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A HISTORICAL AND METHODOLOGICAL STUDY OF CHURCH AND LEADERSHIP IN INDIGENOUS TRIBES.

THE LOUISIANA STATE UNIVERSITY AND
AGRICULTURAL MURALICAL COLLEGE, PH.D., 1976.
A HISTORICAL AND METHODOLOGICAL STUDY OF ENDS AND MEANS IN ECONOMIC THEORY

A Dissertation

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in

The Department of Economics

by

Gerald Alonzo Smith
B.A., St. Louis University, 1960
M.S., University of Florida, 1971
August 1979
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In his recent book *The Steady-State Economy: The Economics of Biophysical Equilibrium and Moral Growth* Herman E. Daly develops the concept of an ends-means spectrum and suggests that economic theory with its emphasis on economic growth has been both too materialistic and not materialistic enough. In ignoring the ultimate means and the laws of thermodynamics it has been insufficiently materialistic. In ignoring the Ultimate End and ethics it has been too materialistic. There are, however, impressive intellectual traditions that criticize economic theory with its emphasis on growth in production from each of these two perspectives. Modern statements of these critical traditions are evident in current policy debates concerning economic growth, energy, the environment, etc. But the underlying issues are not new, and we can learn much from past thinkers who were perceptive enough to foresee the problems of a growth economy before they emerged in full bloom.

The object of this dissertation is then twofold. First, it attempts an historical exposition of two traditions of economists.

The first tradition has been labeled neo-malthusian and includes those economists and other scholars who because of their belief that natural resources are a unique and essential factor of production in the economic process have explicitly incorporated the biophysical environment into their economic analysis. The second tradition includes those economists who would attempt to evaluate the worth of the output of the economic system by a more ultimate goal than that used by most economists (i.e., the satisfaction of "given" wants). This second tradition would hold that the existence of this ultimate goal and a partial description of it can be derived from a study of man's human nature.

Second, the concluding portion of this study will attempt to show the methodological importance of what an acceptance of these two traditions would be for conventional economic theory. Building upon an Aristotelian epistemological foundation, the conclusion will argue for an holistic methodology which explicitly incorporates into economic analysis a consideration of the biophysical environment and the Ultimate End of man's nature. It should be emphasized that this concluding portion will be tentative and suggestive in nature.
CHAPTER I
INTRODUCTION

In his recent book *The Steady-State Economy: The Economics of Biophysical Equilibrium and Moral Growth* Herman E. Daly develops the concept of an ends-means spectrum and suggests that economic theory with its emphasis on economic growth has been both too materialistic and not materialistic enough. In ignoring the ultimate means and the laws of thermodynamics it has been insufficiently materialistic. In ignoring the Ultimate End and ethics it has been too materialistic. There are, however, impressive intellectual traditions that criticize economic theory with its emphasis on growth in production from each of these two perspectives. Modern statements of these critical traditions are evident in current policy debates concerning economic growth, energy, the environment, etc. But the underlying issues are not new, and we can learn much from past thinkers who were perceptive enough to foresee the problems of a growth economy before they emerged in full bloom.

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Second, the concluding portion of this study will attempt to show the methodological importance of what an acceptance of these two traditions would be for conventional economic theory. Building upon an Aristotelian epistemological foundation, the conclusion will argue for an holistic methodology which explicitly incorporates into economic analysis a consideration of the biophysical environment and the Ultimate End of man's nature. It should be emphasized that this concluding portion will be tentative and suggestive in nature.
The classification into conservationist and humanistic traditions is in terms of emphasis and starting point only. Many writers are to a considerable extent in both traditions. This is to be expected because the two traditions are not really so logically independent as may at first appear. For example, many questions of final goals such as distributive justice and inter-generational equity are muted if one believes that continual economic growth is biophysically possible. Likewise if one’s arena of concern is limited to satisfying as many as possible immediate and autonomous effective wants, then many long-run biophysical constraints are no longer of much interest.

Economics has often been defined as that discipline which studies the allocation of scarce means or resources among competing wants or ends. This definition has been the source of as much confusion as understanding because of an ambiguity in the meanings of the two underlined adjectives. To enlighten rather than to obfuscate, it is necessary to distinguish, in the first instance, between relative and absolute scarcity and, in the second instance, between competing autonomous ends, unrelated to any final or ultimate end, and competing contingent or intermediate ends that are derived from a single Ultimate End. Is one resource scarce only relative to another, while the aggregate of all resources is not scarce, or is the aggregate also scarce in an absolute sense? Do ends compete only as purely autonomous wants, or do they also com-
pete in terms of their capacity to serve an objective Ultimate End, even if the latter is not well-defined.

In most modern economic analysis scarcity is defined to be of the relative nature, and the goal of economic efficiency is to satisfy as many as possible of the competing demands or ends of the economic agents, which demands are perceived to be autonomous or "given," i.e., beyond analysis. Such use of the relative meaning of scarcity, although legitimate and necessary in treating with a certain type of economic problem, will almost certainly lead to misunderstandings when one discusses the issue of scarcity of resources with geologists, geographers and ecologists, whose disciplines by definition are concerned with determining the aggregate supply levels of low entropy primary matter-energy (both living and lifeless). Such a use will also lead to difficulties when discussing the issue with physicists and chemists whose second law of thermodynamics leads one to the inescapable conclusion that mankind's use of such matter-energy is limited in an absolute manner. As for the other term, in any discussion of the appropriate meaning of the phrase "competing ends," economists who use this phrase in the sense that such ends are totally autonomous with the individual will be talking at cross-purposes with philosophers, theologians and other humanists who perceive such competing ends as being determined by some more ultimate or final end of man.

It must be emphasized that in going back to the very defini-
tions of the most basic concepts in economics (scarce means, competing wants) we are definitely not playing mere "word games." Some will no doubt argue that it does not make any difference how one uses the terms of scarcity and competing, as long as one carefully defines his usage. Such an argument can be shown to be fallacious because, in the very act of defining words, one is building into one's framework of thought and analysis certain presumptions that will have drastic implications at a later stage in the analysis. Though it is important to precisely and carefully define one's terms, it is much more important to take care that such definitions are consistent with observations of reality as students of this particular area of reality perceive it. To state that it does not make any difference what the meanings of such phrases are, as long as such phrases are carefully defined, is to weave fantasies. Such fantasies may be carefully defined, they may be marvels of rigor, they may be consistent to the last detail, they may include "n" number of dimensions, they may be logical to second, and even more order conditions; but, nonetheless, they are basically fantasies since they are not consistent with the perceived reality of the acknowledged experts such as the physical chemists, on the one hand, and the humanists, on the other.

The nearest approach to discussing these issues in conventional economics theory has been in the consumer demand analysis first suggested by Carl Menger and later followed up by Kelvin Lancaster.
As Lancaster notes, "the view of some economists of an earlier generation (Menger, for example) that goods were desired in order to satisfy 'wants' was somewhat along the general line of our analysis: the various characteristics can be viewed, if you like, as each helping to satisfy some kind of 'want'."^5

Actually Menger had made a somewhat different and more perceptive observation. Menger had noted that not only did goods have characteristics which satisfy "needs" (not "wants" as Lancaster had stated)^6 but also that such "needs arise from our drives and the drives are imbedded in our nature. An imperfect satisfaction of needs leads to the stunting of our nature."^7

However, neither Menger nor Lancaster explored man's nature for clues to these "needs" or "wants." Instead, both turned their focus and analysis upon those characteristics in commodities which satisfied these "needs" or "wants."

As Menger noted, the question of needs leads directly to a discussion of man's nature. Is there a legitimate study of the nature of man called the philosophy of man, or is such a philosophy impossible, and thus a fraudulent endeavor? Such a philosophy would have to answer questions about the essence of man, and tell what is helpful in aiding one to be a completely full and essential person in the analogous manner that a good practitioner of the discipline of medicine can tell us what will lead to good health and what will not. And just as the doctor would have to know what
"good health" is and how to achieve it, so would the philosopher of man have to know what is the "essence of man" and how to achieve it. Is such a knowledge possible for man? This question of Socrates has been debated over the centuries. The very fact that there has been such a prolonged debate would seem to imply that, on the one hand, such a knowledge was at least partially possible and, on the other hand, that such a knowledge of man's own nature will never be complete. Or in other words, though some questions about the essence and destiny of man will be partially answered, there will be other questions that defy complete resolution.³

The possibility that there is only partial and less than certain knowledge about every facet of man's nature is not a very pleasing result to modern man with his desires to have certain, complete, precise, and hopefully, quantifiable knowledge. This may, however, be more of an indictment against the epistemological desires of the modern cult of quantification than against the philosophic study of man's nature. It is only a small and insecure mind which avoids this inherent tension and uncertainty in the study of man's nature by stating that since not everything can be learned for certain and precisely about the essence and destiny of man, then nothing can be known about the nature and Ultimate End of man. We seem to have forgotten Aquinas' dictum that it is better to know a little about that which is really important than
a lot about that which is unimportant.

Unfortunately, the view that value judgments about the nature of man and the Ultimate End cannot be fruitfully discussed because they are allegedly mere statements of subjective or autonomous preferences has acquired widespread acceptance within the economic profession. Some economists may be insisting upon the possibility of a purely positive science because they have accepted the odd notion that "man can ultimately only fight" when their ultimate values about the nature of man conflict, and that the question is then reduced to one of "thy blood or mine." But it is sheer dogmatism to insist that such disagreements can never be resolved through discussion and research.11 The Achilles heel of this positivistic methodology is the implicit encouragement that it gives to ethical solipsism. All economists agree that value judgments must be added to positive economics in order to obtain policy recommendations.12 But if such basic value judgments are arbitrary statements of subjective preference and also an indispensable part of any policy recommendation, then are not all policy recommendations finally arbitrary, mere matters of personal preference that cannot be tested even if esconced in a sophisticated and rigorous quantitative methodology.

Such an epistemological approach has momentous implications. Since such a methodology will not allow any knowledge about the nature of man and his Ultimate End which would heirarchically order
the demands of man, we are led to have an unbounded volition in man. Thus the will which is the desiring, wanting, demanding part of man's nature becomes autonomous when making the decisions which motivate man. Thus Hobbes can declare, "Reason is and always must be the servant of the passions. 13 Though such a philosophy or lack of philosophy is called "rationalism," it would be better labeled "irrationalism." As R. G. Collingwood has remarked, "many behavioral scientists are engaged in the propaganda of irrationalism, which is defined as the attempt to provide a rational basis for the irrational flight from responsibility. " 14 Such a methodology can progressively reduce the capacity of social scientists for moral outrage and will result in what Karl Mannheim has called a "crisis in valuation" which he defined as the loss of genuinely ethical judgmental capacity. Lacking this judgmental capacity to distinguish between the legitimacy and non-legitimacy of an economic commodity, modern economic theorists, when they have to deal with the question of what are the valid needs and demands of the individual consumer, have decided that since not everything can be known for certain and precisely (i.e., quantitatively) about the nature of man and his legitimate needs, then nothing at all can be stated about the legitimacy of the individual's demand and that the only way to proceed in one's analysis of consumer's demand is to treat each effective demand as equally good. The nature of man is thus implicitly defined by the use of the term "economic agent." Man is viewed as an agent with insatiable wants
which are given, i.e., beyond analysis. Hence the economics profession's use of the term economic "goods" as if there were no economic "bads." This may, or may not be, a satisfactory methodology; it is, however, no less a normative stance than anything that will be put forward in this study. Not to pass judgment upon it is in fact to join up, that is, to render a positive judgment.

This study will then pass judgment on such a methodological stance derived from the conclusion that the nature of man cannot be studied fruitfully. Furthermore, since one's judgment in this issue ultimately will depend upon one's view of man's nature, it is necessary to outline my definition of man's nature. The definition of man assumed throughout this study is one that is derived from the Greco-Judaeo-Christian tradition: Man is viewed as being composed of a material body and an immaterial component that interpenetrate each other thoroughly. The immaterial dimension is, moreover, ranked as more important not only because it can reflect upon its own nature and thus orientate the direction of the whole self, but because in a limited sense it shares in the existence of an absolute immaterial reality, whether one views this as Plato's Logos or the Judaeo-Christian God. Man has, therefore, the material economic needs of any oxidizing machine, while at the same time he has an interior spirit that will not be satisfied with only an ever-increasing accumulation of economic goods.
In medicine, when one takes a certain amount of addictive stimulant for the sake of good health, the amount of the stimulant is finite and limited by the end of good health. When, however, one takes such a stimulant for its own sake, the desire for it becomes infinite since it is no longer limited by a final goal, but has become an end in itself. The same is true of the output of the economic process which, rather than being used for the sake of achieving the final goal of life, tends to become the final goal itself. Since output is then not limited by any final goal, the desire for it becomes infinite. We get hooked on economic growth. To paraphrase Descartes, such a lifestyle would be based on the philosophical foundation: "I make and I buy, therefore I am."

In such a philosophical perspective man's reason becomes subject to the desires of the acquisitive side of his nature rather than the dominant partner in the orientation and direction of his activities. To act irrationally comes to mean only that, given one's desires, one commits some action which is inconsistent with such desires. It makes no difference what one's desires are, because they are seen to be beyond the reach of reason. As long as he used the most efficient tools, the completely mad Captain Ahab was entirely rational in his search for the white whale. No less an economist than Frank Knight has remarked on such a view: "Living intelligently includes more than the intelligent use of means in realizing ends; it is fully as important to select the ends intel-
ligently, for intelligent action directed toward wrong ends only makes evil greater and more certain."^15 More recently, Tibor Scitovsky has written about such activity: "This may well be an example of the higher irrationality of behavior governed by narrowly rational calculation."^16

Most economists, however, have refused to follow Knight and Scitovsky in a discussion of how man's economic behavior affects the achievement of his final end, but instead have evaded this issue by placing it outside of the realm of the discipline of economics. Such an approach might appear to be well and good; after all, there has to be a division of academic labor just as much as physical labor. Yet the profession of economics cannot absolve itself in this instance by such a simple side-step because it is of the essence of economics that it deal with scarce resources and competing ends. How can a discipline efficiently allocate scarce resources among competing ends if it has the wrong definition of both scarce resources and competing ends? If the economics profession should somewhat arbitrarily accept an unrealistic definition of either of these two terms (say because of tractability to arithmomorphic analysis), to that extent all of its mental endeavors, no matter how arduous and sophisticated, will be aberrations from reality. As such they may do more harm than good.

Such faulty analysis would not be too harmful, however, if it only left the economists in error. But economics provides society
with the image of economic society and this image, in turn, notably affects the behavior of society. As Warren Samuels has written, "Economists should and do participate in the social valuational process, despite disclaimers to the contrary." If the economics profession accepts as appropriate the image of relative scarcity and competing autonomous ends, then such views of these critical phrases will in a very subtle manner become the guiding vision of society, which will, in turn, reinforce the economists in their beliefs.

Yet there have been some economists during the Industrial Revolution who have incorporated the concept of absolute scarcity into their analysis. The name of Thomas Robert Malthus immediately comes to one's mind when one acknowledges the importance of absolute shortages. There have been economists who have eschewed the satisfaction of autonomous given wants of consumers as the final criteria for determining the worth of the output of the economic system. J. C. L. Simonde de Sismondi in *Nouveaux principes d'Economie politique*, John Ruskin in *Unto this Last*, and R. H. Tawney in *The Acquisitive Society* have each in their own way raised questions about determining the worth of the output of the economic system. Each of these humanistic economists have refused to let go of the conclusions reached slowly and with great difficulty about the final end of man by the Greco-Judaeo-Christian civilization and to accept in their place the conclusions of an economic methodology
founded upon the principles of utilitarianism and the epistemology of positivism moderated by individualism. Each investigated whether the increases in production and consumption experienced during their lifetime benefitted man in achieving his final end which, following the Greco-Judaic-Church tradition, they defined as life in all its dimensions, especially in the higher immaterial dimensions. It would seem worthwhile to back up and learn from our predecessors who have discussed these concepts. Such learning from history will be the goal of the next two chapters.


3. Lutz and Lux, The Challenge of Humanistic Economics, p. 52. The chart lists several names which neither I nor Lutz and Lux discuss. In a correspondence with Mark Lutz he writes "I was absolutely floored by the fact that you came up with the same historical sequence of scholars as we did. How did you pull them out of the dark? In any case, it confirms that we have discovered something that is of real substance. One day Sismondi and Jobson will have to be recognized as absolutely top economists whose major fault was to be too far ahead of their times."
   (Letter dated May 4, 1979).


6. It is interesting to note that Menger always spoke of "needs" (Bedurfinis) and not wants or desires (Wunsch und Verlangen) as Frank Knight pointed out in his preface to the English translation of Carl Menger's Principles of Economics (Glencoe, Illinois: The Free Press, 1950).


8. "There is no denying that the structure of wants is not amenable to ordinary analysis. Wants are dialectical concepts, with blurred, not sharply drawn, boundaries. But this is no reason for refusing to describe and study them. After all, their structure is not completely amorphous." Nicholas Georgescu-

16


12. "But the idea that there can be constructed a system of prescriptions which results more or less inevitably from the results of positive analysis can involve scarcely less of a confusion: any theory of economic policy must depend partly on conceptions and valuations which are imported from outside." Lionel Robbins, Politics and Economics (New York: St. Martin's Press, 1963): 19. See also H. Scott Gordon, "Social Science and Value Judgments," Canadian Journal of Economics 10 (1977): 529-546.


15. The Economic Organization (New York: A. M. Kelley, 1951): 4. In another article Frank Knight has argued that "life is at bottom an exploration in the field of values, an attempt to discover values, rather than on the basis of knowledge of them to produce and enjoy them to the fullest extent." In "The Limitations of the Scientific Method in Economics," Ethics of Competition and Other Essays (New York: Harper & Brothers, 1935): 105.


CHAPTER II

CONCERN FOR THE ENVIRONMENT (1800-1962)

Nineteenth-Century Concern for the Environment

Although it was Rachel Carson who in 1962 aroused modern American public opinion to the dangers of the modern industrial economy upon the biotic environment, she was, by no means, the first to recognize the conflict between an expanding industrial economy and a delicate biotic and limited environment. And although it was the Arab oil embargo in 1972-1973 that forced upon Americans the recognition of the total dependence of our economy upon a limited and exhaustible supply of certain natural resources, there were perceptive scholars who had sounded the tocsin over potential natural resource shortages long before the OPEC nations flexed their oil muscles. Analysis of the relationship between our modern economy and the biotic and physical resources of the earth has a long and widely-based, if somewhat checkered, intellectual history.

This section will attempt to provide an historical outline of this intellectual concern for biophysical resources in industrial economic systems from the time of Thomas Robert Malthus to the time that Rachel Carson published the *Silent Spring*. The intellectual
history of a concern is an elusive subject which must be bounded if it is ever to be finished. Since the concern is over the social scarcity of biophysical resources, social scientists as well as biological and physical scientists have a legitimate interest in this concern. But to be more precise, it is that area of study wherein the biophysical sciences and the social sciences overlap that will most likely generate the knowledge which is necessary for the wise utilization and allocation of our biophysical natural resources. Accordingly, in this study we have limited our search of authors either to biological and physical scientists who took an active intellectual interest in problems of social scarcity, or to social scientists who acknowledged explicitly that our economy is totally dependent for its very existence upon the physical resources of this globe as well as upon the proper functioning of many delicate and intricate biotic, physical and chemical reactions within the environment.

The significance of Malthus was not in the resolution that he gave to the problem of natural resource scarcity, but in the manner that he framed the problem. Once Malthus discussed the dynamics of population growth and the limitations of the earth's fixed resources, social scientists were forced to acknowledge that the problem of how mankind with its growing population and expanding industry could survive on a fixed, limited and delicate environmental base was a critical and real threat.
Malthus developed his position in the following manner in his first essay on the subject:

I think I may fairly make two postulata. First, that food is necessary to the existence of man. Secondly, that the passion between the sexes is necessary and will remain nearly in its present state. . . . Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio.

There were thus two basic assumptions which Malthus used to justify his pessimistic conclusion that "the superior power of population cannot be checked without producing misery or vice." First, he assumed a rapid increase in population whenever the amount of food rose above the subsistence level. Second, he assumed a slower increase in the food output from the relatively fixed natural resource of land. Both of these assumptions have been explored and discussed from many angles. In this chapter I shall focus upon the latter of these two assumptions by discussing those scholars who have attempted to show the importance of natural resources in their economic analysis. It should be pointed out that the intimately related assumption of population dynamics will not be discussed in this paper even though the population question has probably generated more research than the resource question. As indicated in the title to his later editions, An Essay on the Principles of Population, or, A View of Its Past and Present Effects on Human Happiness; with an Inquiry into Our Prospects Respecting the Future Removal or Mitigation of the Evils Which It
Occasions Malthus himself devoted almost all of his attention to studying the dynamics of population growth rather than to the resources which supported the population. He seemed to take it for granted that one could safely assume that food was 1) the basis of all life, and 2) its supply could not be increased very rapidly. Most of Malthus's immediate followers also turned their attention to the problem of restraining population growth rather than to that of analyzing the natural resource base that supported a population.

It was not until 1865 that a thorough analysis of the resources supporting a modern economic system would be undertaken. In that year the economist William Stanley Jevons brought Malthusian thought up to date with the industrialization of England and the repeal of the Corn Laws.

This is what Malthus argued. He said that, though our numbers tend to increase in uniform ratio, we cannot expect the same to take place with the supply of food. We cannot double the produce of the soil, time after time, ad infinitum. When we want to double the produce of a field we cannot get it by simply doubling the labourers. Any quantity of capital, and labour, and skill may fail to do it, though discoveries from time to time do allow of a considerable increase. Yet the powers and capabilities of organic and inorganic nature always present this remarkable contrast. The former are always relative to the number of existing beings, and tend unceasingly to increase. But exterior nature presents a certain absolute and inexorable limit, uncertain and indefinable though that limit may be.

The whole question turns upon the application of these views to the consumption of coal. Our subsistence no longer depends upon our produce of corn. The momentous repeal...
of the British industrial supremacy of his times. He prefaced the second edition of *The Coal Question* with a summary statement of his principal hypothesis.

Renewed reflection has convinced me that my main position is only too strong and true. It is simply that we cannot long progress as we are now doing. I give the usual scientific reasons for supposing that coal must confer mighty influence and advantages upon its rich possessor, and I show that we now use much more of this invaluable aid than all other countries put together. But it is impossible that we should long maintain so singular a position.10

Jevons' position was quite straightforward. It was that the British industrial economy had taken advantage of the energy of coal more than the industry of any other country. Thus British industrial supremacy depended upon the use of vast amounts of easily accessible coal. However, this supremacy could not last because 1) the coal was becoming more difficult to obtain, and 2) other countries such as the United States and Germany had larger reserves of coal and were beginning to utilize their resources. This meant that in time that Great Britain's industrial might would be surpassed by these countries. Also, and more importantly, it meant that in time the economy of Great Britain would begin to slow down. One of Jevons' main concerns was how the British nation of the mid-nineteenth century should use its unparalleled and never-to-be-repeated industrial greatness which was based upon coal. As he concluded *The Coal Question:*
If we lavishly and boldly push forward in the creation of our riches, both material and intellectual, it is hard to over-estimate the pitch of beneficial influence to which we may attain in the present. But the maintenance of such a position is physically impossible. We have to make the momentous choice between brief but true greatness and longer continued mediocrity.11

At the same time as the Englishman Jevons was treating of the importance of coal to the British economy, an American, George Perkins Marsh, was undertaking a much more comprehensive project, a study of the impact of mankind throughout history upon nature. According to Marsh, through wanton destruction and profligate waste the earth was:

fast becoming an unfit home for its noblest inhabitant, and another era of equal human crime and human improvidence, . . . would reduce it to such a condition of impoverished productiveness, of shattered surface, of climactic excess, as to threaten the deprivation, barbarism, and perhaps even extinction of the species.12

In many ways the studies of Jevons and Marsh complement each other. Jevons investigated the dependence by one particular country at one particular time upon one particular resource. March investigated the impact of civilized man throughout his history on his environment. Jevons' work was a scientific and detailed case study; Marsh's work was that of a generalist, as he himself recognized. Jevons was concerned with one source of industrial energy. Marsh was concerned with the total biotic and land environment that supported civilization, but not with the metals and
fossil fuels that constructed and powered an industrial economy.

Marsh introduced his topic with a brief discussion that linked the fall of the ancient Roman Empire to a decrease in its natural resource base. Next, in a wide-ranging investigation, Marsh generalizes from the example of the Roman Empire to the whole of western civilization. It is in this section that some of his most memorable indictments and expressions of concern are found over the way that western man has destroyed his environment. After this general introduction, Marsh discusses man's role in plant and animal domestication, and the effects of such domestication upon the organic and land environment. Next, in the largest chapter of the book entitled "The Woods" he explores the consequences of deforestation which was one of his chief concerns, because he had been personally involved in the deforestation that had occurred on the Green Mountain slopes of his native Vermont, and he had observed the scrub and desert regions of the Mediterranean.

The remainder of the book surveys man's impact upon two other aspects of nature, that of water and dunes. He concludes by showing that man's actions, though individually negligible, may in the aggregate alter the structure, composition and destiny of the earth and its inhabitants.

Marsh's analysis of mankind's impact upon the earth attracted wide attention at the time. It directly inspired an 1873 statement by concerned scientists which, in turn, led Congress to
establish a national forestry commission and to set aside certain lands as forest preserves. From this forest commission would come the leaders of the Conservation movement that would spread over the United States from 1890 to 1910.

The foresters were concerned with the indiscriminate deforestation that was taking place in the United States. By 1890 the American frontier was coming to an end. Americans in their search for their manifest destiny could no longer face west and see unlimited expanses of forest resources beckoning to them. It was the end of an era, and it is no surprise at this critical time in its history, the United States stopped momentarily to take a rough inventory of its natural resources and to consider just how they should utilize such resources. The forests were the first of the great natural resources in the United States which were depleted so rapidly and wantonly as to attract attention and cause concern. As mentioned just above, as a result of a concerned statement by the American Association for the Advancement of Science, the Division of Forestry was created in 1882. In 1886 Dr. B. E. Fernow, a leading conservationist, took charge of the work of forestry in the United States Department of Agriculture. Since the history of the role of the foresters in the First Conservation Movement of the United States would take us too far afield, it will be omitted in this study with the exception of some work by B. E. Fernow.¹³

Early geologists also concerned themselves about the supply
of crude petroleum. The Geological Survey of Pennsylvania showed a concern over oil supplies as early as 1874. In 1883 the Pennsylvania State Geologist, Peter Lesley, sounded a distinctly warning note: "The next generation will gather from our oil history, with angry astonishment, a lesson of warning in political economy, only useless because coming too late."\(^\text{14}\)

Nathaniel Southgate Shaler, professor of geology at Harvard, expressed a conservationist philosophy similar to Marsh, but he emphasized more than Marsh the importance of minerals and the fertility of the soil. In "The Economic Aspects of Soil Erosion," Shaler warned his readers in vigorous language of the dangers that their fertile soil resource would wash away if American farmers continued to abuse the land.\(^\text{15}\) This warning would ring true to the many American farmers who saw their top soil either wash away or blow away during the Dust Bowl era. In his best-known book, \textit{Man and the Earth}, Shaler endeavored to set forth certain reasons why there should be a change in the point of view that Americans commonly regarded the resources of the earth. Shaler noted in the preface; "As a teacher of Geology, I have seen that there is a complete lack of understanding in our communities as to the duty we owe to our successors in their use of these limited resources."\(^\text{16}\)

It is important to note that Shaler, as Marsh had before him, recognized that the careful conservation of America's resources would not only require more information derived from careful research,
but also, and even more essential, a change in attitude by Americans. There was a need for more than the optimistic utilitarian approach that progress would be able to resolve all the problems of resource scarcity. There was a need for a change in heart, for a love of the earth and a respect for posterity. Shaler concluded *Man and the Earth* with this exhortation:

> the great gain we are to have from the modern knowledge of the world is in the change of attitude it is to bring about: in the sense of kinship with the anciently alien realm and of duty by the great inheritance of life. To the making of this new spirit no great body of learning needs go; it will depend for its development far more on the way of approach than on the mass of the knowledge that is gained. So soon as men come to feel themselves as really the children of the world, the tides of affection that instinctively tend toward it, but have been sorely hindered by ancient misunderstandings, will help in the good work, and give us souls reconciled to their great house and eager to help its order.\(^7\)

Charles Van Hise, professor of geology at the University of Wisconsin, also played a vital role in the Conservation movement. His book *The Conservation of Natural Resources in the United States*, first published in 1910, became the textbook most often used in all conservation courses in the universities. One can easily perceive why it would become a successful text. It was illustrated, factual, and to the point in its message to Americans to stop wasting their fossil fuels, water, forests, and land.

