to use our human energies, space, and time, then an obvious ambiguity arises. How can we maintain what is to be preserved - the disposition stock - while we diminish that same disposition stock in our efforts to fulfill our other preservation requirements? In other words, the whole effort to preserve, or maintain a disposition stock is futile, that is, economically *meaningless*, if what is added to the disposition stock is not enough to compensate for the losses.

An example is in order. If a person has to care for his family and its health, he needs some goods and services, or a disposition stock, with which to do so. To receive the needed goods and services, he and his family must either produce them or they must earn an income with which to buy those goods. If, perchance, the reward for these productive efforts is so low that they cannot even purchase enough food to restore the potential for future labor efforts, then the goal [30] of preservation can never be reached. The income added to the disposition stock is not enough to compensate for the losses.

Out of this situation arises an urgent need to economize. "Economizing"

refers to the organizing or combining of the acts of disposition, production and consumption in such a way that at least a net increase in the disposition stock results. Economic normativity, therefore, always demands a *fruitful* disposition. In order to combine the acts of disposition in such a way as to obtain a *fruitful* disposition, a weighing process must be introduced. The disposition-order should be chosen only after a consideration of all the saving possibilities inherent in the disposition stock. The disposition elements, then, can be combined in various ways with the human faculties in the acts of production and consumption in such a way that at least the same level of production or consumption is realized with decreasing inputs of disposable elements. In the production process/economizing can take place in various areas. By changing the time-order or space-order of the process you can economize in certain instances. For instance, the decentralization of energy production may in some instances reduce the use of the disposition stock by cutting down on the need for transmission lines, minimizing the effects of power "black-outs," etc. Using tools in the production process which require less energy to produce than they will save in use also creates a possibility for economizing. Insulation is an example of one-such "tool."

Therefore only by comparing the different ways of organizing the available objective elements and subjective human faculties, and weighing them against each other, can an economizing outcome be reached. A fruitful disposition is realized when the potential added to the disposition stock compensates or outweighs the losses in potential. A fruitful *production* (as opposed to consumption) involves, then, a balancing of *costs* (the loss of preservation potential), and *benefits* (additions to preservational possibilities). Production is considered economically rewarding if the benefits exceed all the costs involved, regardless of how and by whom they are made. This outcome can also be referred to as a *net* economic fertility.

4.3. Costs and Benefits

a) Costs

When a production process begins fulfilling certain needs of preservation, it also has the potential for a negative impact on the existing disposition stock. This negative impact determines the costs of production. Thus economic costs are always preservation-costs. But in what ways do costs present themselves, and how does one determine their size?

We must remember here that the things entrusted to our care include more than those things open for free economic disposition. We can dispose of human energy, time, and resources, but to do the same to our human health, mental health, and ecosystem would be a [31] violation of our cultural mandate. Our mandate to preserve, therefore, is broader than the necessity to maintain a disposition stock. It is possible that, in the act of production or consumption, we create side effects which directly downgrade our health and environment. We must reckon therefore with two types of costs. The first refers to the free disposition of resources, labor energy, etc. that lead to a diminishing of the disposition stock itself. These costs demand a compensation. The economic costs of labor, for example, are the goods or labor-incomes necessary for the laborer and his family to live within a given cultural setting and

for the laborer to be able to continue his work in good health. Marx terms these the "reproduction costs" of labor.

The second type of cost includes the prevention or elimination of any harmful effects to economic objects and subjects to culture as a whole. For example, a company that is polluting the atmosphere and thereby threatening the ecosystem and the health of its neighbors is causing harm to that which has to be preserved. These externalities cannot really be neutralized by one or another "compensation," since, for instance, an ecosystem is not capable of legal action on its own behalf and cannot "receive payment" in any human sense. Therefore a prevention or elimination of these effects is necessary. The costs of prevention or elimination through the application of anti-pollution devices or of the installation of an alternative production technology are, in a very concrete sense, "costs," whether the firm actually pays them or not.

Our idea of costs, therefore, is a normative one, reflecting the norm of preservation. The Mandate of Preservation demands an adequate compensation for the use of the disposition stock, as well as an adequate prevention or elimination of the harmful side effects of production on all objects of entrustedness.

b) Benefits

A production process is accompanied by costs that originate in the necessity for preservation. But the same process can also lead to benefits that outweigh these costs. Benefits emerge due to economizing efforts that give rise to a net fertility. These benefits, too, can be valued economically only against the background of preservation. Costs and benefits are obviously equal in economic value if the preservation stock is not enlarged by the process of production but rather, remains the same. This does not mean, however, that each of its components must necessarily remain the same. New goods can enter the stock, while such things as labor energy are used in the production process and have, therefore, left the stock. In other words, it is possible by the economic disposition of consumption to transfer an amount of these new goods--food, for instance--into the disposition stock, so that in such a situation change occurs but the stock remains on a constant level because the labor energy of the workers is replenished.

[32] What has just been expressed in terms of labor energy can also be stated, to a great extent, in terms of the use of natural resources. Here the distinction between renewable and non-renewable resources is of great importance. Renewable resources, such as seed and wood, have to be treated as costs of production, measured by the costs of their regeneration (reforestation, for example). The real costs are the costs of replenishment. But for non-renewable resources we have a different situation. Their use leads in one way or another to a permanent diminishing of a part of our common disposition stock. One obvious example can be made of the use of oil. For example, the use of land for radioactive waste storage would "permanently" eliminate the possibility of using the same land for cultivation.

It is clear, then, that in light of certain unavoidable consequences of production, the statement that "costs and benefits have an equal economic value if the disposition stock remains the same," does not refer to a technical equivalency. This entails that the economic subjects themselves have to weigh

the value of what is produced over against the invested disposition entities according to their mandate to preserve life, nature, and culture. For preservation to be present, the newly acquired economic entities in the disposition stock must be equivalent to the economic entities disposed of, in terms of their economic ("preserving") value.

It will be clear, therefore, that economic theory must respect a limit to its capacities in this context. Only a living culture itself can perform such an evaluation! However, this does not mean that the economist cannot and should not express his own evaluation. For example, even if in a given culture the economic evaluation, of the entities in the disposition stock tends to overaccentuate (in his opinion) the relevancy of producing new goods, while underaccentuating the permanent losses to non-renewable resources, the economist must include this cultural economic evaluation as a fact in his theory. But he does also have the responsibility to warn if he concludes that such a lopsided economic valuation of society's disposition stock will sooner or later lead to the exhaustion of every possibility of preservation in the future. The economist must make these things visible to society. He must criticize production techniques that result in the exhaustion of human or natural resources, space, availability of time, and so on. The economists can lead economic subjects, in their cultural context, to another "style" of economic valuation by shedding light upon the possible economic consequences of their activity. As Keynes once wrote, "Economists are not the trustees of civilization; but they are the trustees of the possibility of civilization."

The economist's task, therefore, can best be compared with the task of a treasurer of the board of a cultural association. His responsibility is to care for the disposition stock, or means available to the organization. He is not to determine the ends of the organization, although in his role as steward of the organization he is co-responsible for the ways in which the means are used. He is therefore obliged to inform his co-members on the board of the best [33] possible use of the means, as well as the consequences for their misuse. In other words, he must initiate a stewardly use of the means.

4.4. Net Fertility

It has already been stated that economizing leads to a surplus of benefits over costs. This difference becomes visible in a net gain of economic entities: saved time, saved energy, saved resources, etc. We can now establish three possible uses for such a net fertility.

1) The net fertility can simply be added *directly* to disposition stock. For example, if an aboriginal tribe finds a method of doing seven hours of work in six hours, and uses the hour saved for leisure time and intra-tribal communication instead of working an added hour, it can be said to be directly adding to the disposition stock.

2) One could also *indirectly* increase the disposition stock. This would entail working or producing goods for the extra hour in the example above.

3) It is also possible to use the economic gains to contribute to future *production*. This could be accomplished by making tools or improving technology so that it would be possible to create a net fertility in the future. In

this method not the present, but the future, disposition stock is increased. As soon as the new tools or machines are completed, they can be viewed as part of the disposition stock because of their productive potential.

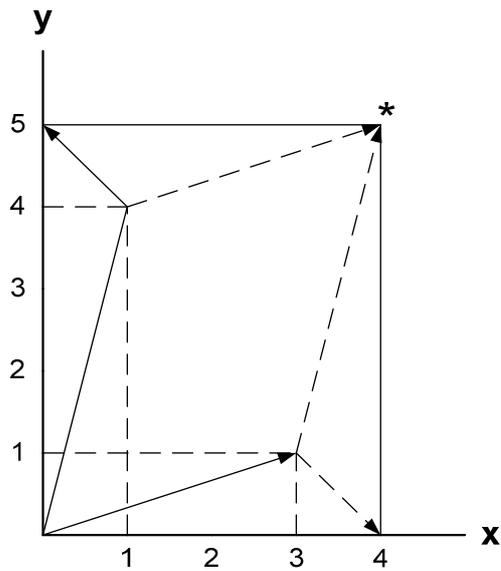
4) The net fertility could also be used to increase the quality of fulfillment of preservation needs.

Finally, we must add one more category of production costs - capital costs. These are the depreciation costs of present stocks of machinery, tools, etc. An accurate accounting of total costs must make allowances for accumulated depreciation.

On the basis of this short and incomplete analysis we can already supply a new definition of economic "growth." Economic growth is the net addition to the disposition stock, qualified by the requirement that the preservation needs of physical and mental health, the ecosystem, and all the possibilities for a healthy cultural and social life are being cared for according to the norm of stewardship. Economic growth may be improperly valued by the economic agents of a given culture. For this reason, the economist must investigate the long-term consequences of existing economic growth patterns with an eye to the possible exhaustion of the existing common disposition stock.

One problem must still be dealt with before we arrive at our preliminary conclusions. When speaking of the production of machinery and of food, the latter produced with the aid of machinery, we are [34] including *two* production goods in our model, both of which have their own costs of production and replacement. In such a situation a process of *exchange* is inevitable. In his masterly book, **Commodities in Terms of Commodities**, Sraffa has shown that the exchange relationship between the production of two goods such as food and machinery, both requiring inputs of food and machinery, will be fixed as long as a net surplus does not result from their production. If a net surplus, or in our terms a net fertility, results from their production, the outcome however is indeterminate. Hence, in their exchange under these latter circumstances, *subjective economic valuation* must play a role. We observe, then, a second necessary element of economic valuation within society. The first element of evaluation was present in weighing the losses to the disposition stock of non-renewable resources against the gains to that stock which resulted from a production process. This second element of evaluation enters economic analysis when comparing the component gains brought to the overall disposition stock by different consumption goods. Both forms of evaluation are inescapable in any culture,

A) Production without a surplus



$$3x + 1y = 4x$$

$$\frac{1x}{4x} + \frac{4y}{5y} = 1$$

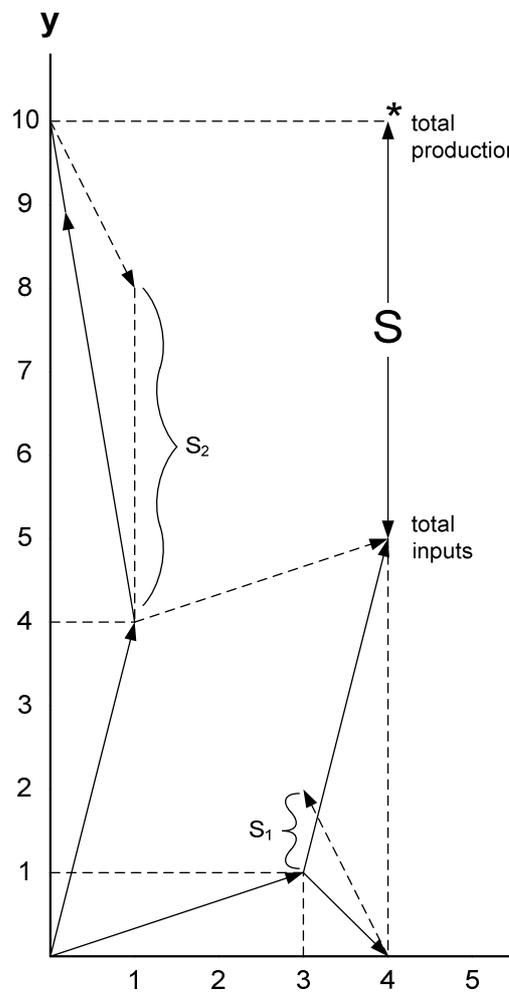
a sustainable economy

Exchange of 1x for 1y necessary to repeat the sequence

* Total production = total input

x = food
y = steel

B) Production with a surplus



(A) $3x + 1y = 4x$
(B) $\frac{1x}{4x} + \frac{4y}{5y} = 10y$

Exchange of 2y = 1x makes surplus visible

Net residue A = 1y (S₁)
Net residue B = 4y (S₂)

The exchange rate determines the distribution of the net fruits

x = food
y = steel

Fig 2 Economizing according to Sraffa
("production of commodities in terms of commodities")