Before advancing on to the economists' involvement with the First Conservation Movement in the United States, it seems worth-
while to summarize the conclusions of Malthus, Jevons and Marsh and his followers. Malthus's contribution is well known. He showed that it was necessary for a nation's economic prosperity that its population not outrun its supply of food energy. Jevons brought Malthus's thoughts up to date with the industrialization that had taken place in the first half of the nineteenth century by attempting to show that England's economic prosperity depended upon an easily accessible and plentiful source of energy for its industry, and that, since the supplies of coal were threatened with exhaustion, so was the prosperity that depended upon them. Jevons argued for a heightened awareness of the importance of coal and a public discussion of how England should use her declining coal fields. Should England's industrial system go out in a blaze of glory or should England opt for a period of "slow restrained growth?" The American George Perkins Marsh took a wider view and attempted to show the dependence of western civilization upon a fertile biotic environment. His historical studies showed how man's economic system could slowly and unconsciously destroy the fertility of an environment. He called therefore for more investigation into the impact of man's economic system upon the environment. Later, foresters and geologists added warnings from their respective disciplines about the potential destruction of forests and exhaustibility of fossil fuels, and exhorted society to develop some ways to keep from wasting such resources.
Natural Resource Economic Theory of the First Conservation Movement

In a major address before the American Association for the Advancement of Science in 1895 Bernhard E. Fernow, the noted forester and conservationist, concluded his presentation with this challenge to the economists of his day: "I close with the hope that the students of political economy will see that this branch of their science, the economy of natural resources, so important and yet so neglected, requires on their part a fuller and more careful consideration." Evidently not one to wait around for others, in the next year Fernow taught a course on the economic aspects of forestry under the auspices of the Department of Political Economy at the University of Wisconsin which Richard Ely has claimed were the first such lectures given within a department of political economy.

Fernow's main contribution to natural resource economic theory was his fourfold classification of natural resources: 1) Inexhaustible resources; 2) Exhaustible and non-renewable resources; 3) Renewable resources, but liable to deterioration under increased activity; and 4) Renewable resources whose yield could be much increased if managed scientifically. It should be noted that when Fernow and those who follow him speak of an exhaustible and non-renewable resource, they are referring to the aggregate supply of the resource and not to the supply of one particular mine or
oil well. Neglect of this distinction has caused some confusion in the literature on the subject.

It would not be, however, until around 1912 at the height of the Conservation Movement that some economists took up Femow's challenge to incorporate natural resources within the scope of their analysis and to explore explicitly the question of the appropriate rate of utilization of natural resources by the economy. Were such natural resources to be treated by economists in the same way as all other factors of production excluding labor (i.e., as a portion of either society's homogeneous capital or land) or were natural resources in some way unique as a group and uniquely different in the manner that Femow had classified them, therefore requiring special consideration as to their optimal rate of utilization. Until that time economists generally had dealt with natural resources under the two headings of rent and royalty. Adam Smith had noted that mines could yield a rent but only if the mineral was relatively easy to obtain or favorably located. David Ricardo is somewhat ambiguous in his treatment of mines. In his brief chapter entitled "On the Rent of Mines" in the Principles of Political Economy and Taxation Ricardo accepts Adam Smith's conclusion that relatively fertile and/or favorably located mines could yield a differential rent. However, in the previous chapter he implies that the concept of rent should be reserved for "that compensation which is paid to the owners of land for the use of
its original and indestructible powers" and that the "compensation
given for the mine or quarry is paid for the value of the coal or
stone which can be removed from them, and has no connection with
the original and indestructible powers of the land,"\textsuperscript{26} (i.e.,
royalty). Alfred Marshall attempted to harmonize these views by
stating that the net income from a mine includes the "payment of
a rent as well as a royalty."\textsuperscript{27}

The conservationist did not think that this discussion of
rents vs. royalty was adequate in dealing with the issue of optimal
utilization of natural resources because it did not deal explicitly
with the question of the potential exhaustion of certain resources
and the impact of that exhaustion as Jevons had done, for example,
in \textit{The Coal Question}. The conservation theorist would claim, not
only that natural resources as a group were a unique input into
the economic system, but that some particular resources were 1)
essential to modern industrial society, 2) liable to exhaustion,
and 3) unable to be replaced satisfactorily by any other resource.
Consequently, the conservationist would state that mankind had a
moral duty to preserve the vital resources for future generations
as nearly unimpaired as the nature of the resource admits.

Lewis Cecil Gray was the first economist to attempt to explore
the connection between the conservationist ethic and economic theory.
His pioneer study "Economic Possibilities of Conservation" appeared
in the \textit{Quarterly Journal of Economics} in 1913. In this seminal work
Gray showed a clearer understanding of the all-important difference in outlook between that economic theory which accepts the present value maximization criterion for determining the appropriate utilization of a mine and the conservationist theory with its ethic of preservation of vital natural resources than has been shown in many more recent studies.

Though Gray states in his first sentence that "It is not safe, without some preliminary definition, to attempt a scientific consideration of a concept which is chiefly a product of popular discussion," nowhere does he give a precise definition of the conservation ideal. However, from his introductory discussion it is clear that conservation has to do with natural resources: "It is desirable to confine the idea of conservation to its original application to natural resources." And that for Gray the conservationist ideal has to do with conserving natural resources for the future. "The real heart of the conservation problem presents an issue which taxes the resources of economic theory to the utmost. This issue is the problem of adjusting the conflict between the interest of present and future. It is the purpose of this paper to estimate the extent of this conflict of interest and to point out the economic possibilities of conservation."

In his discussion of that category of resources which he defines as being "necessarily exhsuted through use, and non-restorable after exhaustion," Gray states that "Minerals afford a tolerably clear-cut type of resources which are absolutely limited in supply
and non-restorable. It is necessary to make a definite choice between present and future. Normally, when once used, the supply is exhausted practically for all time. . . Yet the most serious phases of the conservation problem grow out of the fact that some of the most important elements, such as coal, petroleum, and iron, are being rapidly and completely used up without hope of replacement."31 He concludes this first section with the preliminary observation that "In short, it is not necessarily true that the method of utilization which results in conservation is the method which results in maximum profits."32

In the second section Gray asks what rate of extraction the individual owner of a mine will pursue in his quest for maximum profits. Gray's overall object is "to inquire what are the conditions which, in the case of the individual, determine the profitableness of a conservation policy."33 His conclusion is that "whether or not the individual will pursue a policy of exploitation or one of conservation, depends on a number of conditions, the most important of which are the rate of interest, the law of diminishing productivity, and the value of the natural resources under the individual's control."34 It is in this section that Gray first develops the present value maximization criterion,35 which is the criterion that most economists had implicitly accepted in the past and would continue to use more explicitly and correctly in the future to "determine" the optimal rate of utilization of nonrenew-
able resources. Using the present value maximization criterion as his guide Gray next discusses the role of the interest rate on the extraction rate of a natural resource. He concludes that "the general effect of a high interest rate, other things being equal, is rapid exploitation; whereas a lower interest rate makes a policy of conservation more profitable to the owner." He concludes this section with a discussion on the impact of prices on the extraction rate of natural resources. Though he is aware that higher prices have both a favorable and unfavorable impact on conservation, he believes that the overall impact is favorable. "There are several reasons, however, which justify the view that utilization will tend to be exploitative when land is cheap, and conservative when it is dear."

In the third and final section of his paper, Gray attempts to show what could be done to make the present value maximization criterion promote the conservationist goal. He notes first that "much, however, depends upon the character of wants. If men desire chiefly commodities which require a large amount of natural resources for their satisfaction, the social demand for the objects of nature will be correspondingly great." And "Since an increase in social demand results in a great increase in the aggregate utilization of natural resources, it follows that conservation may be affected by measures whose result is a decrease in social demand. Such a decrease may be effected by the restriction of population or by
changes in the character of wants." Gray admits that "alterations of these kinds, however, are exceedingly difficult to bring about by positive social action."

Next he shows that if the supply of natural resources had been artificially limited by restraining the frontier this would have aided the conservation of natural resources. "The frontier has been the line of minimum social demand for natural resources in proportion to the supply and, therefore, the line where the most wasteful methods of utilization have been followed . . . Had our fathers made the frontier a dead-line which might not be extended until sufficient social demand existed to create high land values at once, a maximum economy of utilization might have resulted."

Gray next discusses the implications of policy actions that would directly force the resource owner to be more conserving of his resources even though it might be economically inefficient. For instance, "If mine owners are required to substitute wooden supports for the columns of ore which are now employed to support the roofs of their mines, coal that would otherwise be lost may be saved for the future; but coal for present use will likely be more expensive." He concludes this discussion with the following observation:

Conservation if generally a policy which increases the burden of the present . . . Society is confronted by . . . a choice between present satisfaction and future satisfaction. Moreover, conservation requires that individuals lessen their consumption today in order that other individuals may enjoy the results of their abstinence. Hence, in so
far as it involves the saving for the enjoyment of other generations what we might use for ourselves, it constitutes a type of ethical requirement which is upon a higher level than any that has heretofore existed, -- an ethical requirement entirely novel in its scope. The ethical field is to be widened to include unborn generations; not only those which will appear in the immediate future but also those which are yet enshrouded in a future limited only by the uncertain period of human life upon the earth. Few individuals have achieved an ethical level sufficiently exalted to induce them to curtail present enjoyment for the sake of shadowy generations yet to come.43

Next Gray discusses the limitations of using an extreme version of the conservation ethic: "Conservation as a single principle of action involves the equal importance of future wants and present wants. It requires that the want of the infinitely distant future shall be as important as the want of the immediate present. Conservation as a single principle of action is reduced to an absurdity."44 This awareness that an extreme conservation ethic cannot be the sole guiding model for society prompts Gray to ask the question "Where is the proper balance between utilization and conservation,"45 Gray recognizes that this is a basic philosophical question, the complete answer to which would require a complete knowledge of the nature of man. "Philosophically considered, the question cannot be answered with finality without such a definite comprehension of the purpose of human existence as has not yet been vouchsafed the race. In the absence of more infallible foundations we shall doubtless lean on the 'crutch of common sense.'"46
Though not a very precise answer, such an answer follows logically from Gray's premises about the worth of conventional economic theory, the conservation goal and his philosophy of man.

Next Gray asks if conservation policies necessarily hinder progress in the future. He answers:

Exploitation results in maximum production under certain conditions, but maximum production does not necessarily mean progress. Maximum production may be accompanied by a manner of life which is not consistent with the highest social development. A vast amount of consumption is neither based on welfare, nor an enjoyment; it is solely dictated by convention. The enormous waste of coal required for the electrical advertising in our great cities is illustrative of this exploitative consumption. As Professor H. J. Davenport has expressed it, "Every great white way in every American city is nightly one more chemical orgy of waste, a crime of competitive advertising for which some day thousands of individuals must shiver for months." The necessities of conservation may compel the economist to enlarge his field so as to apply the test of economy as one of the criteria for the justification of wants.

In concluding his paper Gray wonders what policy measures can be undertaken to create the "proper social conditions which will provide the motives for conservation." Gray immediately recommends a low interest rate. "A most important social condition is the interest rate. In all cases the interest rate must be rendered as low as possible. To this end adequate credit agencies should be provided for those who own and operate natural resources." Also he suggests that the prices of natural resources be kept relatively high by the government. "Conservation requires the creation
of high values; . . . In this manner values may be kept sufficiently high to cause the individual to accomplish the maximum result with the minimum of waste."^50

However, even with these policies Gray ultimately concludes that it is mostly a question of demand. "If social demand is allowed to increase by leaps and bounds, the most careful utilization may coincide with an enormous increase in the aggregate destruction of natural resources. At this point are encountered questions of population and of luxurious consumption. The wisdom of the nations will be none too great to deal with these phases of the problem."^51

Richard T. Ely was Lewis Gray's professor at the University of Wisconsin so it is difficult to determine whose ideas should take precedence in time. However that might be, Ely takes a different approach to the problem of conservation than that of Gray even though he cites Gray's work. Dr. Ely assumes as a basic premise that since certain natural resources are both indispensable and exhaustible, they should be preserved "in a condition so nearly unimpaired as the nature of the case, or wise exhaustion, admits."^52 In his analysis of the optimal rate of utilization of natural resources Ely rejects the deductive and abstract methodology which had produced the present value maximization criterion and opts for an inductive methodology which allows more direct input from the foresters, geologists, hydrologists, etc. It is in this section that he takes pride in bringing the forester B. E. Fernow into the Department of Political Economy at the University of Wisconsin.
Ely favors such a methodology because of his academic background which was with the German historical school or inductive method of political economy. As Ely acknowledges in this essay, his methodology owes much to the German economist Friedrich List. Though List's *National System of Political Economy* dealt primarily with the development of future productive capacity through appropriate tariff policies, Ely shows that List's inductive analysis of productive powers is easily and naturally extended so as to find application to the conservation of vital resources. Since one of the main premises of the conservation ethic is that society should have a careful regard for the productive power for the future, Ely was able to show the necessity of conservation policies if one accepts the methodology of List.

Ely goes on to argue that since *laissez faire* economic policies based upon private present value maximization criteria would not ensure appropriate conservation of vital resources, some public ownership and/or regulation would be necessary if such resources were to be preserved. This latter argument is mostly done by use of examples though it is at this point that Ely cites Gray's work in his defense.

 Though there were a few other economists interested in the study of economic theory as it applied to the conservation of natural resources, their work was somewhat tangential to the main issue. Such was the work of Thomas N. Carver, an economist at Harvard who
was mainly interested in human resources, and Ralph Hess, another economist at the University of Wisconsin.\textsuperscript{55}

As the conservation movement lost much of its popular support during and after World War I, the few economists who had attempted to analyze the goals and principles of conservation apparently lost their interest in continuing this line of research. It is interesting to note that they seemed to shift their interest to the newly-developing subdiscipline of agricultural economics. For instance, Richard T. Ely became editor of \textit{Land Economics} and collaborated on a much-used textbook of the same name while doing his research on the taxation of land resources. Lewis Gray became president of the fledgling American Farm Economic Association, author of a classic two-volume history of southern agriculture, and later an active administrator in the Land Resettlement Division of the Department of Agriculture during the New Deal era.\textsuperscript{56}

\textbf{John Ise and Frederick Soddy}

\textbf{A. The Economic Thought of John Ise}

The intellectual void left when Ely, Gray and others turned their attention away from the analysis of conserving natural resources to other issues would be filled in the United States by one indomitable academic. John Ise was born in 1885 very close to the geographical center of the United States. After graduate studies at Harvard, he returned to the University of Kansas where

Though John Ise understood and appreciated the frontier ethic as regards natural resources, he also perceived that it was destructive to the American way of life in the long run. He sounded a theme in the first paragraph of his first book that would be his life-long concern:

The history of the United States is fundamentally a history of rapid exploitation of immensely valuable natural resources. . . Whatever preeminence the United States may have among the nations of the world, in industrial activity, efficiency and enterprise, in standards of living, in wealth, . . . must be attributed to the possession of these great natural resources; and the maintenance of our preeminence is dependent upon a wise and economical use of remaining resources. Thus the question of conservation is one of the most important questions before the American people.57

Ise's The U.S. Oil Policy stands as a socio-economic classic, much ahead of its time. His discussion of the social costs and benefits of the automobile in particular and technology in general, though fairly common today, broke new ground for the economists. His premonition that on the international scene "there are many reasons for believing that oil will never be left entirely to
unfettered economic sale and purchase," has turned out to be only too true in our time.

In addition, John Ise expanded the subdiscipline of natural resource economic theory by investigating the alleged benefits that society receives from a rapid exploitation of natural resources. Unlike most economists, he was willing to ask critical questions of much of the consumption of his age, or as Lewis Gray had expressed it, he was willing "to enlarge his field so as to apply the test of economy as one of the criteria for the justification of wants."

Can we say categorically, that the pleasure of riding from nowhere to nowhere at 80 miles an hour is inferior in quality to the pleasure of listening to the Eroica symphony? As economists, we have always evaded such questions. We have assumed that whatever the people want has economic utility whether bootleg gin or Beethoven, and from the predominance of demand for the former have assumed that American happiness was increasing day by day in every way...

Perhaps much of our traditional economics is pointless and of little avail, a foundation with no superstructure, a prologue without the opera. The production of goods, more goods, mor things, mountains of things--to what purpose?

In the study, "The Theory of Value as Applied to Natural Resources," Ise probed into the question of what is the appropriate pricing policy for exhaustible natural resources. He began his analysis by distinguishing between those resources which have renewable substitutes and those resources which do not have such substitutes. For these latter resources which do not have substitutes either for themselves or for their products, the issue boils down to the question of "how much difference are we justified in
making between present wants and future wants?" Ise concluded, as indeed he must and as Lewis Gray had previously concluded, that it is impossible to answer this question in a definite and precise manner. "Doubtless future wants should be discounted somewhat, because of various contingencies and uncertainties, but it is doubtful if the wants of the next generation, for instance, should be rated less than half as important as our own. This would mean a discount of about two percent a year."^62

Ise's main contribution to the price theory of natural resources was however in the next category, resources for which renewable substitutes are available either for the resources themselves or for their products. This would certainly be the largest and most important category, and it is in the price theory for this category that Ise makes his unique contribution.

On the theory of forthcoming substitutes, where should prices be fixed? The answer here is clear. Prices of the resources or of the products derived from these resources, should be fixed at a point approximating the cost of producing adequate and satisfactory substitutes. For example, the price of a barrel of oil should be priced approximately the same as the cost of producing an equivalent barrel from an agricultural crop such as sugar cane. Pricing nonrenewable resources at the same level as the cost of producing adequate and satisfactory renewable substitutes would have two desirable consequences according to Ise. First, it would conserve our exhaustible resources. Second, it would stimulate efforts to find a variety
of adequate substitutes from renewable resources.

Ise would incorporate many of these conservation principles into his textbook on Economics, published toward the end of his long career. In an opening chapter on Land he included a long section on the waste of our resources and discussed the state of the nation's lumber, fossil fuel, and metal reserves. He concluded that "the significance of all this may be seen if we consider that our high standard of living has been possible largely because of our rich natural resources of many kinds."

Ise goes against the drift of current economic thinking, as he himself recognized, by adding chapters discussing the American consumer and his utilization of the products derived from exhaustible natural resources. In a chapter entitled "Human Wants and Utility," he critically investigated the usefulness of many of the consumer's purchases. In what other economics text could one read the following about the American consumer?

He has to work like a slave every day to get the things that convention and fashion and social emulation and advertising demand of him; but he winds up as poverty-stricken in wants, in the capacity to enjoy and appreciate, as he is rich in goods and in opportunities for ostentation. What he needs is not the satisfaction of the wants he has, he needs a better set of wants.

Was Ise prophetic when he concluded this chapter with the observation that "the American people may soon have to learn to adjust themselves to a stationary income and to find the joy of life in something other than a growing flood of goods--for example, . . .
in the development of a more genuine appreciation of some of the simpler and less expensive but really higher and finer kinds of satisfactions."^67

His two chapters on the machine age explore the problem of technology and human life. As he notes, "We have a lot of things in these hectic days, a lot of movement, but little time for living."^68 "Modern transportation, communication, advertising, and salesmanship--all of them important features of the machine age--have intensified the struggle to keep up with the Jones by making everyone more conscious of the pace that the Jones are setting. There is little if any general gain in this social marathon."^69 He next shows the impact of the machine age upon exhaustible resources by pointing out that "the machine has used up more oil in the past ten or twelve years, and more minerals in the last thirty-five years, than were used in all history."^70

In conclusion to this section, I would contend that John Ise's writings entitle him to be called America's first natural resource economist. I would also submit that his incorporation of the physical coordinates of value into his economic analysis as well as his critical questioning of modern man's consumption of the products derived from our exhaustible resources are still valid and deserve to be studied by modern economists who now in increasing numbers grapple with the problems that he alone in his time dealt with extensively.

It was unfortunate that John Ise was unaware of the work of
Frederick Soddy, an English chemist and heretical economist who was shocked by the economic profession's lack of attention to the physical coordinates of value, and who urged economists to pay attention to the principles of thermodynamics. Soddy's analysis would have provided a firm biophysical, if not metaphysical, basis for many of the exhortations of Ise.

B. The Economic Thought of Frederick Soddy

1. Introduction:- Frederick Soddy (1877-1956) is best known as a Nobel Prize-winning chemist who collaborated with Rutherford in studying radioactive disintegration, introduced the concept of "isotopes," and was a major contributor to the modern theory of atomic structure. Although an enthusiastic believer in scientific progress and in the possibility of a society in which the fruits of scientific knowledge would be shared by all, Soddy was acutely aware that history supported the view that science is at least as likely to amplify evil as good. He could not accept the comfortable view that scientists have no responsibility for the uses to which their work is put, and although others (bankers and economists) were in his view more guilty, scientists could not plead innocent. But the real problem was faulty economics, not faulty chemistry, and in his latter years economics replaced chemistry as the center of his intellectual life.

Soddy realized earlier than most the theoretical possibility
of atomic energy. Since his own work had contributed to the discovery that such a vast energy potential existed, it was natural for him to ask, "what sort of a world it would be if atomic energy ever became available?" His answer (written in 1926) was clear: "If the discovery were made tomorrow, there is not a nation that would not throw itself heart and soul into the task of applying it to war, just as they are now doing in the case of the newly developed chemical weapons of poison-gas warfare . . . If it (atomic energy) were to come under existing economic conditions, it would mean the reductio ad absurdum of scientific civilization, a swift annihilation instead of a none too lingering collapse." For Soddy, the problem was to change economic conditions in order eventually to make the world safe for atomic energy and other fruits of science. There must be something radically wrong with economic thought and institutions in order for the gift of scientific knowledge to become such a threat. Soddy was thus led to a radical critique of economics.

Soddy's background as a physical chemist prepared him to introduce a new level of sophistication into the neo-malthusian critique of economic theory. Just as Jevons had pointed out that coal, not corn, was the driving force of a modern industrial economy, so Soddy carried the argument a step further by showing that it was inanimate sources of energy, whether coal, oil, falling water, or potentially atomic that was necessary for any modern industrial economy. "If we have available energy, we may maintain life and
produce every material requisite necessary. That is why the flow of energy should be the primary concern of economics.”

Soddy’s discussion of the first and second laws of thermodynamics were pathbreaking and anticipated the brilliant work of Nicholas Georgescu-Roegen in this field. His investigations into the original source of energy (the sun in almost all cases) led him to distinguish between the permanently available flow of energy and limited stocks of energy stored in the fossil fuels, a distinction which is at the basis of much conservationist’s thought. Such considerations led him to the conclusion that the ultimate basis of economic wealth is physical. "The wealth of the community is its revenue, which, in the last analysis, is a revenue of energy available for the purposes of life.” Nature has stored such energy in fossil fuels, but Soddy notes that such supplies are limited and that "what we do is to unstore it (energy in fossil fuels), an easier matter (than storing it), and to convert it into a flow before it is of the least possible use to us.” Soddy’s investigation into energy, its sources, conservation, and usefulness led him to declare that "Economics deals not with energy, but entirely with the flow of useful and available energy.”

Soddy’s basic philosophical approach to economics might be called "materialism without reductionism." He argued that we must recognize the fundamental dualism of the material and the spiritual and resist "monistic obsessions.”
Consequently Soddy rejects the monism of "Ultra-Materialism:"

I cannot conceive of inanimate mechanism, obeying the laws of probability, by any continued series of successive steps developing the powers of choice and reproduction any more than I can envisage any increase in the complexity of an engine resulting in the production of the "engine-driver" and the power of its reproducing itself. I shall be told that this is a pontifical expression of personal opinion. Unfortunately, however, for this argument, inanimate mechanism happens to be my special study rather than that of the biologist. It is the invariable characteristic of all shallow and pretentious philosophy to seek the explanation of insoluble problems in some other field than that of which the philosopher has first hand acquaintance.  

Yet a proper materialism must be one of the foundation stones of economics. In fact, "without phosphorus no thought" is a maxim that all philosophers and ethicists should be required to memorize. What mechanical science teaches economics is that, life derives the whole of its physical energy or power, not from anything self-contained in living matter, and still less from an external deity, but solely from the inanimate world. It is dependent for all the necessities of its physical continuance primarily upon the principles of the steam-engine. The principles and ethics of human law and convention must not run counter to those of thermodynamics.  

The last sentence is very significant because it provides the basis for many of Soddy's criticisms of the economy as a presumed perpetual motion machine. For men, like other heat engines, the physical problems of life are energy problems. Pre-nineteenth century man lived on energy revenue (sunlight captured by plants, the "original capitalists"). Present day man augments this revenue by consuming energy capital (coal, the "stored sunlight of palaeozoic
summers"). While man can use fuel-fed machinery to lighten labor, he can feed his internal fires only with new sunshine, or rather the energy of new sunshine as transformed through the good offices of the plant. Life thus depends on a continuous flow of energy, and hence the enabling requisites of life must partake of the nature of a flow rather than only a stock. There are limits to the degree that this flow can be stored for future use. A significant part of the requisites of life must come to us as a current flow or "revenue" that cannot in any physical sense be converted to a stock and indefinitely stored for later use. Stocks of assets, to the extent that we can maintain them against the ravages of entropy, are aids and accessories in improving our ability to tap the energy revenue, but the revenue itself cannot be significantly increased, and it cannot be saved except to a limited degree. Indeed, the very maintenance of our accumulated stock of physical wealth against the destructive force of entropy requires the renewing power of the low-entropy "revenue" flow. True, nature has stored energy in coal, but it took geologic epochs of time, and we are only able to unstore it. Furthermore, the "flamboyant period" of using up the capital stock of coal was perceived by Soddy as a "very passing phase," after which the constraints imposed by living on energy revenue would be more clearly seen and unmistakably felt.

For Soddy the basic economic question was, "How does man live?"
and the answer was, "By sunshine." The rules that man must obey in living on sunshine, whether current or palaeozoic, are the first and second laws of thermodynamics. This in a nutshell is "the bearing of physical science upon state stewardship."

The importance of Soddy in this tradition that was concerned about the matter/energy input into the economic system was the scientific support that he provided the tradition. His analysis of the basic sources of energy and the importance of the laws of thermodynamics added a scientific dimension to the conservationist tradition and brought it up to date with twentieth-century physics and chemistry.

Subsequent Natural Resource Economics

John Ise and Frederick Soddy were lone voices in the field of economics. There would be no immediate follow-up on their penetrating and seminal ideas. Instead most economic theorists would follow the lead of Harold Hotelling who in a 1931 article entitled "The Economics of Exhaustible Resources" attempted to discover what maximizes the present value of the stream of consumer's benefits from the stock of natural resources. Since the market encourages firms to maximize the present value of their profit stream even with exhaustible resources, Hotelling wondered whether market forces would maximize the present value of consumer's benefits. He found that under competitive conditions there is a tendency for the market to lead toward present value maximization
of consumer's benefits. It is important to note that Hotelling was working under the assumption that new resources can always be found and/or that technology will come up with suitable substitutes for the vital natural resources. In other words, there is no such thing as absolute or Malthusian shortage, or even the possibility of such a shortage, in his world-view. Only particular mines or wells are exhaustible for Hotelling, but not resources. This is quite a different use of the word "exhaustible" than that of Gray, Ise and Soddy. For the most part, the economics profession has followed Hotelling's methodology and assumptions, and, explicitly or implicitly, has assumed that, for any rate of utilization of natural resources, what is optimal for the consumption of the present generation will also be optimal for the consumption of future generations. As a result, most economists have felt that no unique effort ought to be made in the conservation of our natural resources. However, Talbot Page and James Doilney have recently shown that present value maximization, if used as society's only criterion for determining the optimal rate of extraction of natural resources, can lead to disastrously low future welfare levels. Accordingly, in this section we shall not attempt to outline that body of literature that had derived its inspiration from Hotelling's methodology. Such a technique may be useful in resolving certain problems dealing with relative or Ricardian scarcity, but with its assumption of unlimited natural resources.
and/or that technology will provide such resources, it does not belong in a history of the conservation tradition. I have mentioned it merely to show where conservation principles were ambushed in the history of economic thought.84

During the 1930's intellectual concern for the conservation of natural resources dimmed somewhat. There appears to have been four causes of this decline. First, the socio-economic problems of the Depression took precedence over all other problems. Second, American education had become more specialized and departmentalized. Scientists were coming to know more and more about less and less. But the problem of wisely allocating natural resources requires not only a comprehensive interdisciplinary knowledge of many sciences from geology and physics to economics, ethics and philosophy but also an appreciation for the holistic integrity of the universe.85 Third, the social sciences were becoming more positivistic in their methodology. Since the issues involved in the conservation of resources quickly lead to normative judgments, the social scientists became more reluctant to deal with such issues.86 Fourth, there was a rising faith that technology would resolve the problems of natural resource scarcity, and that conservation of such resources was not really needed.