Economic Weighing in a Consumer Household

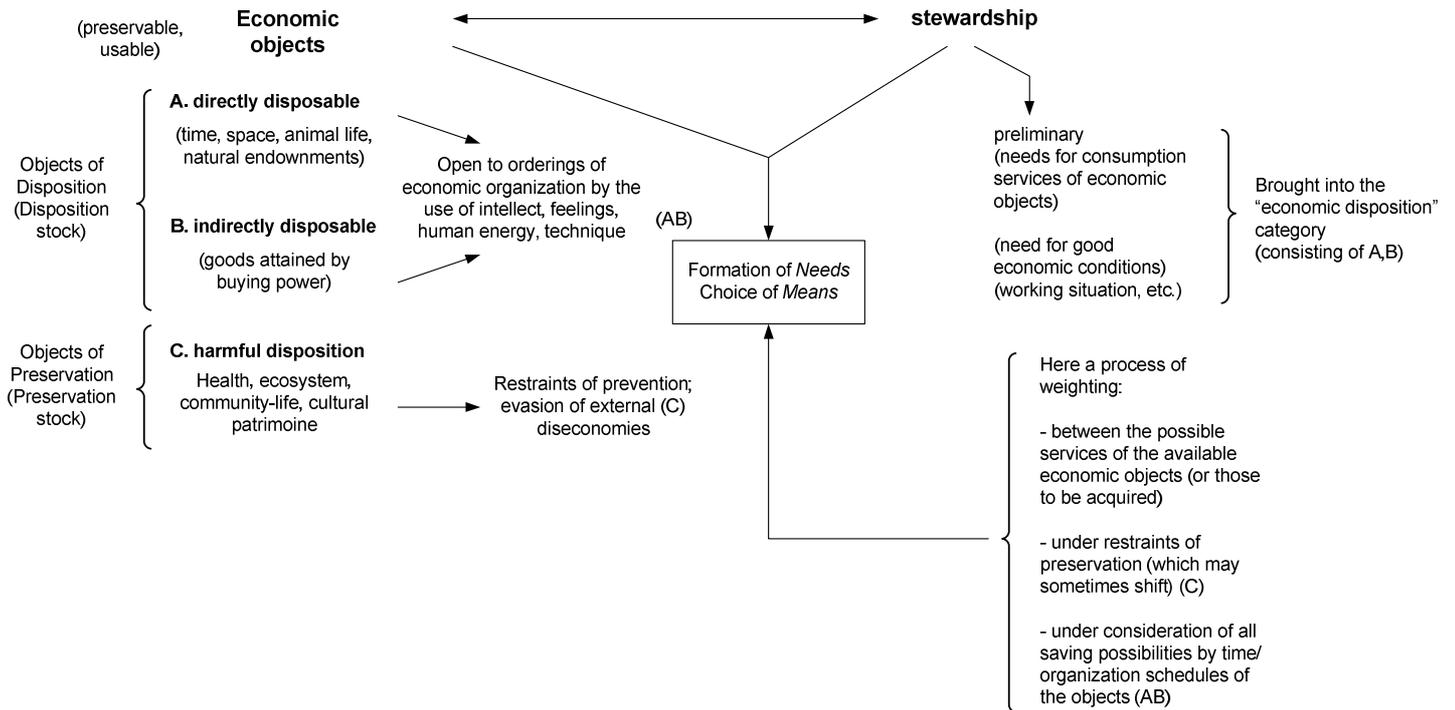


Fig 3 Economic Weighing in a Consumer Household

4.5. Implications for a "complex" economy

Modern economies are, of course, far more complex than the accompanying illustrations indicate. In the graphical illustration only two goods and one exchange activity are mentioned whereas in reality there is a large quantity of goods and many possibilities for exchange. This is only one of many substantial differences. In our developing culture, responsibilities are differentiated amongst the various institutions. Government has the responsibility of establishing its preservation needs according to the norm of public justice. Each production-household (the right hand part of the picture) has as its mandate an internal possibility to economize. (The state can be pictured as present at both sides of the illustration, internally economizing, as well as producing public services for the nation as a whole).

This differentiation does not, however, change our basic approach which is oriented to the mandate of preservation, while disposing of goods, services and resources fruitfully. But we can now understand more clearly what this

mandate of preservation means. Preservation of a culture refers to the preservation of the government's ability to act for public *justice*, the preservation of the family's ability to act according to its *ethical* calling, and the preservation of the potential social production associations to carry out their *stewardship* mandate. And in addition to these institutions and associations, we must recognize the right to economic existence of churches and corresponding religious institutions which are qualified by a *faith* aspect, as well as many other cultural groups and human, social inter-relationships which bear diverse normative qualifications.

Preservation, therefore, is always bound to a diversity of normativities. Preservation needs have their origin in the great variety of normative human callings, callings to promote justice, [38]¹² love, to worship, to give heartfelt charity. Only by listening to these normative principles can a culture be preserved and maintain the possibility for harmonious development.

The implication for economic theory is that preservation needs can only be fully understood in terms of their normative background. These non-economic norms present themselves in society in such a way that human subjects act according to their normative responsibility for family life, for example, in their economic decision making. Another implication is that an enlargement or increase in the disposition stock is useless, *unless* it is oriented in some way to a more complete fulfillment of the variety of normative tasks of mankind. An increase in the stock can never be a goal in itself, as an economic goal apart from other goals. Any increase must have a link with present or future preservation needs, as these needs are *normatively* (not irresponsibly) expressed.

As should be clear from this vantage point, we must raise serious questions when we consider the absolute commitment to a production-orientation of both the capitalist and communist economic systems in modern society. This production or growth-orientation is not only present within our

¹² Page 35 contains Fig 1 Farm Family and Industrial Family; page 36 contains Fig 2 "Economizing according to Sraffa; page 37 contains Fig 3. "Economic Weighing in a Consumer Household."

economic systems, but is an essential feature of these systems. They are organized in principle to attain a permanent and limitless growth of output and consumption. Without this "security" provided by the growth process, many economists believe that our society will become unstable and give rise to unemployment, to large deficits in the national accounts, and to inflation. But is there really a sound economic base for this effort to maintain continual growth, an effort which has been supported by the *theoretical* fiction of the limitless character of human wants? This shall be the first question to which we will address ourselves in the following section, a section which attempts to make use of the theoretical insights which we have gained here.

Section 5

A Few Illustrations

5.1. The Failure of the Continuous-Growth Ideal

The theory of economic systems usually distinguishes three basic types of social economic organization: the traditional economy, the market economy, and the command economy. The first type is usually described as "primitive" and is not regarded as interesting because it is not based on growth in either needs or production. As soon as economic expansion occurs the choice between a market or a command economy, or a whole range of "mixed" economies between these two extremes, is believed to be inevitable. Both systems are perceived as organizational devices to order ("run") the growth process.

[39] An economic system, however, is much more than an organizational device; it is an expression of a style of culture. In a human culture there may be a religious impetus to give almost absolute priority to the ongoing "process" of science, technical development and economic growth, as measured by an ever-increasing stream of material goods. This priority does not have a basis in a normative response to economic life, but is founded on a *belief* that "progress" will automatically guarantee the increase of human happiness.

What is the economic result when such a cultural and religious choice is embodied in an economic system? We will mention five inevitable consequences, which all can be seen as a violation of real *oikonomia* or stewardship.

The *first* consequence is that few or no *preservation restraints* are recognized. Not only nature, but also human life is "used" in the most "productive" or efficient way. "Social costs" emerge in the form of adverse pollution effects on the environment, poor working conditions, which affect human health, over-cultivation of the soil, and the subjugation of the worker to the technological workplace, which gives him no joy in the fruit of his labor and begins to destroy his mental health. The disposition stock grows rapidly in terms of the amount of consumption goods produced but the potential of that stock to serve its core purpose, the preservation of culture itself, is gravely threatened.

The *second* consequence is that the necessary *costs of compensation* are only partially paid. Some components of the disposition stock are not replenished, since nothing substitutes for the stock that was removed in the production process. The result is two-fold: first, a money-surplus emerges, which is substantially higher than the *net-fertility* which is being produced. This surplus usually leads only to higher capital investment, which is but one of the three possible uses of a production surplus (cf. 4.4), and thereby to higher production outputs. Second, because of the limited supply of resources, physical limits upon the possibility of continued growth of this output will become evident.

The *third* consequence is that, as growth continues, two of the elements of the preservation stock, space and time, will become increasingly scarce. A space-scarcity appears when high population densities are needed to sustain high production centers. Because of that lack of space in urban areas, people

are forced to "stack up" their domiciles, giving rise to the sky-scraper phenomenon. A time-scarcity is created since not only production, but also consumption, requires increasing amounts of time: time to buy, time to maintain, and time to dispose of consumption goods. As material wealth increases, more and more time is consumed in the relation with "things," and less time is available for inter-personal relations. In Martin Buber's terms, the dominance of the I-it relation endangers the I-You relation in a society.

[40] There are at least two further consequences of the limitation of time in the acquisitive economy. First, the individual's time-schedule is characterized by increasing "haste," combined with increasing loneliness and alienation in the midst of an affluent society because people no longer have time for one another. Second, production goods appear which are designed to save time for the consuming individual. Throw-away articles, convenience and fast foods, time-saving household appliances, and a functional, sterile style of treatment for the lonely, aged and overstressed people all serve to create more time for consumption. Seemingly these developments would add to the preservation stock, but in most cases we find they are only an inadequate substitution for the previous losses in the preservation stock in terms of culturally necessary time (family time, communication time, etc.). The mobile CB-unit can be so overwhelmingly successful only in a culture which is starved for communication time.

A deliberate cultural choice for consumption growth has led to a *fourth* consequence, one which the concept of the *social* limits to growth (Fred Hirsch, **The Social Limits to Growth**) makes apparent. This concept suggests that increasing production leads to a reduction of scarcity, but many "amenities" of life become increasingly difficult to obtain. For instance, the phenomenal "growth" of urban and suburban areas has closed off many opportunities for a direct contact with nature. The problem was temporarily relieved by the production and use of the private automobile, permitting people to "get away from it all," but now the congestion of the cities migrates to the national parks every summer, and true "wilderness" becomes increasingly hard to find.

The *fifth* consequence is a very special one - the simultaneous emergence of *system-scarcity* and *system-abundance*. It is only a *systemic* scarcity or abundance, for the system "makes" scarce what in reality is not scarce at all, and "creates" abundance where true economic surplus does not exist.

System-scarcity is most obvious in the area of human wants. Human wants are, of course, not scarce. But within a growth-oriented system a system-scarcity of wants does arise. For the continuation of production-growth remains crucial to the entire system; it is the core, the root of the fragile stability of the economy. But this implies that, even if the consumer finds his life saturated with goods, or perhaps wishes to spend more time with his family and less with his possessions (his TV, stereo, golf clubs, etc.) he must nevertheless continue to consume in order to maintain economic stability. In the words of then President Eisenhower, "It is the duty of every American to consume." For this reason, the system provides itself with a surplus-draining industry - advertising - to *enforce* higher consumption levels. This consumer stimulation is necessary to a production-centered economic system since, in order for production to continue, the relative scarcity of wants must be eliminated through want-"creation".

[41] But such a use of the instruments of commercial pressure on human desires is in flagrant contradiction to the mandate of stewardship. It is a pressure which creates a non-normative development of cultural human needs, pushing them beyond the needs of human calling. It means, moreover, that scarce resources are indiscriminately wasted, resources which are badly needed to feed people in other parts of the world, and which would aid developing nations in their efforts to create responsible economic growth for the preserving of life and culture.

But a system-abundance also arises in the growth economy. Human labor is gradually transformed into a surplus commodity by means of capital-intensive methods of production. This abundance develops despite the fact that, from the point of view of stewardship, the failure to employ offered-labor must be valued as wasteful. This artificial abundance is a result of the priority placed upon economic growth before all other ends, because as soon as capital can be more efficient than labor in the production process, such machinery will be introduced whether or not job opportunities are eliminated.

But this bias toward capital-intensive means of production cannot be seen as an economically responsible orientation. "Efficiency," as the economist uses that term, is not synonymous with "stewardship," Efficiency is devaluated into an instrumental principle within a production-obsessed system, while stewardship is a non-instrumental norm which holds for any economic order, pointing to the need to preserve the serviceability of human culture.

5.2. Structural Unemployment

In the present context structural unemployment is defined in the narrow sense of unemployment due to a shift in the production process from labor-intensive toward capital-intensive methods. How do we economically evaluate such a shift and what are the conditions necessary to cure structural unemployment?

On the macro-economic level, from the vantage point of preservation by means of fruitful disposition, we must first of all notice that wages paid cannot be seen as full economic costs. Costs are only those expenses which are really needed to maintain the disposition stock of the laborer's family on such a level that the labor-effort can be reproduced in the future (without harm for the existence of the family as a whole). Part of present wages therefore do not have the character of economic costs, but of *revenues*: they represent a share of the laborers in the money-gains of the production-household. Taking the wage-level as the level of real *costs* of labor-input means therefore an *over-estimation* of those costs in our economic system.

Secondly, we must also realize that only few people regard unemployment as a welcome addition to their leisure time. Most of the unemployed suffer a "disutility" while they are out of work. But this unfulfilled preservation-need is not registered in the market, nor is [42] it accounted for in present economic theory. Existing theory holds the opinion that work is essentially a disutility and that additional leisure time is a utility, a stance which was challenged already many years ago by Hobson (**Work and Wealth**, 1914).

The cost of capital, viewed from the same vantage point, is at the same

underestimated in our economic system. Generally the input of capital requires a greater use of energy, space, and environmental components than labor. These additional costs are often not reflected in the price of capital, (In the case of the environment, the costs are partially accounted for through legislation, although present energy prices, for instance, certainly do not reflect adequately possible future depletion of supply).

Consequently, seen from a macro-economic point of view, labor is underutilized relative to capital. Economizing, against the background of the preservation of culture and the maintenance of the preservation stock, demands therefore a further substitution of *labor* for capital.

But what are the implications of this on the *micro-economic* level? Some economists suggest that the only way to alter the current situation would be to decrease the macro wage-rate and to increase the price of capital. Within a market framework this sounds very logical. But from a stewardly vantage point, there is no reason why the economic (market) system should not itself be brought into question. In short, we must be critical of the relations between income and economic contribution which are established in the market. The time-honored maxim, that, in the market everything and everyone gets what they're worth, is perhaps not so realistic.

In our economic system, then, capital revenue is regarded as an asset, while wage-payments are considered to be liabilities. But from a broader economic point of view, this statement is fully in-correct. Only a portion of the wages belong to the costs of production, namely, that part of wage-income which is necessary for the maintenance of the disposition stock of the family and the corresponding possibility of reproducing the labor effort. Similarly, a part of the revenues of capital properly belong in the realm of economic costs, specifically that part which is necessary to uphold the capital-stock of the capital-owners in question.

The treatment of wages is especially important, since, while part of the wage-bill does belong to the cost side, the portion of wages which exceeds the costs of reproduction must be considered as a part of the benefit accruing to the production-household (firm) *as a social unit* (which is afterwards transferred to the wage-earners). The legal structure of the corporation is misleading in this situation, for it does not correspond with true economic costs and benefits.

The implication is that in an alternative structure of enterprise, one, for example, in which there is a joint sharing of the fruits of the enterprise between the owners of capital and the laborers, one in [43] which the laborers own the company and pay a yearly compensation for hired capital, a more stewardly allocation of capital relative to labor would be possible. Wages would then be divided into two components: a fixed, guaranteed portion, enough for the compensation of real labor costs; and a flexible part, which expresses the share of labor in the *net* profitability of the production-household. This would make it possible to maintain labor inputs in the production-household to a far greater extent than is now possible. For as long as the fixed portion of the wage can be paid out, and the *basic* costs of the capital can be reimbursed, the economic continuity of the firm is guaranteed. The laborers might be prepared to accept the loss of "productive efficiency" (and the consequent drop in wage rates) if they can view the production household as *their* common responsibility. The

current structure of the firm, therefore, has important economic consequences, because it almost unavoidably increases structural unemployment.

This argument can be made more general if we are willing to question seriously the goal of our present economic system: the increase of production and economic growth. This goal corresponds with a strong "result" - orientation toward labor and capital activities. There is only one criterion for the allocation of labor and capital in the production process: the maximization of income. This definition of "efficiency" drives all enterprises to attain the highest possible level of money output. But stewardship is different from financial efficiency. Stewardship refers to preservation by fruitful disposition. That norm calls as well for the preservation of employment possibilities and the establishment of human, creative working conditions. (In the norm of stewardship, the extra economic norms of life - norms of justice, ethics, social behavior, etc. - are therefore presupposed). Stewardship, in our time, means more than a one-way flow from productive inputs to (maximum) consumption and income results, and it explicitly militates against an understanding of labor as a means to the sole end of consumeristic bliss. Rather, stewardship requires that the flow runs in at least *two* directions. The flow not only has to run in the direction which orients production labor to consumption, and to the income, which is a necessary condition for consumption, but also in the *opposite* direction, which means that consumption and income levels can be stabilized, or even decreased, as a means of creating room for meaningful work.

Only in this way can our enslavement to the growth-ideal be ended, and the preservation of humanness in the workplace be restored. This is not possible, however, without a sacrifice of a part of the *revenues*, which accrue now to both labor and the owners of capital. For as soon as "restraints" upon the nature of work-activity are introduced so that, for instance, machinery becomes less predominant in the production process, we find that productivity in physical and monetary terms is likely to decrease. Only with such a sacrifice of a part of the present revenues which flow to labor and capital (above their costs) can such a production-household-firm preserve itself in a competitive environment.