What concern there was over natural resources focused upon a problem that was only too apparent during the Dust Bowl era, the depletion of fertile top soil, through both water and wind erosion.
As the geographer Carl O. Sauer expressed it in the 1930's, "Soil destruction is the most widespread and most serious debit to be entered against colonial commercial exploitation."

After a description of such soil destruction, Professor Sauer rejected the view that technology would resolve the food problems of the world: "The easy denial of our dilemma by referring it to the technologist is in large measure wishful thinking." According to Sauer, society still has to resolve the question of how to conserve natural resources; a problem that Americans have not faced squarely.

The doctrine of a passing frontier of nature replaced by a permanently and sufficiently expanding frontier of technology is a contemporary and characteristics expression of occidental culture, itself a historical-geographic product. This frontier attitude has the recklessness of an optimism that has become habitual, but which is residual from the brave days when north-European free-booters overran the world and put it under tribute. We have not yet learned the difference between yield and loot. We do not like to be economic realists.

This brings us to the time of World War II. During World War II enormous quantities of resources were used up, and shortly after the war there were some misgivings about the adequacy of the U. S. resource base to meet the greatly increased and steadily increasing demands for raw materials. This concern over the adequacy of the resources base led to the establishment of the President's Materials Policy Commission in 1951 and to its successor, the Resources for the Future organization. This commission, now usually called the Paley Commission, concluded that the period of unlimited
resource availability, for the United States, was over, but, nevertheless, scarce resources could be obtained by increased foreign trade and the resource base could be expanded by new technology.

Not all Americans accepted this guardedly optimistic conclusion of the Paley Commission that natural resources were plentiful, although maybe not in the United States. In a response to the Paley Commission Samuel Ordway stated, "It does not seem likely that imports or 'technology' will be the means of keeping us from ultimately reaching the limit of growth."\textsuperscript{89}

However, in the hubris of the post-World War II years the belief that the depletion of resources was the most serious problem facing the United States was held by only a small minority of scholars. During this Cold War era, urged on by competition with the Soviet Union, most social scientists saw the problem to be the opposite: How can we move our economy to grow ever more rapidly and use even more resources? Because of their faith in technology such scientists disregarded any warnings of absolute shortages or environmental disruption. It would not be until Rachel Carson wrote the \textit{Silent Spring} in 1962 that once again a large number of Americans would gradually start to concern themselves with the depletion of resources and corresponding abuse of the environment upon which their very life and society depend.\textsuperscript{90}
CHAPTER II
FOOTNOTES

1. The historical exposition of concern for environmental resources has, as far as I can ascertain, never been attempted in any systematic manner by other scholars. This chapter is therefore a pathbreaking study. I recognize that the inclusion of certain authors and the exclusion of others is a matter of judgment. I look upon this study as a first step rather than the definitive history of concern for natural resources.

Because of the author's limitations, this chapter will be limited to Anglo-American scholars. This will unfortunately omit the efforts of the Europeans Wilhelm Ostwald and Ernest Solvay to develop an "energy" form of value.

2. Though there were studies before Malthus which were concerned with man's dependence upon the environment, such studies were of a sporadic and tangential nature. See Clarence Glacken, Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century (Berkeley: University of California Press, 1976).


4. Ibid.: 17.


6. "Let us now take any spot on earth, this Island for instance, and see in what ratio the subsistence it affords can be supposed to increase. We will begin with it under its present state of cultivation.

If I allow that by the best possible policy, by breaking up more land and by great encouragement to agriculture, the produce of this Island may be doubled in the first twenty-five years, I think it will be allowing as much as any person can well demand."
In the next twenty-five years, it is impossible to suppose that the produce could be quadrupled. It would be contrary to all our knowledge of the qualities of land. The very utmost that we can conceive, is, that the increase in the second twenty-five years might equal the present produce. Let us take this for our rule, though certainly far beyond the truth, and allow that by great exertion, the whole produce of the Island might be increased every twenty-five years, by a quantity of subsistence equal to what it at present produces. The most enthusiastic speculator cannot suppose a greater increase than this. In a few centuries it would make every acre of land in the Island like a garden.

Yet this ratio of increase is evidently arithmetical.

It may fairly be said, therefore, that "the means of subsistence increase in an arithmetical ratio." T.R. Malthus (1st edition): 12. Later editions carried essentially the same message. See pp. 131-132.

7. For example, see Francis Palce's Illustrations and Proofs of the Principle of Population (London, 1822). John S. Mill was also concerned with population control throughout much of his life. In his youth he was once arrested for passing out birth control literature and he would later argue that the state had the right to control births. See his On Liberty (1859) (New York: Appleton-Century-Crofts, 1947): 110. See also Norman Hines, The Place of John Stuart Mill and of Robert Owen in the History of English Neo-Malthusianism," Quarterly Journal of Economics 42 (1928): 627-640.

8. Though there were earlier works on the question of the exhaustibility of the coal fields of Great Britain, most of these works were rather brief chapters by geologists. Their methodology consisted in making an estimate of the amount of accessible coal left in England and the duration of coal supply. Jevons commented about such studies that "the annual consumption is a rapidly growing quantity, and it is a most shortsighted proceeding to argue as if it were constant."

It perhaps should be noted that the economist John R. M'Culloch had previously characterized the notions of the exhaustibility of England's coal mines as utterly futile, both in the article on Coal in his Dictionary of Commerce and Commercial
Navigation (Philadelphia: Thomas Wardle, 1840) "Calling her coal mines the coal cellars of the great city, there is in them a supply which, at the present rate of expenditure, will last for 2,000 years; and . . . may be regarded as inexhaustible." Volume 1, p. 354, and in his A Statistical Account of the British Empire: Exhibiting its Extent, Physical Capacities, Population, Industry, and Civil and Religious Institutions (London: Charles Knight & Co., 1839) Volume 1, p. 600.


10. Ibid., xxx.


17. Ibid., 232-33.


19. B. E. Fernow, "The Providential Functions of Government with Special Reference to Natural Resources," American Association


22. The only earlier study that discussed natural resources did so in a peripheral manner. See H. J. Davenport, "The Extent and the Significance of the Unearned Increment," Papers and Proceedings of the American Economic Association 1 (1911): 323-333. In this study Davenport discussed the notion of "unearned increment" and by his use of examples implied that exploitative extraction of natural resources belonged in the "unearned increment" category.


24. For a full discussion of this ambiguity see Lewis C. Gray, "Rent under the Assumption of Exhaustibility," Quarterly Journal of Economics 28 (1914): 481-484.


29. Ibid., 498-499.
30. Ibid., 499.
32. Ibid., 503.
33. Ibid., 504.
34. Ibid.

35. Not only did Gray discuss the historical use of the profit-maximizing criterion, he explicitly developed the value of discounted future production, so he was the first to use the present value maximization criterion correctly in a discussion on the economics of utilization of exhaustible resources. For a full discussion of the significant seminal contribution of Gray in this area of present value maximization analysis, see Philippe J. Crabbe, "Lewis Cecil Gray: Pioneer of the Economics of Exhaustible Natural Resources," a paper delivered at the Sixth Annual Conference of the History of Economics Society at the University of Illinois (May, 1979).

The present value maximization criterion is one which discounts all future benefits from a stream of natural resources to the present and then maximizes this present value. The mathematical formulas are as follows:

For discrete time periods, maximize present value where

\[
\text{Present Value} = \sum_{t=1}^{n} \frac{B_t}{(1+i)^t}
\]

where \(t = \text{time}\), \(B_t = \text{benefits in time } t\), \(i = \text{discount rate}\)

For continuous time periods,

\[
\text{Present Value} = \int_{0}^{n} e^{-it} (B_t) \, dt
\]


37. Gray, "Economic Possibilities of Conservation," 506. This is apparently the first discussion in the economics literature
on the importance of the discount rate for extraction rates of natural resources.

38. Ibid., 507.


40. Ibid., 510.

41. Ibid., 511.

42. Ibid., 512.

43. Ibid., 513-514.

44. Ibid., 515.

45. Ibid.

46. Ibid., 515.

47. Ibid., 516.

48. Ibid., 517.

49. Ibid.

50. Ibid., 517-518.

51. Ibid., 518.


53. Ibid., 12, 72-77.

54. Ibid., 62-69.


61. See p. 38.

62. Ibid., 285.

63. Ibid., 286.


65. Ibid., p. ix. Much of this and the following paragraph logically belong in the next chapter, but in order to present the thought of John Ise in an integral manner, I have left it in this chapter.

66. Ibid., p. 162.

67. Ibid., pp. 176-177.

68. Ibid., p. 524.

69. Ibid., p. 525.

70. Ibid.


72. Ibid.


74. See his discussion of these items in pp. 50-57, 102-104, and
108-112 in Wealth, Virtual Wealth and Debt.


77. Wealth, Virtual Wealth and Debt., p. 104.

78. Cartesian Economics, p. 6.

79. Ibid., p. 7.


88. Ibid., 154.

89. Samuel Ordway, "Possible Limits of Raw-Material Consumption,"

90. For a detailed historical study of the personalities and ideas which would dominate the Conservation movement after 1962, see "Roots of the New Conservation Movement," by Donald Fleming in Perspectives in American History, VI (1972): 7-91.
CHAPTER III

THE TELEOLOGICAL FUNCTION OF ECONOMIC OUTPUT

Progress to what and from where? . . . .
The European talks of progress, because by an ingenious application of some scientific acquirements he has established a society which has mistaken comfort for civilization.1

Introduction

In the preceding section of this study an attempt was made to explore the thought of some scholars who, since the beginning of the Industrial Revolution, were intent on exploring the significance of the matter/energy input into the economic system. Such scientists attempted not only to analyze the vital dependence upon the ultimate means (the natural resources of the globe) by any socio-economic system, but also what a society could do to minimize waste and destruction of such resources.

In this section I shall focus upon the aggregate output of the economic system. More specifically, I shall attempt a historical review of scientists who have assessed the value of the aggregate output of the economic system by measuring its worth against some more Ultimate End of mankind. Herman Daly has discussed the concept of the Ultimate End and its importance in the following manner:
Is the nature of the Ultimate End such that, beyond some point, further accumulation of physical artifacts is useless or even harmful? Are some of the intermediate ends now being served, and those newly proposed, really undesirable, or less than worthwhile, in the light of the Ultimate End? Could it be that one of our wants is to be free of the tyranny of infinite wants?

The ultimate benefit or Ultimate End is less definable than the ultimate means. Perhaps, as a minimum (emphasis is in the original) definition, it could be considered as the survival and continuation of the evolving life process through which God has bestowed upon us the gift of conscious life. I hasten to add that this minimum definition begs some important questions . . .

Even though it is difficult to give a satisfactory definition of the Ultimate End, we are forced to choose among competing intermediate ends. The ranking of intermediate ends into a list of priorities logically implies some ordering principle, some concept, however vague, of the Ultimate End, with reference to which intermediate ends are ordered. Some of these ends cannot be served by aggregate growth. In fact, production and consumption often just get in the way.

In his analysis Daly shows that the economic profession, in performing its rightful task of efficiently allocating scarce intermediate means among an array of competing intermediate wants, has erroneously assumed that these intermediate means and legitimate intermediate wants were infinite in quantity and number. It should be made clear that it is not suggested that economics cover as its formal object the whole spectrum of reality from ultimate means to the Ultimate End. Such a suggestion would indicate that there was only one all-encompassing science. What it does suggest, however, is that the science of economics has to be aware of the findings and
conclusions of its neighboring sciences which impinge and overlap upon its subject matter if it wants to be consistent with other branches of knowledge. Though economics is an autonomous science, this autonomy does not give it the right to determine the content of the concepts which it necessarily receives from other disciplines. Such an arrogant procedure would cause a break in the continuum of knowledge which would not only be the source of much confusion, but also be a sure way to introduce erroneous concepts into the very fundamental definitions of one's science. What seems to have happened historically is that economics has legitimately borrowed the definition of these border concepts--intermediate means and ends--from its neighboring disciplines, but has not kept up with the more recent investigations of these neighboring disciplines.

As the Industrial Revolution has progressed, society has changed from an age of real penury and absolute scarcity in intermediate ends--food, lodging, clothing--but one of an absolute abundance in natural resources--forests, clean air, land, space--to an age of abundance and surplus in intermediate ends but one of scarcity and shortages in natural resources; consequently, the content of these border concepts of economics has changed drastically in the real order of events. Yet the economics profession continues to act and think as if nothing had changed in the last 250 years. The reason for this obstinacy of the economic profession in maintaining its original perception of these border concepts in the face of all
evidence to the contrary is not precisely known but several reasons have been advanced. First, the resistance to change itself. Second, the traditional concepts with their infinite substitutability of both intermediate means one for another and infinite wants one for another, the mathematical calculus can be used to full advantage. Third, if one allows an Ultimate End (sumnum bonum) to determine the priority of intermediate wants, one is drawn into the vagueness of philosophy. If the economics profession allows this, much of its precision and rigor will be lost, and precision and rigor are highly valued in the modern "scientific" world. Such a change in the content of its most fundamental building-block concepts would force the economics profession to admit that it is not similar to the physical sciences with their unchanging demonstrable laws and, in our culture, this means giving up the appearance of being truly scientific. As R. G. Hawtrey describes the issue: "Economists are proud to claim that theirs in the most exact branch of social science. The intrusion into it of the vexed question of ethics, with the vast amorphous phantoms of metaphysics looming in the background, would soon make an end to that claim."3 For, as it stands now, with all effective desires being given equal weight, one can avoid further normative judgments. It should, however, be pointed out that giving all effective desires equal weight is a stupendous normative judgment in itself. Ignoring this problem will not make it go away. In this case, economists have apparently decided to just follow the line of
least resistance. This can be shown by asking an economist what is it that determines the economic preferences or goals of an individual. The orthodox economist answers that such preferences and goals are given, that is, subject only to and determined by the will of the individual. This positivistic and utilitarian response of the economists has had serious consequences, not only for economic theory, but also for society in general.4

One obvious result of such a response for economic theory has been that economists have constrained their range of analysis by vigorously excluding all questions of value concerning the preferences of the consumers. John Whippen and Stephen Renas have remarked, "As positivism became entrenched as a leading methodological position, it led to the closure of much of economic thought... By taking as given the values and goals of Western society from the time of Adam Smith onward, positive economists assumed them to be non-problematic. As non-problematic, these values were not subject to examination."5

Ben B. Seligman is even more telling in his indictment of positivistic economics:

Overconcern with economy of thought has too often led to the use of mental bulldozers, leaving the intellectual landscape quite barren. To remove a few trees that obscured their view, positivists frequently leveled entire forests.6

The latter (the positivistic economist) eschews any identification with goals, asserting that analysis can only elucidate the implications of his model and that he must pursue these implications wherever they may go. He is not concerned with teleology or norms... Yet, he
may be charged with the patent fact that there are specific norms hidden in his positivist economics for when he speaks of the relationships between ends and means he is establishing perforce certain boundaries of behavior patterns.7

Positivism has abolished the desire to engage in open and free speculation about the nature of man and the universe.8

John Kenneth Galbraith has parodied this closure of economic thought in his usual delightful manner:

The first step (in making economics "scientific") was to divorce economics from any judgment on the goods with which it was concerned. Any notion of necessary versus unnecessary or important as against unimportant goods was rigorously excluded from the subject . . . Nothing is so thoroughly drilled into the minds of the young as the need for this restraint. Nothing in economics so quickly marks an individual as incompetently trained as a disposition to remark on the legitimacy of the desire for more food and the frivolity of the desire for a more elaborate automobile.9

After making this indictment against the conventional wisdom of economic theory, Galbraith follows his mentor Veblen who made the very same point with his phrase "conspicuous consumption,"10 and argues that, since the consumers cannot achieve what is best for society in their own private spending binges, the affluent society should allow some other organized body to make the choices of what should be produced, allocated and consumed in our society. Veblen seemed to prefer an organization of engineers to make these crucial decisions, somewhat akin to the technocratic solution; while Galbraith favored more public sector goods and services as could
only be obtained by increased government intervention.

There is, however, another more ancient and more radical tradition besides that of Veblen and Galbraith which questions the economist's uncritical commitment to maximizing the individual's subjective consumption preferences as the final goal or end of an economy. This is the very ancient tradition which traces its origin back to Greek philosophers and to the beginnings of the Judaeo-Christian civilization. It is more radical than the Veblen-Galbraith critique because it questions the very desirability of any increase in gross national product. Veblen and Galbraith question more the composition and the manner in which the gross national product is consumed rather than the amount of gross national product. This Greco-Judaeo-Christian tradition emphasizes that a critical evaluation of the consumption of economic products is just as important as increased productivity and efficient allocation of scarce means. This tradition holds that the value of economic goods and services are determined by the extent that they contribute to the achievement of some final goal (the summum bonum) of man, and which final goal is conceived as something beyond just the satisfaction of increasing one's economic productivity and consumption. In such a tradition, it is not only possible but, indeed, quite likely that the increased satisfaction of consumer's subjective preferences could do more harm than good. G. K. Chesterton has remarked,

And as long as Mr. Mark Starr and others continue to tell the people that all the various gadgets foisted
upon us by capitalists to make profits are gifts of the Almighty for enabling us to lead fuller, larger, nobler, higher, wider, deeper, etc., lives so long will the people remain in utter darkness.11

In such a teleological vision, the value of economic "goods" is determined by a final goal, and the final goal is determined by a study of man's nature. This brings us once again to the Socratic question of "What is man?:" Along with other Greek philosophers, Aristotle probed deeply into the question of what use of material possessions makes for harmony and happiness in man's life.

Perhaps the Latin ideal of "contemplatio in actione" which using a certain amount of poetic license I have translated as "in the wise use of possessions man reflects the harmony of divine reality" best describes Aristotle's goal. The possession of certain economic goods and services were necessary but not sufficient elements in the search for the good life. Aristotle noted that "a good man may make the best even of poverty and disease, and the other ills of life; but he can only attain happiness under the opposite conditions... This makes men fancy that external goods are the cause of happiness, yet we might as well say that brilliant performance on the lyre was to be attributed to the instrument and not to the skill of the performer."12

It was the wisdom shown in the use of a moderate and harmonious amount of material possessions, rather than the maximum accumulation of such possessions that constituted the essence of the good life. In this sense Aristotle differs from modern econo-
mists who view the accumulation of material possessions as the end of both the individual and nation. Barry Gordon has described Aristotle's thought about material possessions in the following manner:

In Aristotle's view, economics is not the competing technology it has tended to become in the hands of many of its twentieth century practitioners. Much of the engineering-style literature which pervades modern professional journals and monographs in the field would seem pointless to him. This pointlessness stems, given his perspective, from the dissociation of that literature from explicit consideration of what he takes to be the central question of human thought and action, the nature of the happy life...

It is pointless then to investigate means of increasing the community's command over the use of resources while dissociating the investigator from analytical involvement in the question of how that enhanced command might result in a genuine improvement of quality of life for the community.13

Aristotle taught that the art of economy consisted in using economic possessions moderately and wisely in improving one's self toward a higher order of wisdom and virtue. There are two other basic attitudes one might take concerning economic possessions. One can take an ascetic position and view such output as a necessary evil to be renounced as far as possible in one's pursuit of immaterial ideals. On the other hand, one can take a more modern position and have as one's primary goal the constrained maximization of such economic goods and services. These three approaches to economic possessions might be labeled and categorized as follows: 1) "Ascetism" in which worldly or material possessions are viewed as necessary evils and thus renounced as far as possible.
2) "Materialism" in which the object of society is to produce and consume as large a quantity of economic goods and services as is economically efficient. The materialism referred to here is not intellectual and philosophical but practical (concern for comfort, living standards, per capita GNP). 3) "Contingentism" in which economic goods and services are used to the extent that some more final goal based upon man's nature would dictate.

It is with hesitation that one coins such an awkward label as "contingentism" for this third way of evaluating economic possessions. I have thought of such names as "Moderation," "Neutrality," or "Functionalism," but have rejected them all for one reason or another; "moderation" and "neutrality" because although they distinctly imply that an inordinate amount of economic possessions is not to be pursued above all else, such names do not make it clear that use of such goods is to be determined by another more final goal. The word "Functionalism" is suggested by R. H. Tawney in The Acquisitive Society, but he uses it with a somewhat different though related meaning. It is indicative of our age that there does not exist an apt word or phrase which would label clearly that philosophy of life that would look upon economic possessions as neutral objects whose total value is completely contingent upon their relationship to some more final or higher goal. This same indictment of modern society can be made when one reflects that Ruskin's name for material possessions which harm an individual or
society, "illth" in opposition to wealth, has never caught on. The Greek philosophers were quite aware of this distinction between the accumulation of wealth for its own sake and the production and consumption of wealth, the proper use of which would be determined by some Ultimate End of man. Aristotle used the term "chrematistics" for that study which sought to maximize wealth for its own sake, while economy was that science which explored the harmonious and natural use of economic possessions. Needless to say, he thought that chrematistics was inferior in its substance to that of economics.

However, it seems that our more modern age cannot even imagine material possessions being anything except good, hence our word for the product of our economic system, economic "goods." Our usage of the word "goods" is a materialistic narrowing of a distinctively ethical word, still surviving in its usage as a "good life." Such usage is an excellent example of how one's terminology can affect one's analysis. Since we somewhat arbitrarily label the result of production "goods," how can one argue against such production?

Despite this inherent bias in the very terminology and the very marrow of our society, there have been some social scientists in the last two hundred years to critically question the value of ever-increasing economic possessions for individuals and society. It will be the object of this chapter to discuss some of the mani-
festations of this third way of contingentism which are found in the history of modern economic thought.

There were two criteria used in the selection of scholars for inclusion into this chapter. First, such scholars either had to be acknowledged economists (Sismondi, Hobson and Tawney) or, if non-economists, they had to attempt to discuss the value of economic output in a theoretical and reasonably complete analytic manner (Ruskin and Chesterton). Second, they had to subject economic output to an humane assessment. And, as noted and discussed above in the introduction, the definition of humanism is one that is derived from the Greco-Judaeo-Christian tradition.14

But before we jump from the ancient Greek civilization of Aristotle to the modern commercial and industrial age, a few comments seem in order on the intervening centuries.15 Though one can find particular statements which could be used to justify all three of the above mentioned approaches to material possessions, it is safe to say that the third approach of contingentism was perceived to be the ideal by the leading Judaeo-Christian philosophers in these intervening centuries. R. H. Tawney writes:

The most fundamental difference between medieval and modern economic thought consists in the fact that, whereas the latter normally refers to economic expediency, however it may be interpreted, for the justification of any particular action, policy or system of organization, the former starts from the position that there is a moral authority to which considerations of economic expediency must be referred.16

What has, however, been modified is the final goal itself.
For Aristotle the final goal was to improve man's mind and will or, in other words, wisdom and virtue. This was a goal that mankind would have to pursue unaided and alone. In the Judaeo-Christian civilization, this pursuit of the final goal is given a definite direction. Using the writings of the Old and New Testament of the Bible as their foundation, the medieval philosophers and theologians were able to construct a philosophy of life that was more detailed and definitive than was that of Aristotle in pointing out what was the final goal of mankind and how the production and consumption of economic possessions should be used in the pursuit of that goal.

This teleological view of economic possessions is made quite clear in the thought of Thomas Aquinas\(^{17}\) and in a very precise statement on the subject in the basic writings of Ignatius of Loyola, the Spanish founder of the Jesuits, written toward the end of the medieval ages.

Man was created to praise, reverence, and serve God Our Lord, and by this means to save his soul.

And the other things on the face of the earth were created for man's sake, and in order to aid him in the prosecution of the end for which he was created.

Whence it follows that man ought to make use of them just so far as they help him to attain his end, and that he ought to withdraw himself from them just so far as they hinder him.\(^{18}\)

Anyone investigating the history of that idea which I have labeled contingentism, that is, viewing economic production in a neutral light and asking for what, in economic writings from the
time of Adam Smith onward is likely to experience much frustration. The source of such frustration is easily found and is the following. It should be as obvious as it can possibly be that before a reasonably intelligent being or society begins an endeavor, such a society would determine the overall usefulness or worth of the project and, only after such an evaluation has been finished, would he attempt to efficiently perform the task. And, if by some chance, the performance of the task came to be substantially more difficult than it had initially been thought would be the case, then the intelligent society would once again review the whole project as to its overall worth to human happiness. It is the essence of insanity to pursue a task without ever looking at the overall picture. Yet such an insanity seems to be the lot of modern commercial civilization. R. H. Tawney has characterized our society in the following manner: "It is a commonplace that the characteristic virtue of Englishmen is their power of sustained practical activity, and their characteristic vice a reluctance to test the quality of that activity by reference to principles." Tawney then goes on to compare our society to a squirrel energetically and efficiently but futilely running in place in a revolving cage. Some of the same ideas must have been going through the mind of J. R. Hicks when he wrote that "one cannot repress the thought that perhaps the whole Industrial Revolution of the last 200 years has been nothing else but a vast secular boom, largely induced by the
unparalleled rise in population. If this is so, it would help to explain why, as the wisest hold, it has been such a disappointing episode in human history.\textsuperscript{20}

Since it is easy to prove that in times of real penury, increased material production is a real source of benefit to society, modern conventional economic theorists have then extrapolated and assumed that ever more is better. This supposition is the same as saying that although a would-be violinist cannot make music without a violin, all that is necessary for ever better music is an ever larger violin.

Thus the critical social scientist seeking to explore recent history of economic thought that he might be aided in evaluating the overall usefulness of increased economic productivity, will soon experience a sense of frustration because of the lack of writings on this subject. When one thinks of all the essays, studies and books written by economists on rather arcane and trivial refinements of economic theory, and how little is written on the worth of all this economic productivity in achieving the final goal of mankind, a sense of defeat can easily set in. "Unhappy man that I am, who shall deliver me from the body of this death?"\textsuperscript{21}

Yet there were some economists who did attempt to maintain a critical stance in the face of the dominant economic theory. The first of these was the Swiss economist, J. C. L. Simonde de Sismondi. It is necessary to remember that Sismondi was writing in a time of
transition from the craft system to the factory system, and that
his criticism will be directed against the excesses that ordi-
narily occur in such a transition period. Sismondi was well
equipped for his role as a critic of the excesses of industrialism
as he was one of the few economists of his generation who had the
historical ability and acumen to observe the transitory nature of
his era.

We are, and this point cannot be sufficiently
stressed, in an altogether new state of society, of
which we have absolutely no experience. We tend to
divorce completely all sorts of ownership from all
sorts of work, to break down all relationships between
man and master, to deprive the former of all associa-
tions in the profits of the latter.

In a very early age of industrialism Sismondi was attempting to
orientate the economics profession from the abstractions of eco-

nomic man that would ultimately be its hallmark. He wanted economics
to describe and analyze a changing economic scene and to hold fast
to the ancient hard-earned truths about man. Instead economists
would eventually come to declare that their concepts and abstrac-
tions were what were permanent, and that the nature of man was what
was unknowable and fleeting.

J. C. L. Simonde de Sismondi

More than one historian of economic theory has pointed out
that the contributions of J. C. L. Simonde de Sismondi have been
unjustly ignored by the economics profession. Thomas Sowell has
shown that Sismondi made five major discoveries in economic theory which the economics profession overlooked and then had to rediscover. Charles Gide and Charles Rist have suggested that Sismondi should be considered the real founder of the school which has since become known as *économie sociale* in France and *Sozialpolitik* in Germany, and, if not the founder, at least a precursor of the Historical School. Elie Halevy has pointed out that Sismondi was the first writer to give expression to the belief that industrial society tends to separate into two absolutely distinct classes—those who work and those who possess—which distinction was to play such an important role in the Marxian system.

In this study I want to investigate another contribution of Sismondi that has been overlooked and which consequently had to be rediscovered. This is Sismondi's role as a moral and humane critic of the classical economic theory. This role was unknown, or at least unacknowledged, by such English critics as Carlyle, Ruskin, Hobson and Tawney. William Grampp also overlooks his role in the otherwise quite perceptive study, "Classical Economics and Its Moral Critics." James Sherburne is more knowledgeable when he writes:

Ruskin's ethical and Romantic bias places him closer to Simonde de Sismondi (1773-1842) than to any other economist critical of the abstraction of the classical school. Sismondi is best known today for his vast histories of Italy and France. Nonetheless, his *Nouveaux principes d'économie politique* (1910) is a landmark in radical economic criticism. ... Sismondi rejects the assumption of economic man and
urges the study of real producers and consumers. He differs from other advocates of an empirical approach in the extent of his ethical concern. For him as for Ruskin, the attack on method is a way of injecting ethics into economic analysis. Unlike Ruskin, Sismondi retains a strong interest in making economics more accurate as a science. Ruskin's debt to the Swiss scholar is unknown. Although he was familiar with Sismondi's history of the Italian republics, it is difficult to determine whether he had read *Nouveaux principes.*

How Sismondi came to this role of moral critic is an interesting story and well worth a digression at this point. J. C. L. Simonde de Sismondi was born into a somewhat impoverished but aristocratic family in Geneva in 1773. In 1793 his family was forced to flee to England where Sismondi thoroughly examined the English industrial system and socio-politico-economic institutions. The young Sismondi learned to love England as a kind of second country and to adopt the principles of political and economic liberalism. After eighteen months in England, his family returned to Geneva and then on to northern Italy where Sismondi published his first work on the agriculture of Tuscany (*Tableau de l'agriculture en Toscane*). In 1803 he published a two-volume treatise, *De la richesse commerciale, ou principes d'economie politique appliques, a la legislation du commerce* which was chiefly, but not entirely, an attempt to expound and popularize the ideas of Adam Smith throughout the French-speaking world. This book was much noticed at the time for Jean Baptiste Say's study had not yet been published, and it met a need in French-speaking countries. Sismondi was offered
the chair of political economy at the University of Wilna in Poland, but he refused the offer that he might pursue his other academic profession, that of an historian. For the next twelve years of his life he concentrated on writing the monumental sixteen-volume history of the Italian republic which established for him a solid and lasting reputation as a historian. During the same time he also published a two-volume work on the literature of southern Europe. After 1803, the year when he published his work on economic theory popularizing Adam Smith, he had read very little in economics. In 1815, however, he was asked to write the article on political economy for the Edinburgh Encyclopedia, and his study of economics was resumed. Upon a re-examination of the economic theory, Sismondi discovered that his judgment of classical economy theory had changed, and he was now led to condemn what formerly he had praised. Beneath the appearance of England's prosperity and political freedom he discerned an economic system, the true name of which was not liberty but servitude.

As a consequence of his revision in thought Sismondi published a two-volume treatise, *Nouveau principes d'Economie politique ou de la Richesse dans ses rapports avec la Population*, in 1819, which he re-edited in 1827 with important additions. Though this study does not seem to have been widely read, it was immediately attacked in the press by the classical economic school. McCulloch inserted a six-page digression condemning Sismondi's thought in an article
In a private correspondence to David Ricardo, McCulloch mentioned that "Sismondi is too much of a sentimentalist to make a good political economist."^31

Undoubtedly one of the themes in the Nouveaux principes which made McCulloch view Sismondi as being "sentimental" was his teleological definition of wealth. For Sismondi explicitly rejected that definition of wealth as it was defined in the following passage by a leading orthodox economist:

To what extent and under what circumstances the possession of wealth is, on the whole, beneficial or injurious to its possessor, or to the society of which he is a member; what distribution of wealth is most desirable in each different state of society; and what are the means by which any given country can facilitate such a distribution?--all these are questions of great interest and difficulty, but no longer form part of the science of political economy . . . The subject treated by political economy is not happiness but wealth.32

What was Sismondi's view of wealth? Why did his view provoke the wrath of the leading economists of his day? In beginning his study Sismondi reviewed the definitions of the ancient Greek philosophers.

But at least they (the Greeks) never lost sight of the fact that wealth had no other worth than what it contributed to the national happiness; and precisely because their treatment was less abstract, their point of view was oftentimes more just than ours.33

In both his Nouveaux principes and his later Etudes sur l'Economie politique Sismondi is insistent throughout on the distinction which he obtained from Aristotle between the science of "chrematistics"
which treats with the accumulation of monetary wealth or items of exchange value for their own sake, and political economy which treats of the role that economic production and consumption should play in achieving the final goal of society. He states his position in the following two quotations:

> When one takes the increase of economic goods as the end of society, one necessarily sacrifices the end for the means. One obtains more of production, but such production is paid for dearly by the misery of the masses.  

> . . . the chrematistic science, or the study of the means of increasing wealth, in setting aside the purpose of this wealth, is a false science.

Since Sismondi disagreed with the conventional economic theorists of his day in his perception of the ultimate end of the economy, it is not surprising that he came to different policy conclusions. During the era that Sismondi was writing the main debate raging within the economics profession was what came to be known as the general glut controversy. This controversy over Say's law and the possibility of general economic crises reached a peak of intensity and volume of output in the 1820's, involving every major economist of the period, and which was unrivaled until the Keynesian controversy of the mid-twentieth century. With the exception of Malthus, according to the classical writers, the general growth of production presented no inconvenience, thanks to the fortunate spontaneous mechanism of the market which immediately corrected the errors of the entrepreneur if he in any way over-estimated the quantity demanded.
Sismondi's teleological approach to the production and consumption of economic wealth led him to reject this optimistic conclusion. Among those opposed to this optimistic faith in the automatic equilibrating mechanism of the market, Sismondi alone thought that the cause of such crises might be over-production as well as underconsumption. Although Sismondi is frequently cited as being one of the founders of the theory that underconsumption was the main cause of the recurring economic crises,\textsuperscript{37} it would be much more precise to say that he viewed overproduction as the cause of the economic crises. This distinction between underconsumption and overproduction is important to the analysis of Sismondi.

If one views economic productivity to be the Ultimate End as, according to Sismondi, did the dominant "chrematistic" economic theorists of his day then, of course, the cause of all economic depressions is lack of consumption. It would be a contradiction in terms to say that there was too much production and, therefore, underconsumption must be the cause of such economic depressions. Such a view implies that the solution to such crises is found in increasing the quantity of consumption or, in other words, increasing the effective demand. In all cases it is better to modify consumption upward than to reduce production downward. And to compound this attitude, the classical economist added that the way to increase consumption was to increase production. "It is not a consequence of production being too much increased. Increase it more."\textsuperscript{38}
Implicit in such a recommendation is the normative position that more is always better and that the solution to such economic depressions is not to thoroughly investigate the society that suffers from the crisis, but to resolve all such macro-economic recessions and depressions by somehow increasing effective demand.39 Sismondi, however, was not content with such an analysis. If one acknowledges a more final goal than production and consumption, then the cause of economic crises could be either overproduction, under-consumption or, as more likely in those early days of the Industrial Revolution, some combination of both, and it is the task of the political economist to investigate the matter more thoroughly by exploring the effect of economic production and consumption upon the welfare of mankind. This was a task that Sismondi attempted in his later economic writings.

Such an investigation will not use the same type of analysis as the classical economists which Sismondi criticized for being too abstract. For instance, the abstract economic theory of Ricardo was attacked by Sismondi, not because it reasons from the general to the particular, but because the generalizations are not based on the actual observations of particular men and also because such generalizations do not take into account that man's consumption is designed to fulfill a higher goal. Sismondi comments that:

... it is a natural habit of the human mind to seek to reduce all its operations to the simplest formula, to generalize all its rules, and to accomplish this uniform procedure whenever it can to avoid more complicated pro-
cedures. That habit, which tends to simplify every-
thing, to classify everything, to generalize everything,
is no doubt the most essential cause of the progress of
various sciences. It is not necessary, however, to abandon
one's self to it in an unreflecting manner.40

The science in their hands is so speculative, that
it seems to be detached from all practice. It was be-
lieved at first that in extricating the theory from all
the accessory circumstances, one ought to render it
clearer and easier to seize, but the opposite is attained.
The new English economists are quite obscure and can be
understood only with great effort because our mind is
opposed to admitting the abstractions demanded of us.
This repugnance is in itself a warning that we are turning
away from the truth, when in moral science, where everything
is connected, we endeavor to isolate a principle and to see
nothing but that principle.41

Sismondi begins his analysis by comparing the economic society
in which the majority worked for themselves as craftsmen and trades-
men with the industrial society in which most laborers worked for
others. (It was Sismondi who coined the word proletariat). Since
the craftsman's reward was the fruits of his own labor, and the
amount of this reward was determined by the natural order of things,
he would stop producing when he had reached the point that he would
prefer to enjoy the leisure and the fruits of his labor. Sismondi
remarked:

For the laborer who works for himself there is a
point reached in the accumulation of wealth beyond which
it would appear as folly to accumulate still more, since
such a laborer would not be able to increase his consump-
tion in a proportional amount. But the needs of the
laborer who works in an industrial society appears to be
infinite. No matter how many riches he has massed, there
is no point at which he will say: "This is enough."

... Moreover this is a serious error into which
have fallen most of the modern economists that they think that the act of consumption is unlimited and always ready to devour an infinite quantity of production. They do not cease from encouraging the nations to produce, to invent new machines, to improve their work so that the quantity of production achieved in the year will always surpass that of the preceding year: they are very distressed when they see the number of unproductive workers to multiply, they would point out the idle for the indignant public, and in a nation where the power of the worker has been increased by a hundredfold, they want that everyone should work in order to live.42

How does it happen that the industrial laborer works beyond that point which he would in a more natural system? Sismondi notes that the workers were getting a relatively small share of the output due to the institutional economic system of that early industrial era. Because of these low wages, the worker and his family had to work long hours in order to obtain the necessities of life. Sismondi questions whether the marginally increased output is worth the marginal extra hours of work.

If all 'les pompons de la richesse' were offered to the manual worker as a recompense for his assiduous travail of twelve and fourteen hours a day, as many do today, there is not one of these workers who would not choose less luxury and more of leisure, less of frivolous ornaments and more of liberty. Such would be the choice of the entire society, if only there was more equality in our society. Every craftsman who profits the total amount of his own industry, when he compares the almost imperceptible pleasure that he would receive from a slightly finer suit of clothes with the additional work that such a suit of clothes entails, would not wish to pay this price. The luxury is not possible except when it is paid for by the work of others. Assiduous and constant labor is able to be procured, not for the sake of frivolities, but only to gain the necessities of life.42a
For Sismondi, overproduction is when workers strain to produce more than they would in a system in which they received a larger share of the fruits of the productive process. Because the owners reaped where the laborers worked, the decision to expand production was made by those who profited from such production rather than by those who bore the real cost of labor that such expanded production necessarily entails. Sismondi wrote about the England of the early days of the Industrial Revolution with its nascent factory system. New technology and organization of large scale production increasingly polarized society into a minority of possessing capitalists and a majority of dispossessed workers. It is important to note that in this critical period of transition Sismondi was unwilling to glorify economic production for its own sake as other economists were able to do because of their absolute faith in the salvific efficacy of Say's Law which declared that since supply created its own demand, an increase in production was a sign of increased demand for such production. Sismondi instead asked a more fundamental question:

What, then, is the object of human society? Is it to dazzle the eye with an immense production of useful and elegant things; to daunt the senses with the control which man exercises over nature, and with the precision or the speed with which a human work is executed by lifeless beings? Is it to cover the sea with vessels and the earth with railways which distribute in all directions the products of an ever increasing industry? . . . If such is the case, we have undoubtedly made immense progress as compared with our ancestors; we are rich in inventions, rich in activities, rich in scientific powers, rich in merchandise everywhere; for every
nation has produced not only for itself but also for its neighbors. But, if the aim which society ought to accept, in encouraging labor and protecting the fruits of the labor of man, fruits which we call wealth,—if these fruits, which consist of moral and intellectual goods as well as material goods, should be the means of improvement as well as of enjoyment, are we sure that we are approaching our goal?\textsuperscript{44}

Sismondi's observation of the industrial system reminded him of the story of Gandalin.

In the time of enchantment, Gandalin, who lodged a sorcerer in his home, noticed that every morning the sorcerer would take a broom-handle and, saying a few magic words on it, he made out of it a water-carrier, who at once would get for him as many pails of water as he desired. One morning Gandalin hid himself behind a door and listened with all his might to overhear the magic words which the sorcerer pronounced for his enchantment. He, however, did not hear what the sorcerer said next to undo it. As soon as the sorcerer went away, Gandalin repeated the experiment; he took the broom handle, pronounced the mysterious words and the broom water carrier went forward to the river and returned with water, and then again went forward and came back with it, thus again and again; Gandalin's reservoir was already full and the water flooded the room. "It's enough!" cried he, "Stop!" But the machine-man neither saw nor heard; insensible and indefatigable, he would have brought all the water from the river. Gandalin, in his despair, took an axe and hit his carrier with repeated blows. Then he saw the fragments of the broom, upon falling on the ground, immediately get up and reassemble the magic form and run to the river. Instead of the carrier, he had now four, eight, sixteen; the more that he struck down the machine-men, the more machine-men got up to do his work in spite of him. The entire river would have passed into his home, if the sorcerer had not fortunately come back and destroyed his enchantment.\textsuperscript{45}

Sismondi comments then that

... the water, however, is a good thing. Water, just as much as the work, just as much as the capital, is necessary for life. But one is able to have too much, even
of the best things of life . . . Each new application of science and the useful arts, similar to the axe of Gandalin knocking down the machine-man which the magic words had created, only to find soon two, four, eight, sixteen in its place; so the productivity continues to increase with a rapidity without measure. Has not the moment come, or at least is not the moment able to come, when one should say: This is too much?

According to the theory which is professed today in all the schools of political economy, this moment has not yet come, and it is never going to come.\textsuperscript{46}

The story of Gandalin epitomizes Sismondi's view of his society. It was increasing economic production with a rapidity without measure but for what? His historical studies had taught Sismondi that there was more to a superior civilization than just increased material production. Such increased productivity could well do more harm than good. As Sismondi grew older, he grew more pessimistic about his society that would not reduce its frenetic activity and orientate its economic production and consumption by some final goal. On September 19, 1834, he wrote in his private journal:

I read in the Westminster Review a striking article on civilization, in which the author points out many of the bad effects of the present system, which hitherto I have been almost the only one to remark. There is much ability in this article, but it inspires one with a melancholy feeling, because the evils are so serious and one does not see the remedies; the too much of everything is the evil of the day.\textsuperscript{47} (Underlining is in the original).

Before we conclude with Sismondi, it is interesting to point out that he could be considered a precursor for another socio-economic ideal which has recently gained some attention. Although
E. F. Schumacher never mentioned Sismondi in his *Small Is Beautiful: Economics as if People Mattered*, it would be possible to gather together a selection of some of Sismondi’s writings and label them with that same title. In twin articles—"On Landed Property" and "On the Condition of the Work People in Manufactories"—published by the *Revue mensuelle d'Economie politique* in 1834 Sismondi criticized the stress on large-scale farming and concentration of economic power which was being advocated by both the theoretic communists of his day, the Saint Simonians, and the classical economists. In the agricultural sector Sismondi observed the following:

The Saint Simonians, and all those who wish to regenerate society by the co-operation system, fall into a great absurdity, when they wish to give by turns to the same men the enjoyment of luxury, and the often rude, sometimes disgusting labours of poverty. He who has been required in the morning to spread manure on the common field, will care little for a ride in a carriage at noon, or for an evening ball in velvet and lace. But the chrematistics fall into an absurdity of much the same kind, when they say, "The more you produce, the more enjoyment will there be for all." . . . Where is the use of offering to the nation more sources of enjoyment, if you are to destroy those who are to benefit by them?48

The chrematistic school has represented us as an eminent progress in agriculture, the power acquired of doing the same work with a continually decreasing number of hands; this progress has been pushed very far in England, where they have succeeded in driving more than half the nation out of the fields into the towns. The economist of men, not of wealth, cannot behold such progress without extreme sorrow.49

And in his study of the urban industrial scene Sismondi commented:

It is in the midst of these trades, exercised by the freeman of towns, which formerly did all the industrial work
in all nations, that manufactories have arisen. The masters of manufactories in towns hold the same place in the industry of towns that great landowners do in the country. Like them, to make their own great fortunes, they must cause the disappearance of one or two hundred small independent properties: like them they afterwards, by agreeing together, reduce all the men who work under them to a state approaching to servitude; . . . Industrialism, or the substitution of one great workshop for many small ones in the common arts, has been considered to be one of the benefits of civilization, in consequence of many illusions.  

Is it not evident, that instead of making a virtue of industrialism, that is, of the effort which all are making to glut the markets still more, society and government should endeavor to give another direction to human activity, so that, as machines will henceforth do the work of men, men should no longer do the work of machines.  

In general, this extolling of the societal advantages of small proprietorships and what today would be known as "intermediate technology" fell on deaf ears. Conventional orthodox economical theory was not prepared to give a hearing to, much less to investigate, the effects of concentration of economic power on society. The classical economics with its praise of free competition and its fundamental goal of an ever-increasing production had no place for a theory which questioned its very premises. Sismondi's questioning of economic concentration out of humane considerations was not even worthy of a reply by the orthodox economic profession. It is interesting to note that the only formal reply to this position favoring decentralization of economic power through intermediate technology was by Lenin in 1893 in a treatise entitled "A Characterization of Economic Romanticism: Sismondi and Our Native Sismondists."
Lenin thought that "Sismondi occupies a special place in the history of political economy, in that he stands off the track of the main trends, that he is an ardent advocate of small production and opposes the advocates and ideologists of large scale enterprise."^52 For Lenin as for Marx^53 however, Sismondi was only worthy of scorn because he did not realize that the facts of history in their inevitable march toward the centralized accumulation of monopoly capitalism and thence to Communism were showing up his errors.

Hence it was that the ideas of Sismondi, characterized as "sentimental" by the orthodox economists and scorned as hopelessly romantic by the Marxists, were, for the most part, totally neglected.^54

Even today modern economists find it difficult to appreciate his analysis, just as he found it difficult to understand the position of the political economists of his day. "The new English economists are quire obscure and can be understood only with great effort because our mind is opposed to admitting the abstractions demanded of us. This repugnance is in itself a warning that we are turning away from the truth, when in the social sciences, where everything is connected, we endeavor to isolate a principle and to see nothing but that principle."^55 Modern economists simply do not agree with Sismondi that l'economie politique n'est elle pas une science de calcul, mais une science moral. Elle egare quand on croit se guider par des nombres; elle ne meme au but que quand on apprecie les sentiments, les besoins et les passions des
It is easy to find the reason for this difference in outlook. As both Grampp and Sherburne have noted in their discussion of the moral critics of orthodox economic theories, it is a difference in basic philosophies of life. The classical economists derived their inspiration from the philosophic liberalism and utilitarianism of their day. Sismondi, and later Ruskin and Tawney, rejected this world view. Using the ancient Greek philosophers as their mentors, just as had the medieval scholastics, Sismondi and Ruskin thought that the theory of political economy was one which investigated the utilization and consequence of economic production on the ultimate end of mankind rather than just an unbounded maximization of production.

As we leave this perceptive observer of the transition age to modern industrialism and turn to a later age of greater production and abundance, we should not forget that it was Sismondi who first criticized the economic theorists who made the increase of production a national goal. In that early industrial age of long working hours for not only for the laboring men and women but also the children, he was concerned not so much about the effect of consumption on achieving the final goal of man's nature, but whether the cost in human suffering was too great for the frivolous items being produced. We now turn to an author who will continue this line of investigation, but who will also question the worth of more consumption
in itself.

John Ruskin

As the Industrial Revolution advanced through the nineteenth century, the worst excesses of its exploitative labor practices were gradually decreased. Most of these reforms, such as the Coal Mines Act in 1842 and the Factory Act of 1844 with 6-1/2-hour maximum working day for children under 13 and a maximum of 12 hours for women, were the result of government intervention to effect a policy which Sismondi had advocated for some twenty years.

Though John Stuart Mill could argue as late as 1848 that it was doubtful whether any of the inventions yet produced had "lightened the day's toil of any human being," he nevertheless noted that "they have increased the comforts of the middle class," even if "they have not yet begun to effect those great changes in human destiny, which it is in their nature and futurity to accomplish."

At the same period in time when John Stuart Mill was writing these sentiments in his Principles of Political Economy, another writer was beginning to investigate what effect these great changes in physical inventions as well as social machinery with their resulting increase in the comfort of the middle classes were having on human destiny. John Ruskin was born in 1819 into a moderately wealthy London merchant family. Though he knew firsthand the power and pleasures that commercial success brought in its train, his puritanic and artistic parents made sure that he never judged the
accumulation of wealth to be the main goal of his life. Trained as an artist and art critic, John Ruskin's reputation grew immensely with his successive publication of the four volumes in his series *Modern Painters*. It was always, however, Ruskin's ambition to bring the beauties and inspiration of art to the representative British worker. When the average British laborer failed to respond to the beauty and inspiration of the intellectual and artistic world, Ruskin set himself to the task of finding the cause of such blindness. His observations into the life and society of the British laboring class rather quickly led him to believe that something was wrong with an economy that produced so much quantity of things of so little quality, yet brutalized so many people in doing so. Similar to other English critics of the industrial society such as Coleridge, Cobbett, Carlyle, Dickens, Arnold, Morris and many others, Ruskin soon denounced the commercial society of his time for its worship of Mammon, its "gospel of greed," and the conventional political economy which he saw as intellectually supporting such a system. As the historian Asa Briggs has mentioned, "indeed, they (the poets) had probed far more deeply than the political economists into the inner meanings of the processes of change, had taken the world of nature as well as the world of men into the reckoning." Yet of all these English critics, only Ruskin attempted to challenge the economic theorists on their own ground by undertaking the task of thoroughly analyzing
precisely what were the errors of conventional political economy. In *Unto This Last* and *Munera Pulveris*, Ruskin attempted to demonstrate what were the basic errors of the political economists of his day. Rather than attempt to summarize Ruskin's criticism of orthodox political economy and the positive content of his economic theory, I shall focus upon his analysis of how the worth of final economic output should be evaluated. Or, as Ruskin phrases it, what determines what is real wealth and what is the opposite of wealth or "illth."

By the mid-nineteenth century there was evidence that the world was shifting from an era of scarcity of intermediate goods such as shelter and food to one of, at least potential abundance in such goods in the industrialized world. If so, then the question of wealth or "illth" becomes not only a theoretical question but one of real life. James Sherburne has noted that "the history of the discovery of abundance is yet to be written." The only scholarly study to face the problem of the discovery of abundance is Daniel M. Fox's intellectual biography of the American economist, Simon N. Patten, who first discussed the implications of abundance in his book *The Discovery of Abundance: Simon N. Patten and the Transformation of Social Theory*. Sherburne claims that Ruskin "stands as the most important nineteenth-century precursor of Simon N. Patten and twentieth-century abundance thinking."

Ruskin begins his analysis of real wealth by contrasting his
definition of wealth to the approach of John Stuart Mill. Mill had commented that "everyone has a notion, sufficiently correct for common purposes, of what is meant by wealth" or, in other and more illuminating words, whatever commodities individuals value to be wealth, that evaluation, in itself, makes such commodities wealth to be valuable and a source of wealth. This basic definition of wealth is critical and Ruskin vigorously rejects this first step of Mill's. Mill's definition of wealth is grounded in that branch of positivistic and utilitarian philosophy which not only sought the "greatest happiness for the greatest number" (as, in some vague but real sense, do all philosophies), but also made the crucial assumption that there is no objective criterion other than the individual consumer's subjective preferences for determining what is conducive to happiness. In other words, as Sherburne has noted, it is utilitarianism strongly modified by a strong attachment to individual liberty. In such an ideology the logical goal of the economic system has to be to maximize the satisfactions that the individual consumers receive from fulfilling their own self-perceived desires. As Jeremy Bentham has noted: if other things are equal, and if pushpin is preferred to poetry, then pushpin is more valuable.

Ruskin, however, viewed wealth in a different light. He thought that the economist's view of wealth as determined by freely perceived desires of autonomous individuals was erroneous. He pointed
out that the economist’s ideal of liberty was entirely deficient in scope, eventually self-defeating, a phantom in other words.\textsuperscript{68} Since the definition of wealth revolves around one’s concept of liberty, it is necessary to pursue the meaning of liberty further in the writings of Ruskin. Ruskin held that true liberty, like happiness, can only be achieved when it is recognized that there is a Law to which all must be obedient. Ruskin notes “how frantic the pursuit of that treacherous phantom which men call Liberty... How could it be otherwise: since if there be any one principle more widely than another confessed by every utterance, or more sternly than another imprinted on every atom, of the visible creation, that principle is not Liberty, but Law.”\textsuperscript{69} Ruskin claims that this principle was acknowledged in ancient Greek thought and in the medieval society. If one somewhat arbitrarily decides that such societies were undesirable because they did not seek directly and immediately to maximize individual freedom, then one is forced to forego an appreciation of most of the leading thinkers of the past ages in their quest for those politico-economic laws which make for a satisfactory community. Ruskin, like Sismondi, had a great deal of respect for the ancient writers.

The study which lately in England has been called Political Economy is in reality nothing more than the investigation of some accidental phenomena of modern commercial operations, nor has it been true in its investigation even of these. It has no connection whatever with political economy, as understood and treated of by the great thinkers of past ages.\textsuperscript{70}
In order to understand Ruskin's rejection of the political economist's definition of wealth which was based on the philosophy of utilitarianism modified by a strong attachment to individual liberty, it is necessary to pursue the implications of such an ideological position. Ruskin notes that in such a society

...the persons who become rich are, generally speaking, industrious, resolute, proud, covetous, prompt, methodical, sensible, unimaginative, insensitive, and ignorant.

The persons who remain poor are the entirely foolish, the entirely wise, the idle, the reckless, the humble, the thoughtful, the dull, the imaginative, the sensitive, the well-informed, the improvident, the irregularly and impulsively wicked, the clumsy knave, the open thief, the entirely merciful, just and goodly person.71

In such a society the more industrious, resolute, proud, covetous, etc. pursue what they perceive as ever more liberty but which should be called license, according to Ruskin.72 In their pursuit of "liberty" they attempt to both manipulate and satisfy the perceived final goals of the less forceful with vendible commodities. This achievement of market power allows them to make decisions that affect their own lives and others. This decision-making ability is then looked upon as "liberty."

Whereas in former times it was the task of ethics, moral philosophy, or moral theology to aid mankind in the moderate and harmonious use of intermediate goods, which goods are the end products of any productive economy, in his time Ruskin perceived that these end products of the economist system had become the
perceived final goals of mankind. Accordingly, the science of political economy had become the ethics and moral philosophy of the age because it is the task of political economy to aid mankind in making the correct decisions on how efficiently to produce and allocate scarce means to achieve as many satisfactions as possible. More simply, since what were formerly intermediate goods, whose usefulness was determined by a more ultimate goal as determined by the ethical sciences, are now perceived as final goals, that science, political economy, which deals with the efficient production and allocation of those formerly intermediate, but now viewed as final, goals becomes the moral philosophy of an age. And regardless of what political economy was supposed by its supporters to be, Ruskin asserts that it abets mamonism. James E. Cairnes, an economist of Ruskin's time, said that political economy abets nothing; it stands neutral among systems and gives no advice.

Political economy stands apart from all particular systems, and is, moreover, absolutely neutral as between all . . . For there are few practical problems which do not present other aspects than the purely economical--political, moral, educational, artistic aspects--and these may involve consequences so weighty as to turn the scale against purely economic solutions. On the relative importance of such conflicting considerations, Political Economy offers no opinion, pronounces no judgments. Ruskin ignores the fact that political economy gives no advice, being only too aware that its advice is taken by practical men. John Fain has noted about this issue the following:
Ruskin's position here is very strong. To the scientists who formulated the natural laws of political economy those laws were statements of human tendencies which never operate in isolation, or as they always said, which are subject to the qualification *ceteris paribus*. To practical men those laws assumed the aspect either of justice or of inevitability. And we cannot say that the scientists were entirely justified and the practical men entirely benighted. It is difficult to exclude normative implications from descriptive statements.

If the statesmen of Ruskin's day had been wise enough to apply economic policies as suggested by the best political economists, all might have been well. But they were not, and their half-wisdom dictated unmodified applications of economic theory. The record is filled with illustrations of this tragic state of misunderstandings. One will suffice:

All this time, the attitude of English statesmen was one of indifference. In 1845, the Devon commission laid bare the fatal defects of the Irish land system and suggested sensible remedies. But no proposals for reform could make headway in face of the prevalent doctrine of laissez-faire. Private property was regarded as sacred, and the principles of the classical political economy were invoked in support of a policy of inaction. It was in vain that the economists themselves pointed out the uselessness of maintaining the forms of free contract when the reality was absent.

As late as 1868 Robert Lowe, a Conservative and economist, opposed Irish land reform with the principles of political economy, for only such principles stood as an "oasis in the desert of politics upon which we may safely rest."

Ruskin's criticism of political economy began by rejecting the fundamental premise that liberty, the power to make decisions, was the final end of a society. In a nutshell, the ability to make
good decisions was his ideal. He, therefore, rejected also the attendant economic conclusion that individuals were the best determinants of what was valuable. Ruskin is adamant in his stand that there is an objective source of wealth. "The value of things, therefore, is independent of opinion, and of quantity. Think what you will of it, gain how much you may of it, the value of a thing itself is neither greater nor less. For ever it avails, or avails not." 78

It is the task of political economy to analyze this true source of wealth, that is, how the production and consumption of economic commodities will lead to an increase in the ideal life. Similar to Sismondi, Ruskin distinguishes between the true science of political economy which subordinates the quest for wealth to an Ultimate End of man and that "bastard science" which merely attempts to maximize wealth.