[44] As soon as the necessary costs of production are met, the additional benefits should not be channeled immediately into capital and labor income, but should rather be used to increase the economic meaningfulness of the firm itself. This can happen as it interacts externally with its immediate social and geographical environment (for instance, by decreasing its pollution effects, or by creating useful goods and services for the community), but also as it functions internally, in the improvement of labor conditions.

Production households have a calling to be institutions of stewardship. Under a narrow "efficiency" principle this calling cannot be promoted, but is perhaps hindered, and it may even be rendered impossible. That principle is only a partial distorted realization (positivization) of economic normativity:

5.3. The Concept of Causality

In the discussion of the concept of causality in Section 3.5, reference was made to the book by John Hicks, **Causality in Economics**, in which Hicks

made the distinction between an old causality and new causality. Hicks describes the decline of the old concept of causality, "a system of thought, in which causes are always thought of as actions by someone, either a human agent or a supernatural agent" (p. 7). This concept of causality was always intertwined with Deism, the belief in a God who acts through natural laws. Therefore when trust in the inherent "goodness" of the natural order was shattered in economic life and theory (giving rise to the "dismal science" of Malthus and Ricardo), the old concept of causality began to collapse, and a new one arose in its place. "The solution was found by the philosophers of the Enlightenment. It was the old association between causality and responsibility which had to be rejected. Causality is a matter of explanation; but when we explain we do not necessarily condemn," Hicks concludes: "The new concept of causality was a permanent acquisition." Since the time of the Enlightenment, it has been this concept of causality which economic science employs.

This shift in the concept of causality had, as we have seen, deep implications, precisely because the element of human responsibility was thus eliminated from the purview of economic theory. One can scientifically "prove" that economic fact B is a result of economic fact A only if one presupposes that economic subjects have acted in such a way as to make this relation possible. (For example, in order to "explain" a rise in the price of apples as a consequence of a poor apple harvest, the economist must assume that economic subjects are competing among each other to buy up the now reduced supply of apples). In order to obtain a predictable outcome, then, the economist must take economic motives and ways of behavior as *given*. But this obviously means that the economist is in fact not really explaining economic behavior at all! He only explains "facts" with the aid of the various *givens* of human economic behavior. The economic subject is not accountable for his deeds, since he cannot help but act [45] in the way he does. Not only the consumers but also the entrepreneurs and the unions are "programmed" to respond in certain ways. The consequence is that the economic system becomes a mechanism, and no one is accountable for the results of that system. Only the system fails - the economic subjects never do.

But if we believe that people are called to be stewards in their economic life, a life in which they are able to respond obediently or disobediently to this call, we can see that this mechanical concept of causality is unacceptable. Then indeed the link between causality and responsibility must be restored. Such a link does not, however, necessitate a return to Deism, as Hicks intimates. People are responsible for their economic actions, and there is no economic action which cannot be attributed to human causes.

This is even true in the instance of a natural disaster (an example Hicks uses to attempt to show the failure of the old concept of causality). If a natural disaster in a certain area "causes" a crop failure, we could say that the resulting famine was either due to a failing of the economic subjects to allow for the possibility of disaster, or that they took the economic risk that such a disaster would not occur. It is only in the context of human economic calculations and responsibilities that a natural disaster can have economic consequences,

But what effect does an alternative concept of causality have on economic theory? An illustration may help us to see the difference between these two different ways of understanding causality.

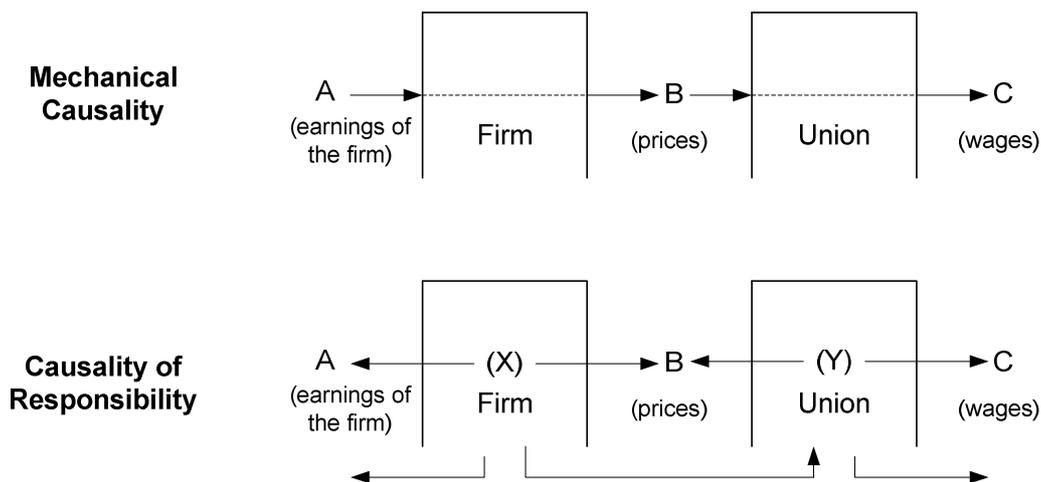


Fig 4 Mechanical Causality and Causality of responsibility

The "new" mechanical causality explains fact B, a higher price, for example, as a result of fact A, say, a lower business income, *given* the subjective preferences of the firm, which are in turn subject to the criterion of profit-maximization. The higher price, B, leads to C, a higher wage demand. Given the preference of the unions which strive for constant, if not increasing, real wages. A causes B, B causes C, and the outcome is fully predictable given the preferences of firms and labor unions. Inflation can then be explained in a mechanical way; it is traced back to its *objective* fact A.

[46] The second illustration gives us another view of the economic process. Here attention is given to the *subjective* decisions which are taken: decision X of the firm to ask a higher price, and decision Y of the union to demand higher wages. Here the crucial question is how these *decisions* are related. The firm is economically responsible for its decision to ask for higher prices but also for the consequent effect that such a change might have on the decisions of the labor union given their responsibility. Of course, labor may over-react relative to the price change, and for such reactions the firm cannot be held responsible. Yet the firm is economically responsible for those patterns of action which it induces in the appropriate economic behavior of other economic agents.

In this way we can study inflation as an economic phenomenon (for instance, fact B is an impulse given to the labor union as a consequence of the firm's price-decision), we can study *reactions* (for example, fact C is the reaction of the labor union to the price-impulse just as fact B is a reaction of the firm to its low earnings), and we can study *economic responsibilities* (each economic subject-is called to avoid economic overreactions). With such a concept of causality it is possible to trace the causes, for instance, of a cost-inflation to the over-reaction of banks, firms, labor unions, and government. We see that inflation is not a natural phenomenon, an inevitable fate. It is caused in one way or another by a failure of human responsibility, either because responsibilities have been abused or because of the distorted way in which they are distributed in an economic system (Cf. Section 5.5).

The question concerning what constitutes an adequate reaction or an over-reaction to economic impulses is a typically economic question. In order tentatively to answer such a question we must study the internal economic

processes within a social unit (a firm, a family, a government, or a union, for example) as it develops according to its own qualifying norm. The state, for instance, weighs all the public interests of society according to the norm of justice, and we cannot say anything meaningful about the role of the state in economic life without recognizing that fact. In addition, the reaction of a state to a higher price - and wage-level (an economic impulse) cannot be adequately understood until we recognize that the state has to deal with *many* public "interests," for instance, the need for a stable price-level *as well as* the need for full employment. These various public interests have to be weighed against each other according to the state's own unique interpretation of "justice," before the state can take any action. This is none other than the role of government in the preservation of a culture - it must determine its own economic needs in relation to that role. If the economist does not reckon with this qualified nature of the state's economic activity, he will be unable to determine whether the reaction of the state to certain impulses is appropriate or excessive.