The real science of political economy, which has yet to be distinguished from the bastard science, as medicine from witchcraft, and astronomy from astrology, is that which teaches nations to desire and labor for the things that lead to life; and which teaches them to scorn and destroy the things that lead to destruction. 79

And for Ruskin, "the ideal of human life is a union of Spartan simplicity of manners with Athenian sensibility and imagination." 80 Thus for his definition of wealth it was natural for Ruskin to turn to the Greek writer, Xenophon for his answer. Ruskin claimed that the Economist of Xenophon "contains a flawless definition of wealth, and an explanation of its dependence for efficiency on the merits
and faculties of its possessors;--a definition which cannot be bettered; and which must be the foundation of all true Political Economy among nations, as Euclid is to all time the basis of Geometry." Ruskin is referring to the first chapter of Xenophon's *Economist*, "The Management of Property, that is Whatever is of Use to a man, But is of No Value to Such as Are Slaves to Their Passions" where Xenophon is intent on showing that some economic possessions aid man in living and thus are true wealth or property, and some possessions, on the contrary, contribute to the destruction of man's nature. These latter possessions cannot be considered as true wealth, but must be considered as the opposite of wealth or property--illth was Ruskin's label for such possessions.

Then the very same things are property to a man who knows how to use them, and not property to one who does not. For instance, a flute is property to a man who can play on it fairly; but to one who is wholly unskilled in its use it is no more property than mere useless stones would be,--unless indeed he sold it.

So it is clear to us that a flute in the hands of a man who does now know how to use it, is not property to him, unless he sells it. So long as he keeps it, it is not property. And indeed, Socrates, we shall thus have reasoned consistently, since we before decided that a man's property must be something that benefits him. If the man does not sell the flute, it is not property, for it is of no use; but if he sell it, it becomes property.

To this Socrates answered, Yes, if he know how to sell it. But if he, again, were to sell it to a man who does not know how to use it, it would not be property even when sold, according to what you say.

Your words, Socrates, seem to imply that not even money
would be property unless a man knew how to use it.

Well, you seem to agree with me that a man's property is only what benefits him. Suppose a man were to make this use of his money, to buy, say, a mistress, by whose influence his body would be worse, his soul worse, his household worse; how could we then say that his money was any benefit to him?

We could not,—unless, indeed, we are to count as property henbane, the herb that drives mad those who eat it.82

This is an important passage for Ruskin and one that he would return to more often than to any other for his inspiration when pursuing problems in political economy. One can see a glimpse of it in the following often-quoted declaration of Ruskin: "And possession is in use only, which for each man is sternly limited; so that such things, and so much of them as he can use, are, indeed, well for him, or wealth; and more of them, or any other things are ill for him, or Illth."83

Thus the concept of wealth includes more than just the measurement of one's actual possessions, it includes, secondly, the capability of utilizing them in an appropriate and vital manner. "'Having' is not an absolute, but a graduated, power; and consists not only in the quantity or nature of the thing possessed, but also (and in a greater degree) in its suitableness to the person possessing it and in his vital power to use it. . . Wealth, therefore, is the 'possession of the valuable by the valiant.'"84 There is also a third aspect to wealth; a commodity cannot constitute wealth unless it has been produced in an appropriate manner. "The whole question,
therefore, respecting not only the advantage, but even the quantity, of national wealth, resolves itself finally into one of abstract justice. . . Any given accumulation of commercial wealth may be indicative, on the one hand, of faithful industries, progressive energies, and productive ingenuities; or, on the other, it may be indicative of mortal luxury, merciless tyranny, ruinous chicane.\textsuperscript{85}

This third aspect of Ruskin's thought on wealth leads into a discussion of the concept of cost. Conventional economics separates the production and consumption processes and considers separately the men functioning in each process. For Ruskin, as for Sismondi, this separation is unwarranted, because the production process itself has an impact upon the consumer. If the production process is heavy with human cost, this will have a ruinous effect on the worker's ability to make wise decisions concerning consumption. As Sismondi had remarked, "Those who spread manure in the morning will not want to dance in silk clothes in the afternoon." Ruskin attempted to carry this discussion a step forward by distinguishing between intrinsic costs, "that of getting the thing in the right way," and effectual cost "that of getting the thing in the way we set about it."\textsuperscript{86}

Another concept of great importance in Ruskin's analysis is 'value.' As Ruskin characteristically phrases it, "\textit{Valor, from valere, to be well or strong (\ldots)};--strong, in life (if a man),
or valiant; strong for life (if a thing), or valuable. To be valuable,' therefore, is to 'avail towards life.' A truly valuable or available thing is that which leads to life with its whole strength. In proportion as it does not lead to life, or as its strength is broken, it is less valuable; in proportion as it leads away from life, it is invaluable or malignant. To be valuable, therefore, is to "avail towards life." To give this concept concreteness Ruskin distinguishes between intrinsic value and effectual value. Intrinsic value is "the absolute power of anything to support life. A sheaf of wheat of given quality and weight has in it a measurable power of sustaining the substance of the body; a cubic foot or pure air, a fixed power of sustaining its warmth; and a cluster of flowers of given beauty a fixed power of enlivening or animating the senses and the heart." However, useful criteria of intrinsic value as life-giving power would have to be derived chiefly from the physical and biological sciences, fields in which Ruskin was not adept and thus he did not pursue this line of thought.

It may be worth a digression here to note that an early biographer of Ruskin was a biologist and fixed upon the quotation as the first instance of an expression of an "objective" value wherein . . . physical and physiological properties, or 'values,' can indeed indefinitely be assigned: the one so much fuel, its heat-giving power measurable in calorimeter, or in actual units of work, the other a definite sensory stimulus . . . It is interesting then to note that the shout of
sentiment versus science,' with which Mr. Ruskin has been
for so many years turned out of court, did after all
accurately enough describe the controversy; . . . the
inductive logic and statistics, the physics and the
chemistry, the biology and medicine, the psychology
and education were all essentially on the side of Mr.
Ruskin; while on the other were too often sheer blind-
ess to the actual facts of human and social life--organism,
function and environment alike--concealed by illusory ab-
stractions, baseless assumptions, and feeble metaphors
stuck together with scholastic logic and frozen into
dismal and repellent form by a theory of moral senti-
ments which assumed moral temperature at its absolute
zero.89

In this respect Ruskin may be considered a forerunner to much
of that work which has attempted to assign a more prominent index
of value to an item's absolute or entropic usefulness, rather than
rely totally upon a commodity's monetary value as the only cri-
terion of a commodity's worth to society. A noted twentieth-
century physical chemist and economist, Frederick Soddy, has analyzed
this idea of absolute wealth much more fully than either Ruskin or
Patrick Geddes. Soddy recognized Ruskin as his predecessor and
often paid tribute to his thought. In the following passage from
Soddy's Wealth, Virtual Wealth and Debt, we are able to see once
again the need of the humanistic scientist for the basic physical
scientist and vice-versa and, we should add, the need of the economic
scientist for both in his attempt to fulfill human needs from the
world's physical resources:

Ruskin, in solitary and picturesque protest
against the hallucinations of his age, pleaded in vain
for an economics founded upon life. Hostile . . . to the
chrematistic pursuit of science which desecrates the
countryside and doomed the workers to bestial conditions of existence, and a great champion of the cause of the higher spiritual and aesthetic values against the onrush of a sordid materialism, yet it is to materialistic science we must turn if we require the theory and justification of his philosophy.90

Thus it is worthwhile to note that Ruskin's concept of intrinsic value brings into the realm of political economy the physical and biological sciences. Though, as just mentioned, Ruskin did not pursue this line of thought, he seems to have been alert to the essential role of such sciences.

Such and such a piece of land, with its associated lakes and seas, rightly treated in surface and substance, can produce precisely so much food and power, and no more. Its surface treatment (agriculture) and substance treatment (practical geology and chemistry) are the first roots of economical science.91

In addition to intrinsic value with its emphasis on the absolute or entropic value, Ruskin used the concept of effectual value. Intrinsic value is present in goods used or unused; effectual value results whenever these commodities with intrinsic value are used by an appropriate "acceptant capacity." "The production of effectual value, therefore, always involves two needs: first, the production of a thing essentially useful; then the production of the capacity to use it."92 This latter ability to use properly a commodity is clearly inspired by Xenophon's Economist which we have already discussed. Thus if a good thing avails toward life in the consumptive process, it is valuable.
In distinguishing between Ruskin's definitions of wealth and value, it is enough to note that, for Ruskin, a commodity might be valuable without constituting wealth. Wealth has three aspects whereas value has only two; wealth requires that a thing be good, that it be honestly got, that it be effectively used, whereas value requires only that a thing be good and effectively used. Consequently, before we may designate a valuable commodity to be a part of a nation's wealth, we must ascertain the intrinsic cost, which may under certain conditions negate the resultant value.

In concluding this section on wealth, intrinsic and effectual, and on intrinsic and extrinsic cost, we see that for Ruskin the true political economist had to be aware of his border disciplines. Ruskin's stress on effectual value and intrinsic cost brought ethics, morals and social philosophy into the realm of the political economist, while his elaboration upon intrinsic values made some knowledge of the results of the physical and biological sciences imperative.

It is clear from this discussion of Ruskin's notions of wealth and value that he could not consider the mere accumulation of wealth and possessions to be the final goal of either the individual or the nation. He contrasts the erroneous from the correct perception of wealth in the following passage:

There will be always a number of men who would fain set themselves to the accumulation of wealth as the sole object of their life. Necessarily, that class
of men is an uneducated class, inferior in intellect, and more or less cowardly. It is physically impossible for a well-educated, intellectual, or brave man to make money the chief object of his thoughts; just as it is for him to make his dinner the principal object of them. All healthy people like their dinners, but their dinner is not the main object of their lives. So all healthily-minded people like making money--ought to like it, and to enjoy the sensation of winning it: but the main object of their life is not money; it is something better than money.93

Generally speaking, Ruskin taught that moderate wealth should be the goal. "A nation which desires true wealth, desires it moderately, and can therefore distribute it with kindness, and possess it with pleasure; but one which desires false wealth, desires it immoderately, and can neither dispense it with justice, nor enjoy it in peace."94 Ruskin urges the individual to recognize that

... the law of life is that a man should fix the sum he desires to make annually, as the food he desires to eat daily; and stay when he has reached the limit, refusing increase of business, and leaving it to others, so obtaining due freedom of time for better thoughts.95

Hence his prescriptions for the running of a state: "I strongly suspect that in a well-organized state, the possession of wealth ought to incapacitate for public office,"96 and "one of the most important conditions of a healthy system of social economy, would be the restraint of the properties and incomes of the upper classes within certain fixed limits."97

This call for moderation and restraint did not fall on fertile ground in Victorian England. Sherburne points out that "Ruskin's
final call for restraint was, perhaps, the most incomprehensible to his Victorian contemporaries. It lies in the sensitive area of social advancement or 'getting-on.' Ruskin denies the 'gospel of whatever we've got, to get more' as vehemently as he does that of 'wherever we are, to go somewhere else.'

The customary reaction was that expressed in a leading article by the Manchester Examiner and Times on October 2, 1860: "He (Ruskin) is not worth our powder and shot, yet, if we do not crush him, his wild words will touch the springs of action in some hearts, and ere we are aware a moral floodgate may fly open and drown us all." For better or worse, the Manchester Examiner and Times and, one might add, the conventional political economists were able to keep shut the moral floodgate that Ruskin's thought represented and thus to keep the Victorian economic theory on the dry road of amorality. Though one economist predicted in 1888 that future economic theory would be built with Ruskinian bricks rather than with Ricardian straw, this prediction has simply not come true.

Yet Ruskin's wild words have touched deeply some minds and hearts. Such diverse individuals as the heretical English economist John A. Hobson, the artist and craftsman Eric Gill, the biologist Patrick Geddes, the physical chemist Frederick Soddy, the economic historian R. H. Tawney, a founder of the American Economic Association Richard T. Ely, the English novelist and
distributist G. K. Chesterton, the French novelist Marcel Proust, and Indian pacifist and political leader Mohandas Gandhi would all pay homage to Ruskin and his ideas.

John A. Hobson

Although John A. Hobson often claimed that he was Ruskin's disciple, and in many of his works indicated that he was merely attempting to fill in some of the gaps in Ruskin's "magnificent plunge" into economic theory which brought "whole civilizations to a grand assise," it is nonetheless true that John Hobson added to and modified as much as he kept intact from Ruskin's thought. Ewald Grether has described the relationship of Ruskin and Hobson in the following manner: "It is clear that it was neither a faith nor a creed that descended from Ruskin to Hobson, but primarily an attitude." This inherited attitude was that of subjecting standard or conventional economic theory to the test of human assessment. Though Hobson, even more than Ruskin, admitted that there was a place for that orthodox economic theory which took the narrow and more quantitative vision that simply attempted to allocate efficiently scarce resources among the perceived needs of individuals, nonetheless, Hobson's plea for a "wider human assessment" of the output of the economic system than was undertaken by such orthodox economic theorists, marks him clearly as a Ruskinian. For both Ruskin and Hobson the discipline of economics had to be moderated by a social ethics and brought under the umbrella of a broader science; the art or science of human welfare.
However, whereas for the idealist and Tory Ruskin, the ethical order was imminent in social behavior and thus socio-economic behavior was ultimately reducible to ethical behavior, the pragmatic and democratic Hobson took a more "organic" view of social welfare which derived as much of its inspiration from the physical sciences, especially biology, as it did from absolute ethical standards. Michael Freeden has remarked about the foundations of Hobson's economic theory: "In terms of the intellectual origins of his thought, this means that his idealism was tempered by an emphasis on biological processes, especially by the 'organism' model and by evolutionary theory."

Ruskin and Hobson were men of different generations and nowhere is this fact made more clear than by their attitude towards the biological sciences. Ruskin had resigned his chair at Oxford chiefly as a protest against the establishing of a physiological laboratory within its classical precincts, while Hobson had enthusiastically accepted the findings of such laboratories. Ruskin's thought apparently had matured too far before the evolutionary concepts of biological science became thoroughly impressed upon the thought of his age. Hobson, on the other hand, was the product of an age in which the science of biology in general and the evolutionary process in particular were the guiding tenets to much of social thought. This is not to indicate that Hobson took an amoral and a-ethical stance, quite the contrary. It does indicate, however,
that Hobson's ethical base was formed somewhat differently (more adequately?) than was Ruskin's. Hobson was quite aware of this difference in his economic theory and that of Ruskin, and often lamented Ruskin's lack of appreciation for the science of biology: "Had Mr. Ruskin been less scornful or suspicious of the rising science of Biology, he might have greatly strengthened the ethical supports on which he relied." Hobson would support Ruskin's ethics by showing that Ruskin's ethical conclusions were similar to the conclusions inspired by an organic worldview. For example,

The law of just distribution of wealth, to Mr. Ruskin primarily a moral problem, is seen to rest upon a necessary physical basis, so soon as we learn to trace through all the changing processes of vegetable and animal life the natural interdependence and interaction between nutrition and function, the intake of food and the output of energy in work. Once let us grasp comprehensively the truth that society is rightly classed as an organism, and the great principle of apportionment of work and its products contained in the formula, "From each according to his powers, to each according to his needs," no longer rests only on a sentimental or a purely moral basis; it becomes the necessary application of a natural law of progress in every department of organic life.

Before plunging into Hobson's thought on the nature of economic wealth, it is worth noting that although Hobson's name is most often linked with Ruskin's in the history of economic theory, in some significant respects Hobson's thought was aligned more closely to Sismondi's than to Ruskin. Both Hobson and Sismondi can be considered as professional, though somewhat heretical, economists in addition to their role of humane critic of the eco-
nomic profession. Both made significant contributions to economic theory. Hobson and Sismondi made their major contribution to economic theory in their research into the causes of the periodic economic crises, and both rejected Say's Law in their belief that over-production was the cause of such crises. John M. Keynes has acknowledged his debt to Hobson, but not to Sismondi. Keynes attributed the origin of the idea of the possibility of a general underconsumption/overproduction and the consequent rejection of Say's Law to Thomas Malthus, and, in so doing, was apparently unaware that Malthus had mostly borrowed this analysis from Sismondi. Marx is closer to the truth when he cynically described Malthus' Principles as merely the "English translation" of Sismondi. And finally, although Sismondi considered himself a "republican" and Hobson thought of himself as a "democrat," they were both politically far removed from the quite conservative Toryism of Ruskin.

With that introduction, we can now sally forth into Hobson's evaluation of economic wealth. Hobson begins his discussion of consumption by pointing out an inconsistency in orthodox economic thought: "Though everybody agreed that consumption was the final goal, this goal, as such, was nobody's concern. When goods passed through the hands of farmers, manufacturers, and traders, into the hands of consumers, they seemed to pass out of the economic system into a destructive process that took place in privacy and obscurity."
And though "consumption remained the formal end of economic processes, production was the real end."\textsuperscript{121} Such an ostrich attitude towards the problems of evaluating the worth of final consumption could only lead to further error, implied Hobson.

Only so far as current tastes and appetites are reliable indices of human utility, only so far as we can identify the desired with the desirable, is the evolution of customary standards of life a sound human art. But it is needless to cite the ample evidence of the errors and wastes that are represented in every human standard of consumption.\textsuperscript{122}

In order to obviate such errors Hobson attempted to dispel some of the "privacy and obscurity" that surrounded the consumption of economic products, or as he perceived the task, "some further adjustment is needed to assess the desired in terms of the desirable."\textsuperscript{123}

Hobson first rejected the approach taken by standard economic textbooks when dealing with the section on consumer behavior. Hobson saw behind the facade of measuring the fulfillment of the effective desires of consumers or utilizing some elasticity of demand index, and then using this measurement as an indicator of how well the economic system was performing its essential task of achieving the final goal of all economic system.

But a study primarily directed to the ascertain-ment and measurement of elasticity of demand, does not yet accord the disinterested valuations of consumptive processes required by a theory in which consumption is the "sole end." For consumption here only enters the economic field as a factor in markets and the determination of prices, not as the means of realizing the purpose of which the whole economic system is directed.\textsuperscript{124}
In order to realize the purpose by which the whole economic system is directed Hobson had to determine what it was that was desirable, or, in other words, what was the Ultimate End by which the economic system could be oriented and measured. Hobson's favorite phrase for such an ideal was "organic welfare" about which he once added, "Though in form a mere synonym for good life, it is by usage both more restricted and more precise." In another study he was concerned to show that "organic welfare" had both a materialistic component and a non-material or artistic, spiritual component.

The organic conception of mens sano in corpore sano still stands as the first principle of human welfare. It finds its justification in the truth so strongly enforced by Aristotle that we must first have a livelihood and then practice virtue.

What contributes to a mens sano in corpore sano? More specifically, what contribution does the economic process make to a mens sano in corpore sano? As Hobson notes, we are immediately "Confronted by the question how far the actual economic conduct, with its accompanying desires and gratifications, can be taken as a safe index of the desirable or organic welfare in its true sense." His response is that "we cannot assume a full identity of the income of an individual or a community, expressed in terms of current satisfactions, with that income expressed in terms of human welfare." This is so because "the total process of consumption-production may contain large elements of human waste or error, in that the tastes, desires, and satisfactions which actively
stimulate this wealth creation may not conform to the desirable."\textsuperscript{127} Later Hobson is more explicit in his condemnation of using the satisfaction of current consumer's effective demand as the Ultimate End of economics.

We cannot admit as the objective of economic activities either the yield of material goods which these activities produce, or the "psychic income" which they yield as assessed in terms of current deservedness or satisfaction, without reference to their intrinsic desirability.

Hobson then echoes Ruskin by immediately adding "A material or a psychic income may contain 'illth' as an alloy to its wealth."\textsuperscript{128}

The notion of excess production appears next in Hobson's analysis. His declaration that "Mechanical production can easily outrun organic consumption," reminds one of both Ruskin's concept of "acceptant capacity" and Sismondi's strictures of the political economists "que de se représenter la consommation comme une puissance sans bornes, toujours prête a devourer une production infinie."\textsuperscript{129}

After surveying the results of actual consumption patterns and the economist's analysis of such consumer behavior Hobson concludes that "it cannot be said that any adequate study either of the evolution of actual standards of consumption, or of 'desirable standards,' has yet been made." Hobson also indicated the reason for such failure:

Though much attention has been given to the economy of expenditure in equalizing "marginal utilities," it has
not been clearly recognized that the several margins are themselves determined by processes of utilitarian calculations based on balances of organic requirements.

This failure to recognize that the determination of the "several margins" is due, at least partly, in Hobson's mind to the fact that economists fail "to realize adequately that the organic nature of man necessarily stamps itself on his standard of consumption, and that, therefore, the various items of consumption must be studied as contributions toward the organic whole."^130

John Hobson would expend a considerable portion of his analytical energies in studying not only the various items of consumption, but also the process of production in an industrial system, and how both consumption and production contributed to or inhibited the organic welfare ideal. Hobson's analysis of the process of production is best summarized in _Work and Wealth: A Human Valuation_ (1914), while the best compendium of Hobson's thought on the items of consumption is found in chapter five "Standards of Consumption" in Part IV, "Organic Reform of the Economic System" in his _Wealth and Life: A Study in Values_ (1929). Hobson begins his analysis in the former study by formulating the general problem provisionally in terms of three questions: "(1) What are the concrete goods and services which constitute the real national income? (2) How are these goods produced? (3) How are they consumed?"^131 Hobson, however, rejects these questions as inappropriate for an organic welfare political economist. Goods, production and consumption
have to be measured in human terms. As he expresses it:

In order to express business "costs" in terms of human costs, we require to know three things:

1. The quality and kind of the various human efforts involved in the business "cost."

2. The capacities of the human beings who give out these efforts.

3. The distribution of the effort among those who give it out.

Correspondingly strictly to this analysis of "costs" of Production will be the analysis of "utility" of Consumption. There we shall want to know:

1. The quality and kind of the satisfaction or utility yielded by the "economic utility" that is sold to consumers.

2. The capacities of the consumers who get this "economic utility."

3. The distribution of the economic utility among the consuming public.

The humanist criticism of the Industry is condensed into this analysis.132

Hobson devoted the next several chapters of his Work and Wealth to investigating the human costs of the process of production in an industrial society. Though he is quite aware of the great value of machines to lighten human labor, he is also aware of their human costs. The "loss of liberty" of being tied to the inexorable pace of a machine is the first cost that he discusses. Second, he explores the indictment "that the worker in one of these routine subdivided processes has no appreciation of the utility or social meaning of his labour."133 Hobson recognizes
that machinery can lead to men who are not interested in their work, and who do not recognize in it either beauty or utility. Hobson comments that such a "man is degraded by that work, whether he knows it or not. When he comes to a clear consciousness of that degradation, the spiritual cost is greatly enhanced." 134

As concerning the process of consumption, though Hobson never fully resolves in his own mind the absolute value of the items of consumption, he was unwilling to agree with the "popular thinking that is apt to brush aside the questions with the remark that values are matters of individual tastes, and quot homines tot sententiae." Hobson considered such a position to be false because "we know that there exists a substantial body of agreement as to the main constituents of welfare, and even as to the order of their evaluation." 135

From his observations on consumption behavior around him Hobson noted that an industrial economy has a built-in bias towards excessive production and consumption of material goods. "This charge of materialism made against the more advanced industrial communities,... is based on an over-stimulation of certain instincts for physical satisfactions, due to the innovating tendencies of modern capitalism with its elaborated apparatus of selling pressures." This leads to an excess which is due to "a hasty exploitation of newly roused tastes that absorb too much of human nature in economic processes. 'Getting and spending, we
lay waste our powers."

"Getting and spending, we lay waste our powers" is the poet's lament over the philosophy of materialism that seems to be the inevitable consequence of an industrial economy in which narrow-minded and tunnel-visioned economists only describe a minute portion of the social canvas. Such economists never take off their blinders, and though they may peak from time to time to the left, they never look above to the Ultimate End, nor below to the primary and absolute foundations of all economies, the environmental resources.

Hobson's final solution to this inherent bias toward excessive production is the following:

Human energy, therefore, increasingly demands that half the power of mechanical production shall be applied, not to producing more goods, but more leisure, that is to say, to so liberating the producer from the strain and burden of specialised production that he may become a skilled consumer, with leisure and energy enough at his free disposal to assimilate the slower gains of scientific production, instead of being overwhelmed by them, while at the same time bringing his harmonised economic standard of living into proper relations with the non-economic activities and satisfactions of his life. This seems impracticable so long as profiteering rules the economic system. For the profit-maker can only gain his end either by working his machines and his workers to their full capacity, and turning out goods so rapidly that his skilled marketeers must induce the general body of workers to take their share in increased goods, not in increased leisure and other non-economic satisfactions, or by restrictions of output that give a wasteful or excessive leisure.137

As a fitting summation of J. A. Hobson's contribution to the analysis of wealth and the economic system which produces such
wealth, and, at the same time, an introduction to the thought of Richard Henry Tawney, the noted economic historian and student of the current economic scene who will be the subject of our next section, we can quote a passage from Tawney's quite favorable review of Hobson's *Wealth and Life*.

The essence of humanism, perhaps, is the attitude which judges the externals of life by their effect in assisting or hindering the life of the spirit. It is the conviction that the machinery of existence--property and material wealth, and industrial organization, and the whole fabric and mechanism of social institutions--is to be regarded as means to an end, and that this end is the growth towards perfection of individual human beings. In this sense, Mr. Hobson is the greatest of economic humanists. Undisturbed by the roar of the wheels, he approaches the engine with questions most of us are too clever, or too superficial, to condescend to ask. What is the thing for? In what way do its impressive gyrations minister to the dignity and happiness of mankind?138

Richard Henry Tawney

On the death of Richard Henry Tawney in 1962, Talcott Parsons, the noted Harvard sociologist, wrote that "it would, I think, be fair to say that Tawney regarded both his historical scholarship and his knowledge of modern economics as primarily instrumental. He was above all a moralist, deeply concerned with understanding, in full historical depth, what he felt to be the moral problems of his times."139 This instrumental role of historical and economic knowledge is clearly observed when one reviews the chronology of Tawney's early life. After graduation from Balliol College in Oxford in 1903 with a standard classical education he decided that
he would attempt some kind of social work. After looking around at the possibilities Tawney finally settled down to work for the charitable organization called the Children's Country Holiday Fund while he lived at Toynbee Hall, a university settlement house in the East End of London. For a very important three years of his life Tawney actively attempted to directly ameliorate the standard of living for the impoverished by philanthropic and educational means. Gradually, however, Tawney became disillusioned in the effectiveness of such direct steps. Perceiving such philanthropic efforts to be somewhat superficial, Tawney turned to research and analysis of the current economic scene. By 1906 he was ready to leave the active life of the social worker and turn to teaching and research into the entire social system which spawned such evils as he had encountered in his work in the East End of London. Six years later Tawney would describe the stages that his thought went through as he searched for the cure to society's evils.

The stages of thought about social affairs through which I, and I suppose other people, have passed are something as follows. One begins by regarding poverty etc. as a matter of individual misfortune. One does not connect it with the main institutions of society; nor does one think of those institutions as the work of the state and dependent upon its support. One therefore does not look to the state for improvement. In the second stage one realizes that there is a unity underlying the individual cases of poverty; that they are connected with social institutions, specimens of a type, pieces of a system, and that this system is, in the first instance, the work of the state and can be altered by an alteration of the law. One therefore now looks to the state for reform... In the third stage one realizes that the attitude of the state is just the attitude of countless individuals, that to rage against it for not removing
economic evils (which state action can remove) is as futile as it is to rage against the Pope for not being a reformer, and that society cannot lift itself up by the soles of its boots. The attitude of governments . . . is wrong because the attitude of individuals to each other is wrong, because we in our present society are living on certain false and universal assumptions; and that even when statesmen honestly mean to do good they will often do harm . . . merely because all their actions, good and bad, proceed from a character based on those assumptions. What we have got to do first of all is to change those assumptions or principles. 