In such an evaluation, however, the economist must take into account the degree to which it was possible for a responsible economic [47] subject to *foresee* the precise economic consequences of a given economic decision. There is a parallel here with the concept of juridical causality. Before any verdict can be delivered, the judge must not only determine whether the accused's action actually *caused* the harm that was done, but must also determine whether the person could foresee the harmful effects of his actions. If such effects were not foreseeable, there would be no basis on which the judge could speak of juridical or legal accountability. Similarly, the consumer who purchases that one car which accidentally pushes the pollution level over the environmentally tolerable limit so that environmental measures are necessary, cannot be said to have caused the full environmental protection decision. All the consumers together bear the economic responsibility for the pollution levels within a given society. *Together* they can indeed "foresee" that a certain level of consumption will be seen by the state as an impulse to tighten pollution restrictions.

5.4. Causality and the Case of Pollution

The case of the polluting firm provides a good illustration of the theoretic usefulness of an *economic* (as opposed to a *mechanical*) concept of causality. It is a case which gives current economic theory a great deal of trouble since, in the case of air pollution, for example, there is a change in the natural environment which must correspond to a change in one of the data of economic theory. In this way, an economic fact changes the data constellation, thereby reversing the normal flow of current theory from (given) data to (predicted) facts. Moreover, economic theory is further hindered in coping with such a problem because air pollution cannot be registered in the market: it is not a "pecuniary external diseconomy" (Scitovsky). Because it is a non-priced scarcity, it lies outside the normal purview of economic theory.

Welfare economics has great difficulty in dealing with the problem of pollution, and several new approaches have been directed at this problem of bringing a non-priced scarcity to expression in market terms. It prompted Mishan, for instance, to construct a fictional two-party contract which could be drawn up on the basis of so-called "amenity rights." These rights permit the afflicted persons to make a claim on polluting firms for financial compensation, and the amount of this compensation is then held to be the "price" of pollution.

The non-welfare economist is usually more modest in this respect. For instance, Alfred Marshall dealt only with external diseconomies of a *technological* nature. As long as the diseconomy had a technical solution, its "price" was fully predictable. The non-welfare economist leaves out, however, the more indeterminate instances of the external side-effects of production and thereby arbitrarily solves his problem.

This sort of mental gymnastics can be avoided if we shift from a mechanical type of causality (which attempts to discover sequences of fact) to an economic type (which deals with economic accountability). From the latter point of view the question of interest becomes: what [48] cost is the polluting firm *shifting* onto other economic subjects, for example, the families living in the vicinity of the firm? What are the impulses given to these families (in relation to their very need to a continued existence) which force them to react? And indeed, we encounter a whole series of possible reactions, if the health of the family is threatened, it may ask for medical assistance, but it may also decide simply to move, and to sell their house at its decreased market value. Here we should note that another datum of economic theory is changing, the subjective preferences of the family. But it is a change for which the *firm* is accountable! For this is an instance of economic causality. The whole economic setting of the family has changed, and it must reweigh all the possible services of economic entities and objects. The family must continue to preserve its full-orbed existence, on the ethically-qualified basis of the care which is due each member of the family. Thus the family must spend time, income, and energy to compensate for the imputed harm and to minimize that harm for the future.

Only the outcome of this complex weighing (economizing) process on the part of the families involved can reveal the true economic cost of the air pollution, and only by understanding the family as an organic, living entity can we have a good insight into the causality which operates here, But even so, an excessive reaction is possible. For instance, if the family confronted with pollution were able to protect itself fully by taking certain preventative measures, but decided instead to move, the firm is economically responsible for the induced cost of the preventative measures, but not for the cost of the move. Further, it is assumed that the family allocates its time, income, and energy in an *economizing* way in its effort to avoid, prevent, or eliminate the harmful effects of the pollution. For if they acted wastefully, the compensation which they might demand from the firm would exceed the true economic cost of the firm's pollution.

Thus, we must recognize that between the impulse to the family of increasing pollution and the family's efforts to deal with that pollution, there is a *human*, and not a mechanical link. The true link is the economic responsibility of the family. Only by means of that responsibility can the impulse of pollution be "organically" translated into a necessary reaction in accordance with the family's

own style of preservation and fruitful disposition, a style of economic behavior which is guided by ethical considerations (in this case the means by which the family can continue to provide mutual care in relation to all its members).

Thus the following classification of the costs of pollution can be made :

a) *direct costs*: losses caused by a direct (technical, chemical) effect on materials and buildings, such as corrosion, chemical reactions; soot, etc.

b) *indirect costs*: the costs imposed on the environment, flora and fauna, but also on human health. These costs inevitably result in the diminution of economic values, and, where human health is concerned, lead to medical costs and perhaps to a [49] loss in the ability to work and to earn an income.

c) *complementary costs*: costs which result from the necessity of the household to establish a new *economic coherence* for itself, its having been disrupted by the direct and indirect harmful effects a) and b). For example, the direct cost created by a chemical reaction with the asphalt roof shingles of a house may result in the complementary cost of water damage to the household attic, or the family may be unable to farm their land because of the indirect cost to the head of the household when he is forced to remain in the hospital for a summer because of his reaction to an industrial pollutant.

d) *induced costs*: costs resulting from the economic *reaction* of the family to a changed situation, These costs include the cost of preventing further harm. Induced costs imply that the datum of subjective preferences of the family has changed, and the family reacts by making economic decisions such as relocation of residence or other measures to protect themselves from harm.

e) *indirectly-induced costs*: costs which accrue to the state and to other households when particularly the state takes separate counter-measures to restrict the firm's pollution. For instance, if regional planning and conservation policies are altered to reflect the reality of pollution, costs might be created both for government and for other families and firms (the ban of DDT, for example).

Normally the economist will consider only a small part of these true costs to be economically relevant, because he insists on a mechanical (not an economic) view of causality.

He is inclined to consider only those consequences that are technologically determinable or fully predictable as relevant for his investigation. So also the true costs of pollution tend to be underestimated by present economists, due to the flaw in their present economic methodology. (For a more detailed treatment see **Ongeprijsde Schaarste** ["Unpriced Scarcity"], The Hague: 1970, by Bob Goudzwaard, which includes an [English summary](#)).

5.5. Cyclical Disturbances: Unemployment, Demand Inflation

The existence of cyclical disturbances in the economy has always puzzled the economist. These disturbances, appearing in the patterns of production, investments, prices, and employment, were often viewed as inevitable law, occurring with unavoidable regularity. In certain theories it was stressed that these disturbances could be avoided by improving the workings of the economic "mechanism." In the early classical theory, the possibility of cyclical disturbances was often excluded because they did not fit into the prevailing concept of a harmonious natural order. According to such a concept,

the market equilibria existed by natural providence, and a harmonious outcome for the economic process as a whole was thereby guaranteed (i.e., there could *not* be cyclical disturbances).

Seldom in these theories is there a hint that cyclical disturbances have a deeper dimension than that of a mechanical causality. [50] These disturbances are either seen as a mechanical fate, as a short-coming in the economic mechanism itself, or as the result of government intervention in the market process. Instead, we must recognize that economic life is a part of human and social life, and that these disturbances are caused by the failure of humans to uphold their economic responsibilities. Cyclical disturbances must be interpreted as sinful human violations of economic normativity. If people who want to work cannot, due to a limited job market, or are deprived of their real income by a sharply rising price level, we must admit that a dimension of a-normative economic behavior is present.