As Tawney searched in the pre-World War I era for the false and universal assumptions that were the ultimate cause of society's evils, he first turned to the study of conventional economic theory for guidance and enlightenment. From 1906 to 1908 Tawney was an assistant in economics at Glasgow University. Tawney very quickly, however, came to the conclusion that conventional economic theory was more a part of the problem rather than any help in understanding the ultimate cause of social evils. At Glasgow University Tawney acquired his lifelong disesteem for orthodox theoretical economics. Looking back on his time there, "as a kind of sub-assistant on economic theory," he recalled having "exchanged apples for nuts in the best manner of Marshall." He quoted the words of the governess to her pupil in The Importance of Being Earnest: "Do not read Mill's chapter on the fall of the rupee, my dear; it is too exciting for a young girl;" then observed: "I found that my attitude to economics was much the same, and that these austere heights were not my spiritual home." Tawney was more forthright in his assessment of economic theory when he confided to his diary (December 11, 1913) an
attitude which he continued to hold but did not later express so boldly: "There is no such things as a science of economics, nor ever will be. It is cant and Marshall's talk as to the need for social problems to be studied by 'the same order of mind which tests the stability of a battleship in bad weather' is twaddle."^{142}

Failing to find what he wanted in the study of conventional economic theory, Tawney turned to the study of economic history for guidance and enlightenment. If he could only find out what had been the historical development of his economic society, such knowledge should be useful in finding resolutions to society's evils. Though he used history as an instrument in his private and personal search for solutions to current social problems, Tawney realized, as few do who seek for answers to problems with which one is emotionally involved, that one cannot dictate to history. Instead one must commit oneself to the era that one studies with an attentive ear, an inquisitive nose, a patient and thorough mind, and a sympathetic heart as one searches for the clues to the history of an era. History can indeed serve as a useful instrument in aiding one to understand current social evils, but it is a delicate instrument to be used only by the adept (not always the professionals) and is a tool which must be treated with respect if it is to be used rightfully. Tawney's *Religion and the Rise of Capitalism* (1926) and his earlier *The Agrarian Problem in the Sixteenth Century* (1912) have been models for many who have published after
But before he could use history as a tool or instrument to aid him in the understanding of current social maladies, Tawney had to clarify in his own mind the broad general nature of the social sickness of his era. During this period of introspection and reflection, Tawney wrote a long entry into his diary for July 12, 1913:

As long as individuals think the attainment of moderate material comfort the chief end of life, so long will governments plead as an excuse for not doing this or that they cannot afford it. If modern England and America are right in believing that the principal aim of man, what should be taught to children, what should serve as a rough standard of merit, what merits approbation and respect, is the attainment of a moderate—or even immoderate—standard of comfort, and that moral questions arise only after this has been attained; then they must be content to go without religion, literature, art, and learning. These are not hard to find for those who really seek them, or who seek them first. But if they are sought second they are never found at all . . .

What I mean is that the failure of society to make the changes which are obviously important when regarded in bulk is due to the fact that individually we all have a false philosophy of life. We assume that the greatest misfortune which can befall a man is poverty—and that conduct which leads to the sacrifice of income is unwise, impractical, etc.; in short that a man's life should be judged by its yield of income, and a nation's life by its production of wealth. Hence we have one group of economists who have attacked certain reforms on the grouping that they diminished wealth, and another school who answered them not by saying 'let wealth be diminished, fiat justicia,' but by arguing that they really would not diminish wealth after all. The answer is I believe correct. But it is, nevertheless, devilish; for it suggests that human life, justice, etc. should be measured as items on a balance sheet . . .

But supposing unearned incomes, rents, etc. are pooled,
will not the world, with its present philosophy, do anything but gobble them up and look up with an impatient grunt for more? That is the real question. It will not be faced in my lifetime because as long as the working classes believe, and believe rightly, that their mentors rob them, so long will they look on the restoration of the booty as the great reform, and will impatiently waive aside more fundamental issues, as a traveller robbed by a highwayman declines to be comforted by being told that money, after all, does not buy happiness. But when their masters are off their backs they will still have to face the fact that you must choose between less and more wealth and less and more civilization. . .

Again may not it be that the real way to overcome the power of the wealthy is to despise wealth?

When three or four hundred years hence mankind looks back on the absurd preoccupation of our age with economic issues with the same wonder as, and juster contempt than, we look back on the theological discussions of the middle ages, the names which they will reverence will be those of men who stood out against the prevalent fallacy that the most important problems were economic problems, and who taught men to conquer poverty by despising riches.

Six years later, after being interrupted by World War I and its aftermath, Tawney returned to this question of what was the basic problem facing the economic society of his era, and wrote first "The Sickness of an Acquisitive Society" for the Hibbert Journal which he soon expanded into the book, The Acquisitive Society which quickly became one of the most controversial books of the 1920's as he called on the British society to reform its fundamental philosophy of life.

These are times which are not ordinary, and in such times it is not enough to follow the road. It is necessary to know where it leads and, if it leads nowhere, to follow another. The search for another
involves reflection, which is uncongenial to the bustling people who describe themselves as practical . . . But the practical thing for a traveler who is uncertain of his path is not to proceed with the utmost rapidity in the wrong direction: it is to consider how to find the right one. 

Tawney next pointed out that the path upon which England's industrial and economic leaders would guide her, the philosophical path that viewed economic productivity as its own end, had been tried in the past and had been found wanting.

When they desire to place their economic life on a better foundation, they repeat, like parrots, the word "Productivity," because it is the word that rises first in their minds; regardless of the fact that productivity is the foundation on which it is based already, that increased productivity is the one characteristic achievement of the age before the war, as religion was of the Middle Ages or art of classical Athens, and that it is precisely in the century which has seen the greatest increase in productivity since the fall of the Roman Empire that economic discontent has been most acute.

Increased productivity alone will not cause societal ills to disappear. Such a response is based upon an illusion.

Hence the idea, which is popular with rich men, that industrial disputes would disappear if only the output of wealth were doubled, and everyone were twice as well off, not only is refuted by all practical experience, but is in its very nature founded upon an illusion. For the question is one not of amounts but of proportions; and men will fight to be paid $120 a week, instead of $80, as readily as they will fight to be paid $20 instead of $16.

Such leaders whose faith is that "riches are not a means but an end," and who imply "that all economic activity is equally estimable, whether it is subordinated to a social purpose or not,"
are "like a man who, when he finds that his shoddy boots wear badly, orders a pair two sizes larger instead of a pair of good leather, or who makes up for putting a bad sixpence in the plate on Sunday by putting in a bad shilling the next."\textsuperscript{149}

Tawney would point out the direction that the correct path would lead by harkening back to a central theme of Ruskin:\textsuperscript{150}

The purpose of industry is obvious. It is to supply man with things which are necessary, useful or beautiful, and thus to bring life to body or spirit. In so far as it is governed by this end, it is among the most important of human activities. In so far as it is diverted from it, it may be harmless, amusing, or even exhilarating to those who carry it on, but it possesses no more social significance than the orderly business of ants and bees, the strutting of peacocks, or the struggles of carnivorous animals over carrion.\textsuperscript{151}

The true political economist realizes that "all rights . . . are conditional and derivative, . . . They are derived from the end or purpose of the society in which they exist."\textsuperscript{152}

Tawney draws on his knowledge of history to say that mankind has ordinarily understood that productivity sought for its own sake is a vice and must be constrained. However this disciplining of productivity is no easy task for society. In a passage made memorable by his adept use of history, Tawney skillfully enlightens his readers to the problems involved in restraining untrammelled and functionless economic productivity.

To do so (determine the quantity of productivity by some final social purpose) requires a constant effort of will, against which egotistical instincts are in rebellion, and because, if that will is to prevail, it must be embodied in some social and political organization,
which may itself become so arbitrary, tyrannical and corrupt as to thwart the performance of function instead of promoting it. When this process of degeneration has gone far, as in most European countries it had by the middle of the eighteenth century, the indispensable thing is to break the dead organization up and to clear the ground. In the course of doing so, the individual is emancipated and his rights are enlarged, but the ideal of social purpose is discredited by the discredit justly attaching to the obsolete order in which it is embodied.

Thus in England the functional relations of society were displaced by "modern economic relations . . . which replaced the conception of purpose by that of mechanism." The Industrial Revolution would not only profoundly modify the facts of economic structure, "but the minds which appraised them." The essence of the change was the "disappearance of the idea that social institutions and economic activities were related to common ends which gave them their significance and which served as their criterion." Society became viewed as a self-adjusting mechanism in which the pursuit of private ends is transmuted by an invisible hand into the attainment of the Ultimate End.

If pressed, however, to give an answer to the obvious question of what was the final goal of the economic system, the industrialists and conventional economists would give an answer reminiscent of the Benthamite formula "the greatest happiness of the greatest number." Tawney's response to this answer is characteristic of his historical approach to social problems. Instead of attacking the obvious mathematical impossibility of a double
maximization in one order (the vagueness of which Tawney alluded to) he perceptively noted that, historically speaking,

... to say that the end of social institution is happiness, is to say that they have no common end at all. For happiness is individual, and to make happiness the object of society is to resolve society itself into the ambitions of numberless individuals, each directed towards the attainment of some personal purpose. 158

Such a doctrine has been historically used to assure "men that there are no ends other than their ends, no law other than their desires, no limit other than that which they think advisable. Under the impulse of such ideas men do not become religious or wise or artistic; for religion and wisdom and art imply the acceptance of limitations." 159 In brief, the Benthamite formula of "the greatest happiness for the greatest number" leads to the "Acquisitive Society" whose whole tendency "is to promote the acquisition of wealth." 160 According to Tawney's historical studies, the Benthamite goal had been guilty of obscuring the notion of final humane standards or principles by which mankind throughout history had moderated the pursuit of economic possessions. Tawney claims that

... when we condemn slavery, sweating, the exploitation of a weak race by a conqueror, even though these things are convenient to the greatest number concerned, we do so because we recognize ... there is a law higher than the well-being of the majority, and that law is the supreme value of every human personality as such. 161

Such an untrammeled pursuit of maximum individual happiness leads to what Tawney regards as the nemesis of industrialism. Paradoxi-
cally, it is not the failure of industrialism which causes the
general malaise of modern economic society, but its very success,
its total domination of society as a way of life.

The will to economic power, if it is sufficiently
single-minded, brings riches. But if it is single-minded
it destroys the moral restraints which ought to condition
the pursuit of riches, and therefore also make the pursuit
of riches meaningless.¹⁶²

Like the spirits in Dante's Inferno, they are punished by the at­
tainment of their desires.

Tawney notes that such a frenetic rush to produce without any
guiding ultimate principle creates a situation where "part of the
goods which are annually produced, and which are called wealth, is
strictly speaking, waste . . . (which) should not have been pro­
duced at all."¹⁶³ And to those who clamor for increased produc­
tivity as the solution to society's ills, Tawney responds "Would
not 'Spend less on private luxuries' be as wise a cry as 'Produce
more'?" To do so, however, would be "to admit that there is a
principle superior to the mechanical play of economic forces, . . .
and thus abandon the view that all riches, however composed, are an
end, and that all economic activity is equally justifiable."¹⁶⁴

Tawney continues by comparing "Prussian militarism" to "English
industrialism." Both of these ideologies have killed the souls of
men by allowing a subordinate social system to dominate their
societies. "When the Press clamors that the one thing needed to
make this island an Arcadia is productivity, and more productivity,
and yet more productivity, that is Industrialism. It is the confusion of means with ends." 165

Tawney concludes The Acquisitive Society by declaring that what English society needs, therefore, is a purpose, a principle of limitation. Such a principle of limitation would divide "what is worth doing from what is not, and settles the scale upon which what is worth doing ought to be done . . . Above all, it assigns to economic activity itself its proper place as the servant, not the master, of society." 166

This is not the place to review the historical portion of Tawney's Religion and the Rise of Capitalism, 167 but it is appropriate to our analysis to review the conclusions which Tawney drew from his historical studies. J. D. Chambers has succinctly summarized the importance of Tawney's findings:

As is well known, Tawney's main preoccupation was with the secularization of traditional Christian values in the sixteenth and seventeenth centuries—the greatest event, he considered, in the history of Western civilization. It was the first step, in Tawney's view, on the way to the establishment of an acquisitive society based on competition, individualism, and the divine right of self-aggrandisement on the assumption that what is good for one is, in the long run, good for all. 167

In the concluding chapter of Religion and the Rise of Capitalism Tawney returns to many of the concerns that had troubled him in the opening pages of The Acquisitive Society. He quotes Berkeley's aphorism "Whatever the world thinks, he who has not much meditated upon God, the human mind and the sumnum bonum may pos-
sibly make a thriving earthworm, but will most indubitably make a sorry patriot and a sorry statesman." He continues by noting that "the most obvious facts are the most easily forgotten. Both the existing economic order, and too many of the projects advanced for reconstructing it, break down through their neglect of the truism that, since even quite common men have souls, no increase in material wealth will compensate them for arrangements which insult their self-respect and impair their freedom." Then Tawney sums up the result of much of his historical study:

The distinction made by the philosophers of classical antiquity between liberal and servile occupations, the medieval insistence that riches exist for man, not man for riches, Ruskin's famous outburst, 'there is no wealth but life,' . . . are but different attempts to emphasize the instrumental character of economic activities by reference to an ideal which is held to express the true nature of man.170

Once again, as we conclude our review of Tawney's analysis of the function of wealth and the economic system, we are led around to the question of what is the "true nature of man." Though Tawney never defined the nature of man in so many words, late in his life Tawney remarked that man, "as known to history, is a religious animal." And he considered the modern industrialism and Capitalism not as irreligious but as counterreligious with their "idolatry of riches and the idolatry of power."171 In his diary he had remarked some twenty years earlier, "If it be asked what is your criterion: why do you condemn this and approve that? I answer that the standard which we apply is really a transcendental, religious, or mystical one."172 The important thing for Tawney was not to define
precisely the ideal—such an achievement was clearly impossible in any total or definitive sense—but to recognize the need to acknowledge the primary importance of such a standard or principle. As he wrote "These (ideals of religion, art, and understanding) are not hard to find for those who really seek them, or who seek them first. But if they are sought second they are never found at all." 173

Indubitably, Tawney sought them first. Perhaps this is why another eminent British economic historian, T. S. Ashton, was able to write of Tawney that "students who had the good fortune to sit at his feet rose with the sense of having been in touch not only with scholarship, but with wisdom." 174

G. K. Chesterton and the Distributists

Sympathetic with, but independent of, the Hobson and Tawney attempt to persuade economic theorists to include a more ultimate goal in the analysis of economic production and consumption, was the effort by G. K. Chesterton, Hilaire Belloc and their followers to bring about a general reform in the English socio-economic structure.

Disturbed by the increasing lack of individual freedom and creativity both in the industrial market society of England with its cash nexus and in the collective society of Russia with its stifling bureaucracy, Chesterton and Belloc searched for a socio-economic alternative to the feral individualism of capitalism and
the oppressive centralization of Communism. The result was Distributism. Distributism was formally born when Hilaire Belloc published *The Servile State* in 1912. Belloc claimed that capitalism was leading western society to a state of servility in which the few with economic power based on a monopoly industrialism and commercialism would have coercive power over the lives of the many. Because, however, of the fact that the many would have political power, capitalism as such was not stable and would evolve either into a plutocracy, a collective state, or to Distributism in which the means of production would be widely distributed among the citizenry. Belloc elaborated further on this in his *Economics for Helen* published in 1924. In order to develop both the theory of Distributism and to spread its message G. K. Chesterton founded the remarkable weekly newspaper *G. K.'s Weekly* in 1925. Ian Boyd has written that

> ... if there was a classical period of Distributism, it occurred during the years between 1926 and 1936 when G. K. Chesterton was at once the president of the Distributist League and the editor of *G. K.'s Weekly* which was its political organ. During this last decade of his life, he and his associates produced a considerable body of literature in which they attempted to supply Distributist answers to the political and economic questions of the day. 175

During this decade Chesterton developed five overlapping objections to the orthodox economic theorists: First and basic to the rest of his objections was Chesterton's claim that conventional economic theorists were only concerned about efficiency and not about the fundamental value-system and Final Cause of the
economic system.

At least people seemed to take a particular interest in every kind of theory except that which is called theology. One gentleman said that theological questions did not interest him; quite arrogantly for all the world as if it were something to be proud of. As a matter of fact, the refusal to go to the roots of thought is responsible for a great deal of failure in the fruits of it.\(^176\)

Second: Such theorists tended to be very political and would shift their views in order to stay in favor with powerful groups.\(^177\)

Third: Chesterton saw economic theory being used as an accommodating tool by both the capitalists and the socialists to enslave the majority of individuals by the few in power.

Fourth: This lack of a moral base and this political outlook led to frequent internal contradictions and inconsistencies. In a lecture at Oxford Chesterton declared that he was unwilling to enter the arena of "howling and shrieking economists who contradicted each other, if not themselves, at every point."\(^178\)

Fifth: Economists tended to be too literal and quantity-minded, or as Chesterton describes them "simple realists" who are not able to understand "the idea of an idea." Chesterton illustrates this exaggerated literalism in his description of an address that he presented before the London School of Economics:

The Editor of this paper recently had occasion to give an informal address to a meeting at the London School of Economics; which should be the very temple of the abstract sciences. But what impressed him most in the debate, entertaining and energetic as it was, was that the prevailing process of thought seemed to be not so much a pedantic or academic detachment as an almost
childish literalism. Some of the brightest debaters seem to be like the schoolboy who cannot even imagine a triangle without turning it into a three-cornered tart.

Sometimes the comments sounded uncommonly like those sometimes uttered by Sandwich Islanders or other savages, when a missionary strives in vain to explain the theoretical nature of theology. 179

It is not difficult to perceive why the study of conventional economic theory had little appeal to the mind of Chesterton.

Though Chesterton and his followers were aware of the need for efficiency in the economic system, they were adamant in declaring that there was much more to political economy than the conventional political economist's final goal of the maximization of production under certain constraints. As one Distributist remarked, "Not maximum but sufficient production is the economic aim par excellence." 180

The Ultimate End of the Distributists, on the other hand, is somewhat more complex. G. K. Chesterton attempted to define it in the following manner:

Distributism, as we understand it, really consists of two propositions, one purely economic and the other ethical or psychological. But they have only to be stated to be recognized as parts of the same spirit, operating on the two planes. The first is that any sort of economic power, whether in cash or credit or the materials that make true wealth, had much better be distributed rather than left undistributed in the hands of individual millionaires. The second is that this distribution of mere cash or credit is but a mere symbol, or a minor application, of a much more vital principle; that what should be distributed is not merely the legal power of a man over money, but the divine or mystical
power of a man over matter. Man is made man, after the fact that he prays, by the fact that he ploughs, that he builds, that he cuts wood for transport or carves it for ornament; in short, by the fact that he has this mystical privilege of mastery over the material universe. The one essentially true idea of democracy is the desire to make what is true of Man true of "a man;" that is, if possible, of any man. In a free country, therefore, men would become completely men in proportion as they have land to plough if they choose, or wood to carve as they like. It is as easy to see that this ideal is difficult as to see that it is desirable.\footnote{181}

The final goal or Ultimate End for the Distributists was that as many individuals as possible should have the economic freedom to fulfill those instincts which lie at the core of his or her being rather than to possess the greatest possible amount of economic goods and services. For this reason Distributists promoted that economic society which had as its ideal a wide diffusion of the means of production, and one in which the majority of individuals would be self-employed. For to G. K. Chesterton, "the moral of the whole nineteenth century is that it is vain to have political equality with economic inequality."\footnote{182} The promotion of such economic equality was thus dictated by the Ultimate End of man and, as such, was a component of ethical justice. Economic theory, in turn, became subject to ethics. "To make political economy merely a physical or merely a mental science, or again merely a mixed mental and physical science, is not much better than making it a mere art: it is a part of ethics, nothing more and nothing less,\footnote{183} is the manner in which a favorite textbook of the Distributists
described the relationship between ethics and economics.

The economic activities of production and consumption have their only rationale to the extent that they contribute to the progressive approximation of that quality of life which is appropriate for individually free men who are created in the image of their creator and, as such, have certain rather definite and unique responsibilities. That which the Distributists would maximize was something different than material goods but something in the soul of man. One writer to the editor of the successor to G. K.'s *Weekly* illustrated this difference between the economists and the Distributists in the following manner:

The reason I have never laboured in the footsteps of Ricardo and Mill, Marx and the Fabians is that I could never get over my instinct that the first step was a false step. Ruskin's mid-nineteenth challenge has been evaded; it has never been answered. In other words, ... I have never found a definition of wealth that seemed to make it much worth while going on. A definition of wealth that leaves out of account the soul of man seems to me to promise nothing but a journey into the illimitable continent of darkness.

For the Distributist, increasing production levels or, as it is sometimes phrased in conventional economic literature, "optimal" growth rates could not be considered as final goals of an economic system. What was the effect of the production of commodities on the personality of the worker? What was the effect of the consumption of such commodities on the personality of the consumer. These were the questions that the Distributists deemed important.
As regards the first question, the Distributists were quite conscious of the relationship between the object produced and the producer. "It is thus that man stands alone among the animals. He alone can deliberately make things which, because of an intrinsic quality, have an independent right to existence. Man alone has the power of making things." Or, as Chesterton remarked in a quotation that we have previously mentioned, "Man is made man ... by the fact that he ploughs, that he builds, that he cuts wood for transport or carves it for ornament; in short, by the fact that he has this mystical privilege of mastery over the material universe."

Productive activity thus has not only for its ideal a certain quantity to be produced but also a certain type of productive activity. That type of productivity which enabled an individual to be free and creative, to exercise this "mystical privilege of mastery over the material universe" was the ideal. That type of productivity which enslaved an individual was to be avoided at all costs. The whole point of Hilaire Belloc's The Servile State was that both Capitalism and Socialism led to enslaved individuals; capitalism by leading to the concentration of ownership so that the proletariat became wage slaves and collectivism by leading to a concentration of power in the hands of a few political leaders.

This concern over the concentration of the means of production led the Distributists to the program for which they are best known and from which they have obtained their name; the distribution
of productive property among the citizenry. This ideal of distribution of productive property came to be the distinguishing mark of Distributism. The true contrary of the word "property" is the word "prostitution" proclaimed Chesterton in the preface to Outline of Sanity. Though the Distributists were aware that such a distribution of productive property could not be carried out completely, nor did they actually desire an exact redistribution of all productive property, they did, however, plead for a society in which ownership of private property would be the norm and one in which extensive private ownership of productive property would set the tone.

The Distributists were aware that certain industries had such benefits from economies of scale and mass production that it was technically impossible to abolish them. Eric Gill pointed out that the goal of Distributism was not to abolish large-scale industries but to minimize the influence of such industries to the greatest extent possible:

Electric light, for instance, could not be, but for the fact that millions of miles of fine copper wire can be turned out by factories. Fountain pens and typewriters could not be, but for standardised labour. But bread and beer and houses and clothes and books and pictures could be, and could be better without such industrialism.186

For those industries which had to be massive in size because of obvious economies of scale there was some controversy among the Distributists over the best policy of ownership. Some advocated
state ownership while others favored some sort of worker ownership through share holding. A majority, however, probably would have agreed with Chesterton that "such necessary machines should be owned by a small local guild, on principles of profit-sharing." In order to distinguish between those industries which were necessarily of large size and those which could be separated into smaller units of production, G. K. Chesterton had in mind the idea "of a series of exhaustive examinations of the big combines and the big shops, written by somebody who could afford the time and trouble to investigate them thoroughly." But the money and talent necessary for such an investigation was not available at the time, and apparently this series of examinations of large corporations was never performed. Earlier, however, Chesterton on his own had investigated the economies of scale in retail stores. His conclusions was: 

Except the illegitimate advantages of being able to kill the competition of a small man, and to bamboozle the public with display in the shop and in printed advertisement, we fail to see that a big store possesses any advantage, even in terms of cash, over a market. The Distributists also did some actual experiments in the agricultural industry, and concluded that moderate-sized farms were just as efficient as the large absentee-owned farming operations. But even if a certain amount of efficiency in production was foregone, all Distributists were at one in claiming that such efficiency was not their only goal. As Chesterton phrased it, "If
we can make men happier, . . . it does not matter if we make them less productive."¹⁹⁰ It was, moreover, his contention that there were already too many things being produced. "We use a thousand things to stun and stupefy people, when we might use a third of those things to awaken and enlighten them."¹⁹¹ Thus the Distributists would violate the first maxim of the standard economics textbook and be quite content with being inside the boundary of the production possibilities curve. For the Distributists, to have as a goal that the economy always be on the boundary of the production possibilities curve makes an intermediate end into a final end, and thus ultimately is enslaving. Indeed they would claim there is something basically irrational about a theory which, having no criterion anterior to itself, is its own justification and which must, therefore, necessarily end in disaster.

Distributists were also concerned about the quality of goods produced as well as the quantity. Distributists felt that the responsibility of ownership of productive property would make for higher quality goods both directly and indirectly. Directly, because each worker would feel more directly responsible for the goods produced. Indirectly, because the responsibility of such ownership would make for better individuals, and such individuals in turn would be capable of producing better quality goods. Among the Distributists, Eric Gill especially lamented the loss of individually responsible craftsmen and the quality of work performed
under mass production.

... it is as responsible workmen, that men must own; for it is only as owners that they can do to things as they should be done by, ... In every case ownership is necessary for the good of the work to be done, and if the work be done well the whole community will benefit.\textsuperscript{192}

If the Distributists were attempting to determine the health and prosperity of a nation's economy, it would not be sufficient to sum up the money value of the national output as is done in some gross national product (GNP) measurement. They would also want to know something about the quality of the goods produced, and, moreover, they would want some information about the individual liberty of those most intimately involved in the production process.

Since Distributism did not have maximum production as its primary goal, it could not have maximum consumption as one of its goals; nor did it. Even though the Distributists were well aware of the joys of consumption and certainly were not an ascetic group (One of the reasons given for the decline of Distributism was that "distributism got mixed up with a sort of mystique of beer-drinking and noisy good-fellowship."\textsuperscript{193}), they distrusted the society in which they lived which set such a superior value upon efficient mass production and gross consumption of material goods. G. C. Heseltine expressed the Distributist viewpoint in the following manner:

It may, indeed, be the way of perfection and the
achievement of an earthly paradise to work for a few
whose philosophy is wholly material, and to accept
the substitute foods, the cheap and depraved
amusements, the mechanized routine life that the system
gives them . . . But the Distributist is unconvinced.\textsuperscript{194}

The Distributists believed that mass production and its at-
tendant of mass advertising had led to a society in which the
quality of man's life suffered because man forgot that he was
more than a mere consumer of material goods.

Though the Distributists were unwilling to dictate to the
individual precisely what means he should take or what he should
consume to be happy because they believed that such decisions
should be left up to the free choice of the responsible propertied
individual, the Distributists did feel that one of the marks of
a responsible individual is precisely a rejection of the "more is
better" philosophy. They realized that the utilitarian economic
philosophy which emphasizes maximum production and consumption is
detrimental to the Distributist way of life. For the Distributist
system to work would demand a society of individuals who placed
individual freedom and self-reliance above increased consumption
of material goods. Thrift in consumption would be a social virtue
rather than a social vice. G. K. Chesterton saw clearly the re-
lationship between liberty and self-control in consumption. "If
we are to preserve the old eighteenth century ideal of liberty,
we must go back to the old eighteenth century ideal of thrift."\textsuperscript{195}

Consumption of goods is thus moderated by a higher end or
goal rather than being an end in itself. This is perhaps the essential difference between Distributism and modern economic theory. G. K.'s Weekly was well aware of this critical distinction in outlook toward consumption and made every effort to analyze this difference, to expose its implications, and to abet the Distributist position. For instance, one of its writers attempted to get to the heart of the distinction and to show the wisdom of the Distributist position by calling in Aristotle for support:

But, being a man, one will also need external prosperity, for our nature is not self-sufficient for the purpose of contemplation, but our body also must be healthy and must have food and other attention. Still, we must not think that the man who is happy will need many things and great things, merely because he cannot be supremely happy without external goods; for self-sufficiency and action do not involve excess, and we can do noble acts without ruling earth and sea.196

Herein lay a crucial dilemma for Distributism and one which they never overcame, to wit; they wanted to maximize the individual's liberty, but the majority of individuals apparently of their own free will did not want this freedom.197 The majority of people seemed to prefer the security of a fixed income to the arduous responsibility of self-employment. G. K. Chesterton wrestled with this dilemma and attempted to define what had led men apparently of their own free will to such an enslaving economic decision. In one of his most penetrating essays he wrote:

When I began it (G. K.'s Weekly), I merely thought it reasonable that there should be one weekly paper to represent a reasonable alternative to conventional Capitalism and academic Socialism. But I now realize ... that what we have taken on is something much bigger than modern Capitalism or Communism combined. I
realize that we are trying to fight the whole world; to turn the tide of the whole time we live in; to resist everything that seems irresistible; . . .