There are two dimensions to a failure of humans to live up to their economic responsibilities. First, it is possible that an economic system may be organized in such a way as to prevent responsible economic decisions, for example, by the way it distributes economic power and authority. This is a failure inherent in the system itself, But second, humans may fail in their economic responsibilities in a very direct way - because of a wasteful use of the disposition stock. In this case the economic system must be accepted at face value, for it is the subjects *within* the system that are acting uneconomically.

Let us begin our analysis of cyclical disturbances with the classical approach, which states that the possibility of cyclical disturbances is excluded because every produced good, in principle, creates its own demand, and therefore, its own market (*loi des debauches*). Every production period, creating a supply of marketable goods, presupposes that enough income is generated (in the form of wages, rents, and profit) to purchase all the produced goods, assuming that the portion of income which is not spent (savings) is transferred, by the capital market, to the producers, as investment funds with which they can purchase the capital goods which they require for the next production period. Therefore in no case can buying power decline, which would have entailed less than full employment.

This theory has since been proven incorrect. For one thing, it presupposes that enough money will be available to permit a continuously growing production output without a corresponding decline in the general price level. A second and more important reason stems from the fact that savings and investments are not necessarily brought into equilibrium by the "price" of capital - the interest rate. This is the heart of the Keynesian analysis of the origin of cyclical disturbances.

It is interesting to observe here that the first presupposition - the unlimited availability of the money supply - has, to some extent, led economists to an awareness of economic responsibility of the state or federal bank with respect to its guarantee of an adequate supply of money in society (a responsibility of which Friedman never tires of reminding the U.S. government). Although this awareness of an economic responsibility exists, there is at the same time a high degree of unwillingness on the part of all economists to evaluate savings and investment decisions to save in terms of a comparable

[51] economic responsibility, i.e., the need to invest only what has been saved.

A divergence between savings and investment levels could not arise if the decisions to save and to invest were made by the same entity, be it person, household or institution. This problem has its roots, then, in the evolution of production into separate, large-scale decision-makers, firms which require enormous amounts of capital, made available to them by a multitude of anonymous shareholders - a type of absentee ownership. The production entities subsidize their financial needs through bank borrowing, a process which has its origin in the ability of banks to create money. Money creation, therefore, fills the gap between the desired investment level and the available level of savings. The government, similarly, finances its investment outlays not only through taxes and official bank loans, but also by the frequent use of its ability to create money.

The very possibility of a divergence between savings and investment, therefore, points to the fact that somehow the choice of the investment level in society is made into an *independent* variable in our economic system! The system can create its own financial resources and hence its own investment. Somehow the investment level has been separated from its true economic root of the net surplus created by a responsible economizing in the production and the consumption spheres. The question can then be raised: why has investment not been restricted to the maximum level of real societal savings, but has instead been allowed to become an economically independent and financially autonomous entity?

Here again the answer lies in the basic orientation of our whole economic system - the maximization of economic expansion as a guarantee for growing human happiness (see Section 4.5). If the ultimate meaning of economic life for a society is oriented toward the goals of increasing production and a steadily increasing income level, with only secondary consideration for the preservation of nature and culture, then this substantial economic expansion demands an unrestricted, autonomous development of all investment decisions. Our growing happiness and progress, in its economic as well as its technological aspects, is therefore unattainable without an unlimited investment.

Our economic system is then nothing but an extension of the autonomous development of the investment level. If there is a tendency for growing investment, we pursue it and make it more possible with money creation. If this investment outburst leads to economic saturation or over-extends the existing production capacity, we bounce from there to a vicious unemployment. We somehow accept it as the natural consequence of our economic process. We forget that the unemployment is really a result of an unnaturally accelerated but "desirable" period of strong economic growth. This is the unavoidable result of an economic system which follows the whims of investment patterns, believing that they will ever and always lead us to a fair and distant land - "that's progress, m' boy".

[52] In terms of responsibility, therefore, one can say that cyclical disturbances will continue to occur as long as investments are not oriented to economic restrictions, restrictions which proceed from a responsible willingness to save, and not always spend.

This is a strange conclusion for anyone who is used to thinking in

Keynesian terms about cyclical disturbances. It was Keynes who stressed that it was a high level of savings that leads to unemployment, not to a high level of investment. He argued that if actual savings are greater than desired investment levels, the national income will diminish, as will employment. Therefore it is essential that investment, to reach and maintain full employment, is undertaken. That process will be much more rapid and successful if savings are reduced, i.e., if everyone spends most of their income. Hence, if one wishes to maintain full employment, he should not bind the investment level to the level of savings, but should make it independent of the savings levels - a conclusion just the opposite of the one we have made.

We should note, first, that economic responsibility relates not only to a responsible level of investment but also to a responsible level of savings. In the time of Keynes, the general social mood, especially that of the elite, was that progress would continue to eternity. The prospects for the future included an endless stream of dividends, greater gains, and an increasingly better life. The present was consequently all but despised; it was only the future that mattered. Combined with a very unequal distribution of income, irresponsibly high levels of savings were permitted to emerge because no limits were seen on the financial rewards of the future. The level of savings, therefore, easily exceeded that level of investment necessary to maintain full employment. A hyper-boom of investment, brought on by the enormous surplus of savings, had only to encounter the light breeze of small financial restriction to dive below the absurdly high savings-level, and thereby create a dramatic decline in national income and employment.

A responsible level of savings, therefore, can be described as that level of savings which is sufficient to utilize a fair amount of labor and to maintain the existing capital in a society. Without this the mandate to preserve labor possibilities is not fulfilled. Investment patterns may indeed be too whimsical, but savings patterns may also be too high or low to feed the investment stream.

A second comment is that the growth orientation of society leads to another phenomenon - an infinitely increasing productivity of labor. This rise in productivity becomes an iron law, enforced also by the competitive struggle. On the one hand it nurtures the belief that, with a fixed supply of labor, a continually increasing output is always possible, which is "progress" itself. But on the other hand, it implies that a constant output of material goods must be accompanied by a diminishing labor population; for, as soon as economic expansion tapers off slightly, the result is structural, technological unemployment. There is a link not only between increasing labor productivity and [53] structural unemployment, but also between the former and *cyclical* unemployment. For aggregate investment must always be increasing if labor productivity is growing, which in turn makes a continually higher level of savings inevitable if employment cycles are to be stabilized. But no society can expect to be able always to afford such demands,

The only way out of this situation appears to be that the iron law of a rising productivity must be subjected to the economic norm of stewardship (see Section 5.2). Only in an economy which learns to have "enough" out of a respect for the needs of preservation, can a lesser degree of rising productivity be accepted, and thus a degree of stabilization in investments and savings afforded. In a growth economy, instability and a divergence of savings from

investment levels will persist, making cyclical peaks and troughs unavoidable. In an "economy of enough," the levels of savings and investment remain more modest. Moreover, the moderated growth of productivity may create possibilities for returning to more small-scale types of production. These small-scale production techniques could reintroduce a far more direct and natural coordination between the decision to save and the decision to invest (Section 5.2). The investment and savings levels do not diverge as easily in a small-scale production economy as they do in a complex, large-scale growth-economy.

5.6. Distribution Problems

In the simple model constructed in Section 4.5, we made a distinction between only one disposition stock and one "block" of preservation needs. It was pointed out, however, that there is a wide differentiation of preservation needs: the needs of families, of businesses and firms, of churches, of the government, and of various social institutions such as schools and associations. In order to fulfill their cultural tasks, all of these organizations require specific disposition stocks. This does not mean that the summation of all these specific stocks is equal to the one large social disposition stock, for a "public" or "collective" stock must also be recognized. This stock consists of such things as public recreation space (beaches, parks, etc.); the seas and lake, with their stocks of fish; common property resources; and space generally to move about. This collective stock encompasses the "government stock," which includes public utilities, highways, defense armaments, etc.