For the thing we oppose is something of which capitalism and collectivism are only economic by-products; . . . It is so vast and vague that its offensiveness is largely atmospheric; it is perhaps easier to defy than to define. But it might be approximately adumbrated thus; it is that spirit which refuses Recognition or Respect.\textsuperscript{198}

Chesterton then continues in this essay to state that if men refuse to recognize and respect the natural boundaries inherent in their created beings, if they refuse to respect their creator's transcendence, then they have nothing left to respect but their own efforts, which is precisely efficiency in production and consumption. Such a pursuit after efficiency in production is basically irrational according to G. K. Chesterton. Since it has no criterion anterior to itself, it is its own justification and must perforce culminate in social anarchy. It is this refusal to recognize these transcendent truths that had led England to such a baneful situation that most of her citizens would prefer the security of economic slavery to the exhilaration of being self-reliant. They were unwilling to follow behind the banner of Distributism which declared:

\textit{Distributism is the negation of all parasitism, for it sees in every man a potential living, thinking, acting free man, made in the image of God, conscious of the omnipotence of God and yearning to develop the God that is in him.}\textsuperscript{199}
But if one does not recognize the transcendence and primal authority of a God, how can one yearn to develop the God that is in him? It was for this reason that Chesterton believed that his role, the role of G. K.'s Weekly, and Distributists everywhere was not so much to draw up a detailed program of Distributist policy and how to achieve it (though such programs were drawn up and plans devised on how to achieve the Distributist state), but by peaceful persuasion of public opinion, a revolution in values and ideas, a change of heart in the direction of humility before one's God.

Nowadays it is exactly those who realize that we have here no abiding city who alone can build anything like a city that will abide. It is exactly those who know that man on earth is man in exile who can alone turn the earth into anything like a home.

This then was G.K. C.'s role; to teach man that earth is not his permanent home, that there is more to life than material production and consumption. Strangely enough, such an unearthly philosophy put such an emphasis on the rights of each individual to own a portion of this earth. Yet Chesterton and the Distributists were completely consistent in this respect. For they realized that if an individual is not to be of the world, he has to have some ownership in the world, or else his freedom to be not of this world is constrained.
CHAPTER III
FOOTNOTES


7. Ibid., p. 274.

8. Ibid., p. 275


14. See pp. 11 and 12.


23. Thomas Sowell, "Sismondi: A Neglected Pioneer," History of Political Economy 4 (1972): 62-88. These five discoveries were the following: 1) a theory of equilibrium income determination; 2) the development of growth equations; 3) the distinction between increased demand and increased quantity demanded; 4) a theory of destabilizing responses to disequilibrium; and 5) the concept of a shutdown point for the firm.


26. Could it be because of this role that Sismondi's other contributions were overlooked?


34. Ibid., Vol. 2, p. 140.


Also "He (Sismondi) was writing in a time of depression and he thought that business depressions were due to underconsumption in comparison with the supply of products." Edmund Whittaker, Schools and Streams of Economic Thought (Chicago: Rand McNally, 1960): 181.

Joseph Schumpeter is more perceptive when he writes: "In a sense, of course, underconsumption can always be described as overproduction. . . It seems more conducive to clear distinctions to avoid the latter phrase whenever an author locates the seat of the trouble with the behavior of consumers, even if the result is also some sort of overproduction." History of Economic Analysis (New York: Oxford University Press, 1954): 494.


39. This certainly is the current Keynesian response.

40. Nouveau principes II, 115. Sismondi would have agreed with the judgment of Alfred N. Whitehead who has written "It is very arguable that the science of political economy, as studied in its first period after the death of Adam Smith (1790), did more harm than good. It destroyed many economic fallacies, and taught how to think about the economic revolution then in progress. But it riveted on men a certain set of abstractions which were disastrous in their influence on modern mentality. It de-humanized industry . . . A self-satisfied rationalism is in effect a form of anti-rationalism. It means an arbitrary halt at a particular set of abstractions." Science and the Modern World (New York: Macmillan, 1925): 288-289.

41. Nouveau principes, I, 55-56.

42. Ibid., 75-76.
42a Ibid., 79.


44. Etudes dur l'Economie politique, I, 27.

45. Ibid., 60-62.

46. Ibid.


49. Ibid., 169.


51. Ibid., 215.


53. "Thus arose petty-bourgeois Socialism. Sismondi was the head of this school, not only in France but also in England. . . Ultimately, when stubborn historical facts had dispersed all intoxicating effects of self-deception, this form of Socialism ended in a miserable fit of the blues." Karl Marx and Frederick Engels, Manifesto of the Communist Party (Peking, Foreign Language Press, 1972): 63-64.

54. Sismondi was not completely without disciples. Mao-Lan Tuan claims that Villeneuve-Bargemont, Joseph Droz and Eugene Buret were much influenced by the writings of Sismondi. See "Sismondi's Followers" in Mao Lan Tuan's Simonde de Sismondi as an Economist (New York: Columbia University Press, 1927): 136-166.

55. Nouveau principes I, 56.
56. Ibid., 313. "Political Economy is not only a science of calculation, but a moral science. It wanders when it believes it can be guided by numbers, it has no other end except to know and appreciate the feelings, the needs and the emotions of mankind."

57. "The ideas (of Carlyle and Ruskind - and he should have added Sismondi) were a form of philosophic idealism, and it is antithetical to the liberalism from which economics derives. Between the two there is war to the death." (p. 364).

"To cope with the idealists, one has to dispute what they believe is their strongest ground—the idea of a natural order that provides a standard of value which is absolute and demonstrable. That is a major undertaking, and few economists have tried it. Those who have, like Frank Knight, have stressed the complexities of liberalism and its limits. They have also acknowledged the power of idealism. I do not mean one comes around to accepting it. Not at all. But our usual response to it is ineffectual." (p. 360). William D. Grampp, "Classical Economics and Its Moral Critics," History of Political Economy 5 (1973): 359-375.

See also James Sherburne, John Ruskin, or the Ambiguities of Abundance (Cambridge, Mass: Harvard University Press, 1972): 119-120.


60. "Our large trading cities bear to me very nearly the aspect of monastic establishments in which the roar of the millwheel and the crane takes the place of other devotional music; and in which the worship of Mammon or Moloch is conducted with a tender reverence and an exact propriety; the merchant rising to his Mammon matins with the self-denial of an anchorite, and espiating the frivolities into which he may be beguiled in the course of the day by late attendance at Mammon vespers." John Ruskin, "A Joy For Ever," in The Works of John Ruskin,

Ruskin's criticisms of individual political economists in general and of John Stuart Mill in particular are, however, wide of the mark. Anyone who has read Michael Packe's masterful biography of John S. Mill cannot but be impressed with both the breadth and integrity of John Stuart Mill's intellect and the all-encompassing humaneness of his person. For more on this issue see John Fain, Ruskin and the Economists (Nashville: Vanderbilt University Press, 1956).


63. For such a summary, see either John T. Fain, Ruskin and the Economists (Nashville: Vanderbilt University Press, 1956) or James C. Sherburne, John Ruskin or the Ambiguities of Abundance (Cambridge, Mass: Harvard University Press, 1972).

64. John Ruskin or the Ambiguities of Abundance, p. 85.

65. Ibid., p. 86.


67. John Ruskin or the Ambiguities of Abundance, p. 120.

68. Ruskin learned the lesson of the phantom liberty, he tells us, in the nursery. His nurse bade him keep his fingers back, but he did not want to obey, so his mother said, "Let him touch it, Nurse," "That was my first lesson in the meaning of the word Liberty," in Works of Ruskin, 20, p. 372.


72. "Why do you name this (liberty) by the same word by which the luxurious mean license?" *Works of Ruskin*, Vol. 8, p. 249.

73. As Ivan Illich has recently noted, ours is a society where "economists replace priests." *Towards a History of Needs* (New York: Harper & Row, 1976): 6. Discussing the role which economists play in modern society, Warren Samuels has argued that "Economics is also social control: economic ideology has largely replaced theology as the social device for achieving social cohesion, providing a set of moral rules, providing goals for individual internalization and identity-achievement, providing legitimation for the machinations of power players both in and out of government, and providing justification for 'the ways of Mammon to man.'" *The History of Economic Thought in Intellectual History,* *History of Political Economy* 6 (1974): 314-315.


75. John T. Fain, *Ruskin and the Economists*, p. 59. Fain also notes that "Ruskin apparently misunderstood orthodox political economy, but such misunderstanding was general among his lay contemporaries, some of whom, industrialists especially, profited immensely by their misunderstanding. Others--moralists, socialists, aestheticians--blamed orthodox economists for what seemed their encouragement of unfettered materialism. But if orthodox political economy was popularly misunderstood, if its rules could not be applied without working havoc in nineteenth-century society, if orthodox economists were victimized by their own science, either the science was so fallacious as to be impracticable or the attempt was made to apply it to societal phenomena for which it was unsuited. The latter hypothesis seems the more plausible of the two." p. 66. See James Sherburne, *John Ruskin or the Ambiguities of Abundance*, p. 122 for a similar assessment.


77. *Hansard Parliamentary Debates*, 3rd Ser. 190, p. 1493.
78. "Unto This Last," Works of Ruskin, 17, p. 85.
79. Ibid.
81. Works of Ruskin, 31, p. 27.
84. "Unto This Last," Works of Ruskin, 17, 87-88.
85. Ibid., 52.
86. Ibid., 84.
87. Ibid.
92. Ibid., 154.
94. "Unto This Last," Works of Ruskin, 17, 144.
96. Letter of John Ruskin to his father. Works of Ruskin, 17, xlvii.
98. James E. Sherburne, John Ruskin or the Ambiguities of Abundance, p. 277.


106. See Introduction to Ruskin's "Unto This Last" by Richard T. Ely in a 1901 edition edited by Richard T. Ely. The copy of Ruskin's Munera Pulveris that was owned by Richard T. Ely (now in possession of Louisiana State University) shows many jottings in Ely's handwriting.


116. Ibid., 102-104.


122. Ibid., 328.

123. Ibid., vii. For Hobson, the words "desired" and "desirable" had important and precise, though quite different, meanings. "Desired" signified what consumers actually wanted. "Desirable" stood for what they should want.
124. Ibid., 304-305.


126. Wealth and Life, 47. It is interesting to note that Hobson quotes Aristotle for the justification of his ideal. Earlier he had rejected the Platonic ideal of Beauty, Truth, and Goodness which Ruskin had accepted. This preference for Aristotle over Plato is another significant example wherein Hobson's thought is more in tune with Sismondi than with Ruskin.


128. Ibid., 130.

129. Nouveau principes I, p. 76.

130. Wealth and Life, p. 305. Hobson would undoubtedly appreciate the recent book by Tibor Scitovsky, The Joyless Economy: An Inquiry Into Human Satisfation and Consumer Dissatisfaction which can be viewed precisely as a study of the standards of consumption and their contributions to man's "organic whole." Scitovsky's first sentences are "This book was written by an economist, but it is concerned with matters not hitherto considered part of economics. People's tastes, the way they spend their money and arrange their lives, are matters economists have always regarded as something they should observe, but must not poke their noses into. They seem to feel that analyzing people's tastes and their motivation would be an invasion of privacy and an abrogation of consumer sovereignty, and that it might expose them to the charge of pretending to know better than the consumer himself what is good for him. Instead, economists assume that the consumer is rational, in other words, they assume that whatever he does must be the best thing for him to do, given his tastes, market opportunities, and circumstances, since otherwise he would not have done it... That assumption, together with its implications, is known as the theory of revealed preference; on it are based many of the economists's arguments, conclusions, recommendations. I consider that approach unscientific."

Hobson would also understand and sympathize with a later statement in Scitovsky's preface: "Economists are deeply divided into the Establishment and its radical-left critics, but they were like a harmonious and happy family in their
unanimous hostility to my ideas." For an explanation of such hostility, the reader is again referred to the study by William Grampp, "Classical Economics and Its Moral Critics," History of Political Economy 5 (1973): 359-375, especially the phrase, "Between the two there is war to the death." (p. 364).

131. Work and Wealth, 34.
132. Ibid., 36.
133. Ibid., 87.
134. Ibid., 88.
136. Ibid., 309.
137. Ibid., 339.
Though Tawney's biographer, Ross Terrill, is in error when he states that Ruskin was "Slade Professor at Oxford when Tawney went there," (p. 30), since John Ruskin had long resigned his chair at Oxford because of a dispute with the University authorities over vivisection labs and other matters by the time Tawney attended Oxford from 1899 to 1903, Terrill's conclusion that Ruskin was one of the two sources of Tawney's thought (William Morris is the other) is probably correct. For Tawney's appreciation of Ruskin, see his article "John Ruskin" first printed in the Observer (Feb. 19, 1919) and reprinted in Radical Tradition: Twelve Essays on Politics, Education and Literature, edited by Rita Hinden. (London: MacMillan, 1966): 42-46.

A cardinal concept in Tawney's analysis is this concept of "function." Tawney defines a functional activity as "an activity which embodies and expresses the idea of social purpose." (p. 8). For more about this concept see chapter 2 "Rights and Functions," and chapter 8 "The Functional Society" in The Acquisitive Society.
162. The Acquisitive Society, 33.
163. Ibid., 37-38.
164. Ibid., 39.
165. Ibid., 46.
166. Ibid., 182-183.
170. Ibid.
172. R. H. Tawney's Commonplace Book, p. 64.
173. Ibid., p. 60.
177. "But what is interesting to note is the way in which the sophistry of political economy changes and adapts itself to the needs of the luxurious at any particular moment. Whatever the politician may want to do, there is always a political economist beside him to say that it must be done, and whenever the rich want to be luxurious it is always opportunely discovered that luxury is a form of economy . . . Political economy has been exceedingly politic. It has always been ready to practise the other sort of economy, the sort supposed to be a variant of equivocation or lying."


190. Outline of Sanity, p. 147.


CHAPTER IV

SIGNIFICANCE OF CAUSA MATERIALIS AND CAUSA FINALIS

To understand and then to improve the reality of commercial production, allocation and consumption is the double-barrelled challenge that we economists place before ourselves. Both understanding and improvement of the economic system require a disciplined intellect that can use all the relevant epistemological tools in the attempt to penetrate the veils of superficial appearances to the essence of the economic system. Just as mere description of whatever economic data one thinks relevant is not sufficient for a thorough understanding of an economic system so mere extrapolation of whatever trends one thinks desirable is not a sufficient base for a thorough reform of the system. Both knowledge and reform require more than one's unsubstantiated personal intuition and desires; they require, above all, a consistency between one's mind and objective reality. Such wisdom requires much insight, the ability to observe and contemplate as well as to reason and act.

In our western intellectual and moral tradition, the most important key both to understanding and reform has been the concept of causation. As Aristotle has stated, "men do not think that they know a thing till they have grasped the 'why' of it."\(^1\) In order to grasp the "why" of it, Aristotle next showed that there were
four essential causes for every rational human act; the causa materialis, the causa efficiens, the causa formalis, and the causa finalis. An example is the building of a house wherein the wood and other materials are the causa materialis, the carpenter's labor and the tools are the causa efficiens, the blueprint or plan in carpenter's mind is the causa formalis and the desire to have a home for shelter and comfort is the causa finalis. To both understand and judge this act of production and consumption in its totality, one would have to investigate all four of these causes since all four play an essential part in both understanding the essence of the action and determining the usefulness of the end product. Were the most satisfactory materials used? Were the carpenter and his tools efficient? Did he have a good plan or blueprint? Was the planned house consistent with the needs of his nature? All such questions are relevant in both understanding this act of production and in assessing its worth.

The same methodological approach has to be taken when a social scientist would investigate the total economic system with a view towards understanding and reform. In current methodology, however, in economics as well as in other theoretical sciences, two of the types of causes advanced by Aristotle have been reduced in importance: these are the causa materialis and the causa finalis.² In its search for understanding and its quest for reform, economics has tended to utilize only the causa efficiens and the
causa formalis, and of these two it has emphasized the causa efficiens much more than the causa formalis. More accurately, the causa formalis is oftentimes submerged by the causa efficiens. As Phyllis Colvin remarked, "theoretical science tends to meld these two fundamentals of explanation, concentrating far more on the causa efficiens than on the causa formalis." \(^3\) "Doing" becomes its own justification. We no longer ask, "Doing what?" Even less do we explore "doing what for what?" or analyze the consequences of "Doing what for what and with what?"

To attempt to study and to reform the economic system of reasonable purposive beings and to neglect the causa materialis and causa finalis of such a system while merging the causa formalis into the causa efficiens would have appeared to Aristotle to shirk one's intellectual responsibility and to ensure that one would end up with the most dangerous kind of knowledge and reform, i.e., half-knowledge and half-reform or, more accurately, quarter-knowledge and quarter-reform.

Why have most economists neglected the causa materialis and causa formalis and focused their attention on the causa efficiens? Is it because they covet the precision and mathematical rigor of the physical sciences which have as their object the analysis of the quantifiable dimensions of inert (i.e., non-purposive) objects? For instance, in classical mechanics the only type of causation that was necessary for the research scientist to be
concerned about was the materially measurable *causa efficiens*. In such a reductionist and mechanistic methodology every immediate physical cause (the *causa efficiens*) can be viewed as discretely distinct from all other immediate physical causes as a single number is distinct from all other numbers. This arithmomorphic assumption, to borrow a term from Georgescu-Roegen, allowed the classical physicist to make extensive use of mathematics and consequently to construct an imposing exact and precise intellectual edifice. Yet the epistemological cost of such a discretely ordered methodology is great, even for the physical sciences as both Georgescu-Roegen and Colvin have shown. The cost is even greater for the economist who deals not with inert objects but a social system composed of reasonable and purposive beings. If one treats only of the *causa efficiens* in an economic system, (only the labor and tools of the carpenter) one is forced to neglect the treatment of such topics as the adequacy of the material resources of the environment or the evaluation of the ultimate end of the system. (Do we have enough wood for the house? Do we really need a house?). Yet since it is through analysis of the adequacy of material resources and the evaluation of the ultimate end that we determine what is actually possible and important, such an arithmomorphic approach based upon the philosophy of logical positivism "comes perilously close to saying of the important we have nothing important to say."
Is the reason that economists have excluded a complete analysis of the *causa materialis* and *causa finalis* from their methodology because, on the one hand, they believe that technology will resolve all problems of absolute material shortages and, on the other hand, nothing useful can be said about the *causa finalis* beyond stating that the *causa finalis* of the economic system is the fulfillment of the given individual consumer's preferences? Such an assumption will allow the economists to continue to use the arithmomorphic model in which all effective wants are viewed as morally neutral. Or, in other words, if a consumer purchases an item, that is positive proof that this item is a *causa finalis* in itself. Since in such an approach there are as many ultimate goals as there are self-conscious free economic agents, the *causa finalis* of the economic system treated as a whole is the most harmonious and greatest possible achievement of all these individual goals. Hence the appreciation for the Benthamite goal, "the greatest happiness of the greatest number," as the implicit final goal of the economic system.

Some such *causa finalis* supports the crucial "revealed preference theorem" with its assumption of given tastes. Such a utilitarian and positivistic presupposition has widespread credence in our age and important implications; not the least of which is the result that since any individuals's preferences are an legitimate as any other, not too much can be said about good or bad,
wasteful or necessary production and consumption with the result that the science of economics ends up in a moral and ecological nihilism. If individual goals did not conflict either with each other or with those of future generations, one might not object; but if they did (and they do), then we would be thrown back into the problems of justice and ethics, but without the possibility of there being any such thing as justice and ethics! As Fred Hirsch has noted, "The problem here is that the pursuit of private and essentially individualistic economic goals by enterprisers, consumers, and workers in their market choices . . . must be girded at key point by a strict social morality which the system erodes rather than sustains." Without a moral base, economic power itself becomes the final arbiter of crucial decisions and we have a full-blown plutocracy. One can understand why this choice of the fulfillment of individual preferences as the causa finalis of the economic system has popular appeal to those who possess a large share of current economic wealth, but less appeal to those who do not or who are concerned about the lot of future generations. Perhaps the historian J. C. Hare was not too far wrong when he noticed in the early part of the nineteenth century,

Often indeed the current philosophy is merely the reflexion of the reigning vice of an age: as has been the case with a great part of that which has assumed the name of philosophy in England during the last hundred years. Its chief aim has been to palliate and justify, to establish and define that worship of Mammon.
Thus the economic presupposition that the fulfillment of an individual's immediate preferences is the causa finalis of an economic system has some societal ramifications which are not immediately apparent. And, whether we like it or not, individual characters and mores are to a great extent formed by the socio-economic structures in which people live, work, and consume.

Frank Knight has stated that "the individual cannot be a datum for the purposes of social policy, because he is formed in and by the social process, and the nature of the individual must be affected by any social action. Consequently, social policy must be judged by the kind of individuals that are produced by or under it, and not merely by the type of relations which subsist among individuals taken as they stand." This belief that the causa finalis of the individual is the fulfillment of his economic desires leads to a consumerism in which man's desires for commodities are reinforced rather than checked as in more previous societies. The value of an individual comes to depend on the amount that he produces and consumes and the individual's identity becomes coterminous with his material possessions. "Justifying significance . . . now attached to compensation and thence to consumption," is the phrase used by the theologian William Stringfellow to describe the consumption ethic of our modern society. The science of economics then continues and completes the circular argument by assuming that since demand for consumption constitutes
the *causa finalis* of an article, the more commodities that are produced, the better off individuals in our society will necessarily be, which, in turn, leads individuals to identify themselves by what they possess, which, in turn, leads economists to value things by the consumer's demand for them, which, in turn . . .

Though the conventional economic theorist will plead innocent to any charge of normatively forming the tastes and wants of the "economic agent" (to use the economist's label for a man, not mine), such a plea is based upon a shallow understanding of the consumer. Georgescu-Roegen has remarked about such a stance:

> The tastes of an individual being given, his actions on the market-utility theory teaches us are completely determined. But as some economists (including myself) claim, with this result we have not exhausted the consumer problem. More important, perhaps, is the question of what determines the tastes — or better, the wants — of a person.10

The economist's lack of any final goal beyond that of immediate consumer preference is itself a normative judgment and one that has implications for the very tastes and wants of consumers by causing consumers to tend to identify their own worth by the amount of their economic possessions. Ben Seligman has summarized the positivist's methodology in the following manner:

> Consider the circle into which the positivist would take us: having defined his terms by what his propositions may achieve, he takes his premises for granted and then asserts that his enterprise is indeed "scientific."11
To escape from this circular argument, one must look beyond the circular flow of monetary-valued income and product that economists explicitly or implicitly use in describing the economic system. Instead of viewing the economy as a closed circular system having no contacts with the material universe or with the final goal of human nature, one must take a more comprehensive view of the economy and its relations with both the material universe and the nature of man. "One of the evil results of positivism is that it has abolished the desire to engage in open and free speculation about the nature of man and the universe." This is just another way of saying that economists should, as Aristotle argued many centuries before, incorporate a critical analysis of the material and final causes of the economic system into their methodology, if one wants to ensure that one's analysis is congruent with reality. Abstract economic "wheels of monetary-valued income and product" can roll on indefinitely and expand to an infinite size, but the material universe is a limited sphere and the ideal society is one which recognizes that a moderate or sufficient amount of economic production and consumption is a prerequisite to the good society rather than one which places an ever-growing gross national product as its goal. When mankind overemphasizes one aspect of his society, you can be sure that another aspect will suffer. If we overproduce and overconsume, we shall to that extent not only have less time to carry on the non-productive and non-consumptive
work of life but, more importantly, less ability to enjoy leisure: to contemplate, to worship, to philosophize, to marvel, to glorify God, to wonder, to sacrifice (sacer-facio: to make something holy precisely by not consuming it); to love, to give thanks, to meditate, to be amazed, to question, or, in summary, to experience to the maximum the tensions and joys of one's life. This statement implies nothing against production and consumption. Of course production and consumption are necessary acts of man. But the question is: whether the life of man is exhaustively defined by production and consumption; can man develop to the full as a producer and consumer. Is human existence coextensive with production and consumption? Stated differently, is the *causa finalis* of our existence production and consumption or is it the celebration of awareness? Even though economists will often give lip-service to such non-productive and non-consumptive activities in their introductory chapters, the main body of their analysis completely ignores such non-productive and non-consumptive uses of one's time.

The object of this study has been to discuss how one could begin to construct a methodology which would incorporate the material and final cause of the economic system into one's analysis. It should be emphasized that the aim is not to replace standard economic theory but to add to it. Just as an economic theory that neglects a scientific and rigorous analysis of the
causa materialis and causa finalis tends to terminate in a moral nihilism and wastes resources due to the lack of meaningful absolute reference points, so a theory that would neglect a rigorous analysis of the causa efficiens and causa formalis would result in a waste of resources and inability to reach the perceived final goal due to internal and relative inefficiencies.

Since the causa materialis of an economic system is the primary natural resources such as metal-bearing ores, energy resources and biological nutrients, it is clear that if economic theorists want to analyze the causa materialis of the economic system, they must be cognizant of the relevant conclusions of those scientists who have as their formal subject of analysis the biophysical universe. For example, it is imperative that economic theorists incorporate within their analysis concepts such as absolute limits, ecological thresholds, and entropic degradation of useful matter. Nicholas Georgescu-Roegen has shown in The Entropy Law and the Economic Process that because of the nature of matter, such incorporation rules out reversible mechanistic or arithmomorphistic models. Such mechanistic and arithmomorphistic models will lead to grave inconsistencies and insoluble paradoxes. But, as shown above in chapter 2, even before Georgescu-Roegen's masterful opus, there were economists who realized that the incorporation of the limits inherent in the physical universe would expand the boundaries of economic theory. The names of Malthus, Jevons in
The Coal Question, John Ise, Lewis C. Gray and Frederick Soddy jump into one's mind. Without having to determine the precise physical limits of such resources, if one admits of absolute scarcity and the consequent need to conserve essential resources for future generations, then somehow one must in his analysis explicitly provide for the conservation of such resources. Such a presupposition will have as one implication that the crucial definition of costs are changed. A society's throughput of resources will have to be viewed as a cost to society that has to be explicitly minimized rather than maximized. The growth of gross national product can no longer be an object of society per se. At the very least, more analysis and insight into the components of gross national product will be required. Much of what now appears to be desirable in our economy will no doubt turn out to be undesirable. The immediate goal for an economy would be to level out its gross national product at the most efficient point, using as one's reference points for efficiency the biophysical limitations of the universe's natural resources and the economic needs of the human nature of the individuals who make up the society.  

What are the economic needs of the individuals who compose economic society? The fulfillment of such needs is, of course, the *causa finalis* of any society. Just as we had to turn to the physicists and biologists for help in resolving the question of
the dimensions of the *causa materialis* so we must turn for aid to the scholars who study human nature to resolve our difficulties at this point since the question of legitimate economic needs ultimately depends upon how one answers the perennial question first asked by Socrates, what is the nature of man. As E. F. Schumacher has pointed out,

Economics is being taught without any awareness of the view of human nature that underlies present-day economic theory. In fact, many economists are themselves unaware of the fact that such a view is implicit in their teachings and that nearly all their theories would have to change if that view changed. If this Socratic question is ignored by economists, it will still be answered, but by default rather than by design. Such an avoidance of the question ignores the vast amount of study and reflection that scholars have performed in their analysis of human nature. Such an avoidance ignores the potential of the mind of man to study his own nature and, as such, is patently irrational and leads to the rational pursuit of an irrational end. As Paul Hayne has written:

Economists ought to re-examine their thinking on the whole subject of value judgments. They enter inevitably into scientific work. Their critical examination can sometimes contribute at least as much to the development of warranted knowledge as can the further refinement of data or the logical improvement of formal models. Economists will, of course, shy away from such a challenge if they continue to maintain that value judgments are nothing but statements of subjective preference. But this is itself a dogma that flies in the face of the undeniable fact that people do hold at least some value judgments to be interpersonally valid, that they do offer
evidence and reasons to support their value judgments, and that rational discussion often does lead to consensus among people who began by holding (or supposing that they held) conflicting ethical or political positions.\textsuperscript{17}

Though it is true that the analysis of human nature will require insights and disciplines of a different nature than that of the physical scientists,\textsuperscript{18} such a prerequisite does not make such knowledge impossible unless one is constrained by the epistemology and methodology of the physical sciences. The fault, in short, lies not in the epistemology of the physical scientist but with the "naive belief that science represents an absolute and exclusive view of reality."\textsuperscript{19}

Though it may be admitted that the more one explores the ultimate material and final causes of the economic system the less precise and less subject to mathematical logic one's knowledge can be; this, however, does not mean that such knowledge will be less valuable or secure. Indeed, the contrary conclusion would be more correct, for as the noted mathematician and philosopher of science, Alfred N. Whitehead, has noted, "No science can be more secure than the unconscious metaphysics which it tacitly presupposes."\textsuperscript{20} To refuse to study such presuppositions because of the incapability of their being subjected to the methodology used by the physical sciences does not, of course, negate their existence or real importance. One should not expect a scientific methodology whose usefulness is limited to analyzing mechanistic matter and to devising the most efficient manipulations of such
matter for ends already established, to be capable of dealing with the more fundamental question of final causes and ultimate values. This avoidance of the issue means that crucial fundamental presuppositions and principles of causation will exist and perform their function in a hidden and implicit manner. Historically speaking it appears that when economists ignore the question of the causa finalis as, by and large, they have for the last century or so, economic activity becomes its own justification, which is a perversion of the traditional role of ends and means. When this happens, when the economic system becomes autonomous of the civilization and culture within which it operates, arrogating to itself that culture and civilization, instead of serving the ends of culture it becomes destructive and cannibalizes the culture.

To take as "given" the material causes and the final causes of the economic system and consequently to focus one economic analysis solely on the severely limited area of the immediate physical cause (capital, labor and land) of economic productivity has led to serious distortions in perspective and to harmful perversions of values in our society.

With gross national product per capitis of more than $5,600 and gross national waste of about 11,000 pounds per year per capita, it is not hard to contrast us with Nero. What we have is too much to be appreciated, beyond adequate perception yet within our purchasing power at least partially because of the exploitative use of externalities. Our consumption is almost totally conditioned by an insatiable desire for individual advancement, invidious comparisons of the class immediately above, or a rat-like attempt at domination and sublimation . . . What a Martian would perceive is not only an infinite desire for goods but an infinite desire gone mad.21
What is the final goal which motivates economic productivity and consumption. As mentioned above, when pushed on this question, economists have usually resorted to the Benthamite goal of "the greatest good for the greatest number." Economists have avoided the difficult problem of defining "good" by substituting the word "goods," in the sense of commodities. The principle thus became "the greatest per capita product for the greatest number." More products per capita and more people to enjoy those products, lead, in this view, to the greater social good. Our commitment to growth is no doubt based in considerable degree on this principle which implies that right action is that which leads to more goods for more people.

But there are two problems with "the greatest per capita product for the greatest number." First, as others have pointed out, the dictum contains one too many "greatests." It is not possible to maximize more than one variable. It is clear that numbers of people could be increased by lowering per capita product, and that per capita product could be increased by lowering numbers, since resources taken from one goal can be devoted to the other. Second, it makes a big difference whether "greatest number" refers to those simultaneously alive, or to the greatest number ever to live over time.²²

To resolve the first of these difficulties we must maximize one variable only, and treat some chosen level of the other as a
constraint on the maximization. For one of the "greatests" we must substitute "sufficient." There are two possible substitutions: the greatest per capita product for a sufficient number; or a sufficient per capita product for the greatest number. Which is the better principle? I suggest that we adopt the latter, and that "greatest number" be understood as greatest number over time, which takes care of the second problem. The revised principle thus becomes, "sufficient per capita product for the greatest number over time."

It is hard to find any objection to maximizing the number of people who will ever live at a material level sufficient for a good life. However, this certainly does not mean maximizing the number alive at any one time. On the contrary, it means the avoidance of any destruction of the earth's capacity to support life—a destruction that results from overloading the life support system by having too many people—especially high consuming people—alive at once. The opportunity cost of those extra lives in the present is fewer people alive in all subsequent time periods, and consequently a reduction in total lives ever to be lived at the sufficient level. Increasing per capita product beyond the sufficient level (extravagant luxury) may also overburden life support systems and have the same long-run life reducing effect as excess population.

Maximizing number while "satisfying" per capita product does
not imply that quantity of life is a higher value than quality. It does assume that beyond some level of sufficiency, further increase in per capita goods does not increase quality of life, and in fact may well diminish it. But sufficiency is the first consideration. To put it more concretely, the basic needs of all present people take priority over future numbers, but the existence of more future people takes priority over the trivial wants of the present. The impact of this revised utilitarian rule is to maximize life, or what is the same thing, to economize the long run capacity of the earth to support life at a sufficient level of individual wealth. The sufficient level may be thought of as a range of limited inequality rather than a single specific per capita income applicable to everyone. Some inequality is necessary for fairness.

I do not want to make too much of this modified utilitarian principle. It is a bit too arithmomorphic and it certainly offers no magic philosopher's stone for making difficult choices easy. But it does seem superior to the old Benthamite goal in that it draws our attention to the concept of sufficiency, and extends our time horizon. It forces us to face the causa finalis, the question of purpose: Sufficient for what? Needed for what?

In our "advertising age" which prides itself on its two and three car families, on its technical prowess, on its gadgetry, on its deep velvet creature comfort, the concept and notion of
economic sufficiency does not attract much attention among social scientists. We Americans, who during the first hundred years of our nation's history had an ever-expanding land area, and for the second hundred years experienced an apparently limitless energy-technology frontier, are not used to the notion of economic limits, of sufficiency. We think that included in our manifest destiny is the right to an ever-growing plethora of economic goods. We are the captains of our fate and that includes our economic fate as well as our political fate.

The difficulty in combatting such a view is that it does contain a half-truth. Man does yearn rightly for more than he possesses. His current economic goods do not satisfy him, nor should they. However, it is not more economic goods that will satisfy his desires. "Our hearts are restless and only in God will they be satisfied," was the Augustinian observation concerning this quest. Or as the economist Alexander Gray has stated, "In bustling too much, one forgets that the purpose of labour is rest, that wealth exists to be consumed, that man's chief end is to glorify God and enjoy Him forever." Modern man's error is not in yearning for more and better things, but in his contrived endeavor to ensure that he will remain ignorant of what the good life does in fact consist. His rejection of the study of legitimate final goals has allowed any goal, no matter how unreasonable, to be considered a final goal of society.
Modern society prides itself on its pluralism, which means that a large number of things are admissable as "good in themselves," as ends rather than as means to an end. They are all of equal rank, all to be accorded first priority. If something that requires no justification may be called an "absolute," the modern world, which claims that everything is relative, does, in fact, worship a very large number of "absolutes."...

Not only power and wealth are treated as goods in themselves--provided they are mine and not someone else's--but also knowledge for its own sake, speed of movement, size of market, rapidity of change, quantity of education, number of hospitals, etc., etc. In truth, none of these sacred cows is a genuine end; they are all means parading as ends.  

As a result of this omission of an absolute goal we have not been able to determine what is sufficient on a lower level of life's hierarchy of values. Whether he likes it or not, modern man must make a choice in this matter of absolute goals. He has three choices. He can make an act of faith in a transcendental reality as traditionally has been the dominant practice in western civilization. Though this faith is superrational, it is not however irrational; at least in part it evolves from a reflection upon the reality which emerges from our human experience and which calls for a man's free decision upon the source of reality. Faith in a transcendental reality is thus aided by one's trust in the reality of the universe. "When he assents to God, man opts for an ultimate reason, support, meaning of reality. In belief in God assent to reality turns out to be ultimately substantiated and consistent: a basic trust anchored in the ultimate depth, in the reason of reasons... In this sense it displays a radical
rationality - which is not the same thing as rationalism."27

Man can also make an act of faith in the notion of Progress or, what is the same thing, an act of faith in the inherent and unaided perfectibility of man himself. Chauncy Wright, the influential early American empiricist, described this faith in the following manner:

Progress is a grand idea - Universal Progress is a still grander idea. It strikes the keynote of modern civilization . . . What the ideas God, the One and the All, the Infinite First Cause, were to an earlier civilization, such are Progress and Universal Progress to the modern world . . . Faith that moral perfectibility is possible, not in remote times and places, not in the millenium, not in heaven, but in the furtherance of a present progress, is a faith which to possess in modern times does not make a man suspected of folly or fanaticism. He may forget the past, cease to be religious in the conventional sense of the word, but he is the modern prophet.28

Though this faith in Progress and the perfectibility has occasionally been found throughout history, it was not until the time of the Enlightenment that it became fashionable. Chauncy Wright is probably correct when he wrote in 1865 that "it strikes the keynote of modern civilization."29

The third option for man in this matter of faith is the option of the radically agnostic. In other words, one has the faith that there is no faith. Ultimately there is no source of, support for, or meaning in reality. This option has a wide following in the modern age and seems to be surpassing the faith in progress.
The author of this study opts for the traditional act of faith in a transcendent God. Since it is an act of faith, by definition I cannot "prove" that my choice is the correct one just as no person can "disprove" it. I can, however, present my reasons for choosing this position. The third option of agnosticism is rejected because if followed to its ultimate logical conclusion (and, in opposition to many in my age, I like to follow things to their logical conclusion) it can easily be shown that it leads to a nihilism and despair which is unacceptable to me. As Will Herberg has written, "The philosophy that has become normative for modern man is part of an entire spiritual complex which paradoxically combines a practical Pru- metheanism with a world-outlook that is nothing short of nihilism." Small wonder that the modern world suffers from a general malaise.

The faith in Progress and the perfectibility of man is rejected because it seems to be just a half-way house, a somewhat arbitrary stopping-point, between the first act of faith and the third. As J. B. Bury has noted, it will in the end fall a victim to its own denial of finality. Though one can glorify man for a certain length of time as was done in the last half of the nineteenth century in western civilization:

Glory to Man in the highest
The Maker and Master of all things.
(Algernon Charles Swinburne, Hymn to Man, 1871)
such a philosophy has no lasting power. Less than a hundred years
after Swinburne penned this ode to man it has become clear to many thoughtful observers that such a faith is incongruous, to say the least. As one of the leading theoreticians of the British Labor Party writes,

The evolutionary and revolutionary philosophies of progress have both proved false. Judging from the facts, there is far more to be said for the Christian doctrine of original sin than for Rousseau’s fantasy of the noble savage, or Marx’s vision of the classless society.32

We have found out that if there is one thing that the twentieth century knows, it is that the more manipulative knowledge is attained by people who do not have a transcendental reference point, "the more that knowledge is used for evil purposes."33 Thus we perceive that the world-outlook of the faith predicated upon Progress and the perfectibility of man, compounded by a positivistic scientism, leads to a relativism which can find no place for absolute values in their vision of reality and, as a result, (as Schumacher has noted) we have a plethora of means masquerading as final ends. But without a secure foundation, human life and all its economic enterprises are deprived of sense and meaning. Idolizing man dehumanizes him no less than enslavement. If man is looked upon as the center of the universe, then it is not difficult to look upon his economic role as "maker and master of things" as an end in itself, especially when the idea of Progress is dethroned. The original error of this positivistic and consequently relativistic faith is not, of course, in taking man
seriously but in making man the center of the universe. Because of a too narrow perspective, modern man's socio-economic goals are rendered empty of meaning. Relying solely on his strength, modern man is bereft of a reference point. This has led to a crisis which Will Herberg describes as follows:

We stand at the brink of an abyss with all our supports swept away. Science, History, Culture, Economic Progress, Socialism - yes, even conventional ethics and religion - how vain and powerless they have shown themselves to be amid the cataclysms of our time . . . The abyss can be crossed in one way and in one way only - by the "leap of faith." It is a leap beyond experience, beyond science, beyond objective logic. Experience, science, philosophy can bring us to the edge of the precipice and point beyond; they cannot help us cross: only the decision of faith can do that.34

Contemporary economic and ecological crises are reflections of an underlying moral and spiritual crisis of civilization, and their resolution depends upon the resolution of that deeper crisis. The underlying dilemma is that, somehow, transcendental values have come to be a luxury, a functionless decoration, superimposed upon values determined by economic efficiency, rather than being the measure of the appropriateness of economic values. We are thus led straight to agnosticism, the faith that there is no faith.

Our task, after having explicitly stated our basic transcendental faith and fundamental values, is next to explore scientifically the economic implications of such a stance. In this traditional Greco-Judaeo-Christian thought with its belief in an
absolute and transcendental creator or First Cause, the primary
evaluation concerning economic activity is obvious: Economic ac-
tivity has its rationale only to the extent that it contributes
to the progressive approximation of that quality of life which
is appropriate for men made in the image of their creator.\[35\]
This fundamental evaluation does not signify that economic pro-
ductivity and consumption are unimportant; indeed, the opposite
conclusion would be more true. Greco-Judaeo-Christian thought,
precisely because of its analytical investigation into the nature
of man and the final goal of man, is able to buttress its con-
cclusions about man's economic activities much more securely than
that rationalistic and positivistic thought which unquestionably
accepts that caricature of man, "the economic man" and his fleeting
desires as the foundation for its analysis. This primary evalua-
tion does, however, signify that economics is a subdiscipline in
the realm of moral philosophy and theology. Economics loses its
autonomy and the economist must consider ethical implications in
his analysis. Not to do so would cause one's economic analysis
to lose all significance. As John Maynard Keynes has testified
about the analysis of economists, "there are practically no issues
of policy, as distinct from technique, which do not involve ethical
considerations. If this is emphasized," he goes on to say, "the
right of religion to interfere in what is essentially a branch
of ethics becomes even more obvious."\[36\] Earlier Philip Wicksteed
had made the same observation, "If we reflect upon these things . . . we shall understand that the ultimate significance (of our economic investigations) is determined by ethical considerations."37

This does not mean that the analysis of economists loses in importance. Once again, on the contrary, it means that economic research is elevated in importance and its logical foundation supported more securely by finding its realistic niche in the hierarchy of disciplines. Not only is economic activity an obvious material prerequisite to man's approximation to that quality of life which befits one made in the image of his creator, but according to the Judaeo-Christian heritage it is a spiritual prerequisite since it is in service to man that service to God is approved. Judaeo-Christians "cannot take God and His will seriously without at the same time taking seriously man and his well-being."38

One can also support the conclusion that the discipline of economics is elevated by subordinating it to a transcendental final goal by discussing the Judaeo-Christian theology of labor. If the Judaeo-Christian ideal is progressively to approximate that quality of life which is appropriate for men and women made in the image of their creator, is not man's creative activity (and that includes economic activity) an important facet of such a society? Though man cannot create ex nihilo, he can create new things out of the material resources of the universe. Man,
alone of all animals, can deliberately make things which, because of an intrinsic quality, have a right to existence. G. K. Chesterton has defined the Christian view of the noble, though secondary, importance of economic productivity in the following manner:

Man is made man, after the fact that he prays, by the fact that he ploughs, that he builds, that he cuts wood for transport or carves it for ornament; in short, by the fact that he has this mystical privilege of mastery over the material universe.\footnote{39}

It is important to note that G. K. Chesterton implies that prayer comes before work in importance. Economic activity, and consequently economic research, has great meaning but only if it accepts the challenge of contributing to that quality of life which is appropriate for man made in the image of his creator.

Although the study of political economy can dull the feeling of the narrow-minded and make them see nothing on earth but merchandise, sales and profits, for those with a larger perspective the study of political economy will always be a source of noble meditation on the means of improving the lot of man, and on the largesse of the eternal creator of all things.\footnote{40}

This subordination of economics to ethics does not imply that theologians should be allowed to dictate particular economic policies based on sacred sanctions. Christian theology, as befits its leader, who certainly did not dictate economic policy, should only want to be a servant to the other disciplines by showing them the highest meaning of life, and should not want to take over their unique, arduous and agonizing particular responsibilities.
Theology can never be a comprehensive, systematic world view, worked out down to the smallest details and rendering ultimately superfluous any further reflections of sociologists, psychologists, economists, jurists, medical experts and natural scientists . . . No science - theology no more than any other science - can take as its object all aspects of human life and action.

Hans Kung then goes on to say that the legitimate object of theology is to attempt to answer "the often tormenting but perhaps nevertheless liberating question about an ultimate why."41 No less than the economist, when the theologian attempts to overstep the boundaries of his discipline he becomes prone to error. Economically ignorant moral theology is as objectionable as morally callous economics. Historically the theologian who attempts to perform economic analysis without a proper training has become a pawn in the hands of the economically powerful or a naive revolutionary. In his time Marx had more than enough evidence to make his succinct statement that "religion is the opium of the people" just as Whitehead has more than enough evidence to state now that "scientism is the opium of the people." One can readily understand why economists are wary of the moral directives of theologians when one studies some of the political-economic involvements of theologians in the past ages. Unfortunately, this is still true of some documents of the modern Church authorities. But such shenanigans are not part of theology any more than arbitrarily defining man to be solely an "economic agent" is part of economics.
The true theologian who studies the absolute Creator and man's relationship with this creator realizes, as one of his greatest predecessors has stated, that he sees through a glass darkly when it comes to man's most important goals and values. This is what one should expect given the extreme "otherness" that separates God and man.

The most important task of philosophy and theology in regard to economics is to set in perspective what should be the final goals of economists. In witnessing the intense desire of economists to analyze the gross national product, their zeal to maximize the utility of every resource and commodity, one can easily get the impression that economists regard wealth, and the productive activity that results in wealth, as the end to which man's existence is subservient. Theologians in their search for the ultimate why should have learned by this time that man's greatness does not lie in having possession of external goods but in utilizing such goods in a manner which recognizes that their true value lies in being used in a dependent fashion - dependence upon God through His law of nature. Such dependence leads to the virtue of humility and away from the vice of hubris and one cannot help but wonder if economists have acquired this virtue of humility and avoided the vice of hubris. This may be analoguous to what the ecological scientist is trying to tell us when he discusses the utter dependence of man upon nature.
What is that quality of life that is appropriate for men made in the image of their creator: What is the role of economics in contributing to that quality of life? It is clear that such a life will find its meaning, its inspiration, its goal in reflection upon the source of all things, its Godhead. In Greco-Judaeo-Christian civilization this reflection has started with exploring all dimensions of creation itself with the hope that by analyzing the created one might catch some glimpses of the creator. The Judaeo-Christian, furthermore, believes he has been aided in this search by divine revelation. And though the Greco-Judaeo-Christian scholar studies the material and physical dimensions of the universe just as intently as the positivistic scientist, and though the Greco-Judaeo-Christian investigates the manifold dimensions of man just as thoroughly as the agnostic humanist and will find no difficulty in accepting the conclusions of such scholars in their appropriate areas of studies, and, indeed, will find much that is worthy of admiration and support, the very fact that the Greco-Judaeo-Christian perceives this analyzed mind and matter as created adds an overlapping dimension that adds a crucial meaning to all of the conclusions. Only the Greco-Judaeo-Christian can evaluate the absolute worth of all features of this created universe from the most insignificant neutron to the most significant works of man and even man himself. Without this dimension that orders all things we would have perhaps a brilliant analysis of
certain particular aspects of the universe but we would not have the slightest idea of the real importance of such analysis.

Because of this fundamental intellectual anchor, the Judaeo-Christian has the key that can evaluate the worth of economic goods, as E. F. Schumacher does in the following passage. He begins by quoting the *Spiritual Exercises* of St. Ignatius Loyola, the Spanish founder of the Jesuits.

Man was created to praise, reverence, and serve God our Lord, and by this means to save his soul; and the other things on the face of the earth were created for man's sake, and in order to aid him in the prosecution of the end for which he was created.

Whence it follows

That man ought to make use of them just so far as they help him to attain his end,
And that he ought to withdraw himself from them just so far as they hinder him.

The logic of this statement is unshakable; it is in fact the kind of logic we invariably try to apply in our everyday affairs, whether it be business, or science, or engineering, or politics. We first try to clarify what we want to achieve; we then study the means at our disposal; and we then use those means just so far as - in our judgment - they help us to attain our objectives, and when it appears that we are overdoing things we withdraw from these means just so far as they hinder us.

When applied to mankind's presentday economic situation, the statement also seems eminently realistic. It implies that where people do not have enough means to attain their ends they should have more, and where they have more than enough they should "withdraw" from that which is excessive.42

How much is "enough" and what is "excessive?" The Christian views man as composed of a material body and an immaterial com-
ponent that interpenetrate each other thoroughly. Man has, therefore, the material economic needs of any oxidizing machine while at the same time he has an interior spirit that will not be satisfied with only an ever-increasing accumulation of economic goods. Material economic goods, besides being absolutely necessary as inputs to keep alive, are the usual prerequisites needed to attain that society which is appropriate to persons who are in the image of the Creator. Yet, too much accumulation of such economic goods can be toxic to this optimal quality of life. But as the precise amount of economic goods that is optimal for the average man to attain his final goal, it would be unwise to attempt to find an exact amount per person. When dealing with one's search for the transcendental, one should not expect the preciseness that can be obtained in a cost-benefit analysis (which is frequently spurious in any case). To attempt to delineate precisely and exactly the optimum amount of economic possessions for achieving a transcendental sumnum bonum is a contradiction in terms. We can only quantifiably measure the inert physical things of this world. As we cannot measure qualities of beauty, goodness, and attributes of the human spirit, much less can we measure the achievement of transcendental goals. When we measure something, we analyze an item within a closed system and, by definition, the transcendental cannot be enclosed. Since we cannot measure the goal, it follows that we cannot measure precisely the means to
achieve the goal. To attempt to make a precise and exact measurement of the optimal amount of economic goods useful in achieving a transcendental goal would be a detour from actually achieving such a goal and would be a manifestation that one was more interested in preciseness and mathematical rigor than in pursuing one's final transcendental goal. One could end up by placing one's faith in numbers and man's ability to logically manipulate such numbers rather than in the transcendental creator.

Although we can never determine the precise amount of economic goods that are instrumental in achieving the final goal, this does not mean that we have to go to the other extreme and say that we cannot acquire some significant conclusions about the relationship of economic activity and the sumnum bonum of man. Even if we could go no further than saying that there was a relationship between the sumnum bonum and the quantity of economic goods produced and consumed, we would have already gone a long way. We would have demonstrated that "a society which, like ours, defines the good life as identical with the high standard of living is running contrary to a fundamental characteristic of the nature of man."43

Assume that we lived in a world in which, because of a more abundant and equitable supply of natural resources and fuels, all of the earth's inhabitants were able to own all the motorized vehicles and electrical gadgets which they apparently desire.
Would it be a better world if we had no transcendental goals but we could go from nowhere to nowhere at 80 miles per hour? Or would we only be more anxious about our increased amount of possessions? Would it not be true that "more production of material goods and services conducive to comfort may be detrimental to the satisfaction of 'higher,' noneconomic needs such as love, friendship, silence, solitude, contemplation, aesthetic and religious experience, community, environment?" As my neighborhood mechanic remarked to me recently on one of my frequent visits to his shop, "there is no such thing any more as a good car. The only trouble is that we cannot survive without the bad ones."

The general criterion to be used in determining what are sufficient economic goods would then be that whatever goods aid one in achieving his transcendental goal are to be used, and, conversely, those goods which detract more than they add in achieving this goal are excessive. The essential norm is that the transcendental goal be sought first. We shall never be able to define the notion of sufficiency if there is no transcendental sumnum bonum, because we must face the question: sufficient for what? For realization of the sumnum bonum. But we can only realize the sumnum bonum by seeking a hierarchy of intermediate ends. Yet we cannot get this hierarchy in the right order without some independent perception of the sumnum bonum. This struggle
to set priorities forces us to clarify our perception of the *summum bonum*. Current conflicts over responsibility of man to sub-human creation as well as his own species, needs of future as well as the present, and what amount of economic goods are sufficient for the ideal quality of life are examples of controversial issues which will aid us in the never-ending task of clarifying the notion of the *summum bonum*. What society needs is not so much a precise resolution to all these issues but a shift in the hearts of men away from external material possessions towards more immaterial goals.

Such a change in goals will have important direct and indirect implications for economic theory. All economic activity will have to be explicitly scrutinized with a view to its effect on achieving the transcendental *summum bonum*. This will require the inclusion of many imponderable and indeterminate variables into our analysis.\(^46\)

In conclusion, as examples of the extended implications of a transcendental goal upon economic analysis, it becomes clear that problems of scale in economic production are important because of the impact that the centralization of decision-making has on the person of both the few decision-makers who can then manipulate the lives of many others and the many powerless who become dependent upon the arbitrary decisions of others. Because of this excessive economic power in the hands of a few and the
alienation of decision-making away from those who will be affec-
ted by the decisions, for the economist with transcendental
ideals "small is beautiful," or as expressed in Thomistic
scholastic terminology, the principle of subsidiarity ought to
be utilized when making decisions concerning the optimal sizes
of economic enterprises. In conventional economic theory monopolies
are disliked, not because of their large size and centralization
of economic power, but because they remove the economic system
away from the "ideal" economic structure of competition between
enterprises. A large quantity of competition among economic
enterprises is looked upon as a desideratum because it theoreti-
cally leads to equality of marginal costs and benefits and con-
sequent "efficient" allocation of material resources. If, how-
ever, natural economies of scale exist, the conventional economist
will then allow such monopolies to exist but will attempt either
through state ownership or regulation to force these monopolies
to price their product as if they were a competitive firm. The
economist whose goal is that quality of life which is most ap-
propriate to persons made in the image of their creator will have
different criteria with which to judge monopolies and large-scale
enterprises. Large-scale enterprises, whether monopolies or not,
tend to concentrate economic power and decision-making and thus
to take away from the average individual any creative expression
of his unique being in both his productive and his consumptive
role. As Richard Crossman has written, "We must assume that increased concentration of power, whether in the form of technological development or social organization, will always produce exploitation, injustice and inequality in a society." 47

Another related implication of having a transcendental goal can be found in the economic theory of labor. Does man's work dignify him in the sense that he shares in the creative work of the transcendent creator? Is it true that "bodily labor, which even after original sin was decreased by Providence for the good of man's body and soul, is in many instances changed into an instrument of perversion; for from the factory dead matter goes out improved, whereas men are corrupted and degraded?" 48 Do modern laboring practices enslave a worker so that he degenerates to a lower level of being than that destined for him, to an animal-like existence in which he is fettered by his own material and sexual desires, or even less to a machine-like existence in which he has no desires at all except the motivated drive to be efficient? 49 Though this latter type of attitude may be able to masquerade as a Christian work ethic (i.e., the Puritan work ethic) because of some superficial similarities, it would not take long for a critical observer to tell which is which. Labor theory in economics should attempt to construct an economic system which encourages to the extent that it is possible a worker may be creative, to exercise in a responsible manner that "mystical
privilege of mastery over the material universe." Those laboring practices which are degrading should be minimized to the extent that is possible. Maximization in output and economic efficiency cannot be the sole goals of labor theory.
CHAPTER IV
FOOTNOTES

1. Physics, 194b

2. See Phyllis Colvin, "Ontological and Epistemological Commitments and Social Relations in the Sciences," The Social Production of Scientific Knowledge ed. E. Mendelsohn, P. Weingart, and R. Whitley. (Boston: D. Reidel Co., 1977: 103-129. Also see Nicholas Georgescu-Roegen, The Entropy Law and the Economic Process (Cambridge, Mass: Harvard University Press, 1971), pp. 182-191 for an analysis of why the social sciences have neglected the study of the causa finalis and the harm that has resulted from such neglect. As for Georgescu-Roegen's appreciation for the importance of the causa materialis, one could argue that the whole point of The Entropy Law and the Economic Process was to show the need for including the causa materialis in one's economic analysis. What else is low entropy (matter-energy) but the basic material cause for the existence of an economic system?

3. Ibid., p. 109. Alfred N. Whitehead has expressed somewhat the same opinion. "For instance, the enterprises produced by the individualistic energy of the European people presuppose physical action directed to final causes. But the science which is employed in their development is based on a philosophy which asserts that physical causation is supreme, and which disjoins the physical cause from the end." Science and the Modern World (New York: Macmillan, 1925): 111.


13. See Josef Pieper, *Leisure: The Basis of Culture* (New York, Pantheon, 1952) for an illuminating essay on the definition of true leisure and the need for such leisure in one's society.

14. This phrase "celebration of awareness" is borrowed from the title of a book by Ivan Illich.

15. See Daly, *Steady-State Economics* and *Toward a Steady-State Economy* for a complete analysis of this need to level out the gross national product and a study of the reference points which make this leveling out necessary.


18. On this point of the need for diverse methodologies in the social sciences and the physical sciences Frank Knight has declared, "Positive knowledge of human beings is so different


22. Lionel Robbins has argued convincingly that Bentham and the classical economists (David Hume to John S. Mill) saw this principle of the greatest happiness to include future time, "The greatest happiness was not the greatest happiness at the moment, but the greatest happiness over time." Lionel Robbins, The Theory of Economic Policy in English Classical Political Economy (London: McMillan, 1952): 178-179.

23. Garrett Hardin's notion of the "sacredness of the carrying capacity" is perhaps another approach to the same idea. Also see John Ruskin's view that there is no wealth but life in pp. 127-128 above.

24. Witness the title of a recent article in one of our more significantly entitled journals, "Affluent 'Creative' Consumers Form Worldwide 'Comfort' Culture," The Advertising Age (September 13, 1965): 4.


social status. By being oriented to prosperity and achievement the industrial nations can escape the pressure of primitive poverty and establish the welfare society.

But in fact this highly successful way of thinking in terms of efficiency finally becomes a serious threat to man's humanity." (p. 584).


45. In his *Tools of Conviviality*, Ivan Illich has attempted to discuss the criteria which might be utilized in distinguishing which of man's tools are helpful and which are inhibiting him in his search for his final goal.


49. As Edward Sapir defined this existence, "Part of the time we are dray horses; the rest of the time we are listless consumers of goods which have received no least impress of our personality." "Culture, Genuine and Spurious," *American Journal of Sociology* 29 (1924): 417.
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