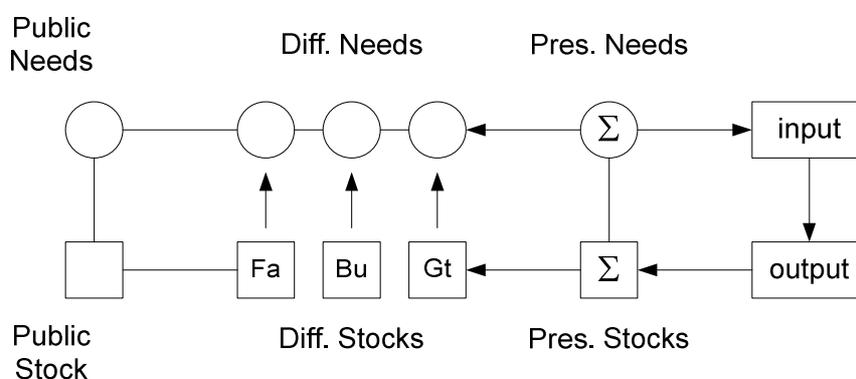


Fig 5 Needs and Stock (p. 54)

[54] How are the *shares* of social net fertility to be distributed among these various disposition stocks? Generally, there are five levels determining or in some way influencing this distribution.

The *first* level is the *rate of exchange* between the different goods and services produced, expressed in terms of each other, or directly in a money-price (see the analysis of Sraffa - section 3.3).

The *second* level is the direct determination of *productive shares* (for instance labor and capital). We already discussed this to some extent in the context of the problem of structural unemployment (see Section 5.2). This level differs from the first in that the shares of capital and labor are not simply

determined by market exchange, but are a matter of shared economic responsibility for the assignments of the production-household's fertility.

The *third* level is that of *government taxes and redistribution*. The state has the power to preserve its own stock by applying taxes, and can redistribute earned income through channels such as the social security system.

The *fourth* level is that of *economic causality* in the economic process itself. Economic subjects can shift economic burdens upon one another if they have the economic power (instrumental control) for doing so. This creates negative economic impulses for other subjects, for example, through tax, wage, or price increases. The households affected will at least try to maintain their own disposition stock, according to their normative qualification. An over-reaction on their part could mean that an even larger burden is shifted to a third household, or group of households. An often unavoidable under-reaction to the negative economic impulse by any household could mean that their distribution share is diminished, or that their disposition stock will even be decreased.

The *fifth* level is that of uncompensated *external* burdens or benefits. Environmental degradation provides a good example of this. Pollution creates new preservation needs for a household which wishes to maintain itself at its former preservation-level. However, without an adequate compensation for the corresponding costs, the burden of pollution is being shifted onto such a household. Likewise, pollution effects may overtax public stocks, which will induce the government to take public measures to compensate these losses.

This five-level approach makes clear that the distribution of economic power in a society has a great influence over the final distribution of economic benefits to the various households and public-stocks. Economic power can influence the distribution on all levels, For instance,

- a) if the rate of exchange between goods is dependent on price setting actions or institutions (level one);
- b) if the share of labor and capital is determined by unequal power relationships - employees versus employers (level two);
- c) if the government over-taxes or pays out insufficient social [55] security funds (level three);
- d) if instruments are used to shift burdens, combining an over-reaction of the causing agent with an under-reaction by the inflicting agent (level four);
- e) if no full compensation is given for external costs resulting from the suppression of the existing preservation levels of other subjects, or from the preservation level of society as a whole (level five).

This means that an analysis of the economic distribution within a society in terms of "primary" and "secondary" income distribution (the latter being governmental correction of primary shares) is too rough and incomplete to create useful insights. For example, here in the West blacks and other minority groups suffer because "basic goods" are very expensive; especially rental housing. These groups are not adequately represented by labor unions (a, b); they must bear the burden of many social costs (e.g., they often live in polluted areas of the city), and they have very limited access to the public stock of society, reserved primarily for the rich, white majority (d,e).

The relation of the West to the underdeveloped nations is also fraught with abuses of economic power. There are many aspects to our abuse of our economic power in this respect:

a) The terms of trade between the products of the poor nations and those of the rich nations are often manipulated in favor of the latter, who defend their markets through the application of tariffs and import levies and suppress the independent development of industry with the third world.

b) The labor of the poor nations is undervalued relative to the returns which invested western capital receives.

c) One of the few institutions attempting to redress the economic imbalance is development aid supplied by the rich nations; but, such aid is often tied, or is accompanied by enormous interest and principle-payment obligations. Consequently, the debts of these poor countries grow at an annual rate of more than 20 percent. In addition, this development aid has a low priority rate in the West, and is quickly cut back if the rich nations are confronted by a decline in economic growth or an increase in unemployment.

d) The shifting of burdens from rich to poor is especially accomplished through the international monetary system. For example, if the Third World countries ask higher prices for their exports, say oil, the balance of payments of the rich countries will deteriorate. The West often responds with a devaluation, or forces an acceptance of a continual depreciation of their currencies. This in turn results in a decrease in the value of Third World exports to their previous level. In another instance, the granting of dollar-credits or SDR's in the international monetary system is often tilted in favor of the developed nations, fuelling the fire of economic over-development.

[56]

e) The public stock of the Third World is often ruined (e.g., deforestation) or depleted (e.g., strip mining) by the multi-national corporations of the rich nations, through their rapid mining and resource exploiting production techniques, creating profits which flow to the West and are not used to compensate for these preservation costs.

We should also evaluate the "modernization" of the developing nations of the world in terms of preservation-economics. Often modernization is proffered as the salvation of the poor nations; Western technology is presented almost as a secular gospel, bringing happiness for the afflicted. But a "normative" evaluation of modernization reveals a more dubious, sometimes even catastrophic result, as indicated in the following.

a) Modernization does not respect the restraints of cultural preservation. It breaks upon a non-western culture with unrelenting pressure, and sets the "traditional" and "modern" sectors off against each other. The "traditional" economy, usually emphasizing sustainability, is always weaker than the technologically advanced and often western-controlled "modern" economy. A responsible choice of economic needs is thereby prevented; luxury consumption goods come into vogue with the elite, and spread dissatisfaction among the masses, those who will never be able to purchase social respectability.

b) The *natural* restraints (see Diagram I) within an economic system are also not honored by modernization. None of the costs of elimination and preservation are paid for and the national environment is often threatened. Non-renewable resources are rapidly exhausted without compensation, resulting in a loss in the public disposition stock.

c) In the modernization process the choice between labor and capital inputs is often very irresponsible. Capital-intensive methods of production are employed in the face of a superfluity of labor-availability and an obvious shortage of capital funds.

d) Wages in modernization industries are usually higher than those in the

rural sector, but only a privileged minority are accepted as part of the industrial labor force. Young people leave the country-side to find work in the cities, but find that no work is offered to them. The result is that the rural areas are deprived of their youth, while an urban mass of unemployed people add to the enormous problems of poverty and housing shortages in the cities. Again there is a gross failure in terms of economically responsible activity. The nations which do attempt to institute large-scale rural development projects continue to be burdened by economic mistakes of the past, laboring under large economic debts and a disruption of the traditional social fabric.

[57] A responsible development pattern in poor countries must begin with adequate methods of economizing, each in the context of its unique culture. This may imply that the production at the scale of small or intermediate technology would be more appropriate to their needs, because they require smaller amounts of capital, are not as susceptible to profit-drains to the West, and are of a cooperative nature in which sharing is a dominant feature. The net contribution to material economic growth may be smaller in the short run than that of a large-scale, capital-intensive fully modernized growth path. But appropriate technology will undoubtedly be more preserving, and will contribute to a higher, more stable net fertility in the long run.