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And Its Neglect. In Various Classics

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# Nature in Economic Theories:

## *Hans Immler Traces Recognition of the Environment—and Its Neglect—in Various Classics*

By SIEGFRIED G. KARSTEN\*

ABSTRACT. *Labor* and *capital* are usually considered as the primary *factors of production*, the *costs* of which are of utmost importance. In contrast, *nature* (including all *natural resources*), as the essential third factor, is disregarded. She is generally assumed to be always available, self-regenerating, and to be exploited without *long-term costs*. In other words, she is more or less viewed as a constant. *Hans Immler's* new treatise represents an important contribution in that he emphasizes the role and function of the *natural environment*, and its neglect, in the formulation of theories of *value* and their long-term consequences on contemporary *economic theories* and on the *person* and *society*. This essay traces Immler's evaluation with extensive quotations—especially with regard to *Physiocracy* and the *classical economists*—of nature's role and function, or their neglect, in the formulation of theories of value through the writings of *Aristotle*, *St. Thomas Aquinas*, *William Petty*, *John Locke*, *Adam Smith*, *David Ricardo*, *Karl Marx*, and others—all dealt with in Part 1 of his book—and Francois Quesnay and the Physiocrats—the topic of Part 2.

### I

MOST CLASSICAL, NEOCLASSICAL, and contemporary economic texts and treatises do not assign nature, representing all natural resources, her rightful place as an economic factor of production. She was and still is treated primarily as a constant, as a means to an end.

Today we are at the threshold of recognizing nature as a crucial third factor of production, which no longer can be taken for granted or which can be exploited without substantial costs to society. For one, nature has presented her bill in the form of air, soil, and water pollution, rapidly depleting natural resources, soil corrosion, and environmentally-conditioned diseases affecting not

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only man but also animals and the plant world. These facts force us, although slowly, to recognize that the natural environment must be treated as an essential scarce economic resource. Its use involves certain costs which have to be accounted for just as the employment of labor and capital must be.

Political economy is moving in the direction of a reconciliation of labor, capital, and technological change with nature. The implication of this is that the science of economics will be forced to reorient its theorizing. In other words, nature's just claim for remuneration for her productive powers for the primary purpose of assuring her regeneration needs to be recognized.

Immler takes the position that contemporary ecological problems can only be fully understood and resolved by analyzing the role of nature as an economic factor. It was the failure to fully appreciate this fact which eventually resulted in harmful consequences for the natural environment. In this regard, one finds great affinity of Immler's thoughts with entropy, synergy, and economic change.

Concern that "nature" is taken for granted as an unlimited, self-regenerating factor of production has, of course, been expressed by other writers. For example, as John Leighly writes, [Carl] "Sauer has always been concerned with man's role in changing, intentionally or unintentionally, the face of the earth in directions determined by his immediate needs."<sup>1</sup> In the words of Sauer: "Have we set up an economy of waste, which we call the miracle of American production? Can we disregard our deficit spending of natural resources because we shall continue the triumph of mind over matter?"<sup>2</sup> And, as Sauer points out, "What we need more perhaps is an ethic and aesthetic under which man, practicing the qualities of prudence and moderation, may indeed pass on to posterity a good Earth."<sup>3</sup> More recently, the same thoughts continue to be expressed in the writings of Rifkin and others. As Rifkin expresses it: ". . . people are both part of nature, equal to and dependent on all other living and nonliving things, and at the same time separate from nature with a responsibility to protect and take care of it."<sup>4</sup>

Although concern about the neglect of "nature" has been expressed by various scientists, no thorough attempt has so far been made to integrate it with economic theories. It is in this regard that Immler's work is an important contribution. He calls attention to the fact that accepted contemporary theories, especially theories of value, are devoid of meaningful and convincing concepts of nature. The author tackles the question why the differentiation between nature, value in use, and value in exchange detrimentally affects nature in general and humanity's environment in particular, with the potential threat of its destruction increasing.

However, the author does not formulate an alternative paradigm which incorporates a meaningful synthesis of economic theorizing with nature. Perhaps,

Immler has this in mind for the yet to be published Part 4 of this work. Part 3, which also has not yet been published, is to deal with the neoclassical treatment of nature as an economic resource, to be written by Ulrich Hampicke.

## II

IMMLER, RECOGNIZING that many theoreticians take Aristotle as a starting point for their analyses of "value," also begins his treatise with Aristotle. To set the framework for the following analysis of Immler's work, a somewhat detailed elaboration of Aristotle's position, as seen by Immler, is presented here.

In Immler's view, Aristotle's economic contribution is to be found in his concepts of "value in use," reflecting man's interrelationship with nature, and "value in exchange." Despite the fact that Aristotle did not analyze the origin of value or how value is derived, especially exchange value, he nevertheless was cognizant of the differentiation between "use value" and "exchange value." According to Aristotle, every commodity possesses these two characteristics.

As Immler points out, Aristotle's "exchange value" of a commodity implies, as described under his system of *chrematistica*, that all commodities must have *something in common*, which in essence subjects them to a universal numeraire. It is the latter which gives rise to objective theories of value: ". . . exchange value must include something which is *comparable*, that is, in exchange *equality* and a *common* standard must be contained" (p. 28).<sup>4</sup> However, it is "use" or "need" which holds everything together, money only serving as the representative of "need." In that he denotes *need* as the true measure of exchange value, he seems to speak in favor of a *subjective* theory of value" (p. 28).

This led to an unresolvable conflict in that Aristotle expected exchange value to possess two properties which cannot be satisfied simultaneously. "For one, *different* needs are to give rise to exchange and also to provide for a social bond. On the other hand, these needs are to be based upon something they have in *common* and which makes them *equal*" (p. 28). The contradiction is to be found in the fact that all commodities are to possess something in common and also something which sets them apart at the same time. "Needs" or "use" which Aristotle attempts to utilize as the common bond, as the equalizing property, are what actually sets them apart, which makes them different. The second best solution, in Immler's view, is Aristotle's use of money as the *common measure*. However, Aristotle does not explain how this comes about and, therefore, fails to resolve the conflict.

Aristotle's concept of *oikonomia* refers to the art of earning a livelihood from nature, *i. e.*, to production, which is essential not only for society, the household, but for the maintenance of life itself. "The objective of 'oikonomia' is, therefore,

to provide for those goods which are necessary and useful for life 'within the community of the State or of the household' " (p. 30). *Oikonomia*, in essence is representative of the *creation of use value*.

The concept of "use value," however, has a greater meaning in Aristotle than simply that of a commodity's economic usefulness in the narrower sense. "Use value" is derived by a commodity's role in the maintenance of human life, by the necessity to sustain it. Therefore, it has to be understood in terms of people's relationship to nature. This is expressed, on the one hand, by the person oneself, *i. e.*, by his or her desire to obtain goods and wealth from nature, and, on the other hand, by nature's ability to produce and to make things available to people. "Need, however, is determined in a twofold manner: one, by man himself, *i. e.*, by his desires of what things to acquire and which produce to eat, but also by nature herself, by her willingness to produce and how much of her abundance she offers man" (p. 31).

Hence, it is in "need" that people's dependence on nature as well as her manipulation, *i. e.*, her utilization, her productive usefulness, is expressed. It is from this relationship that *true wealth* is derived—including all concepts such as need, use, utility, wealth, even human life itself. Therefore, *need* and *use* are not isolated properties of a commodity but result from the manifold interrelationship between human beings and nature. "In this interrelationship each commodity and each life has an origin and a future; it relates to other commodities and lives and without this association the useful and necessary would neither be useful nor necessary" (p. 32).

Although Aristotle employs both "use value" and "exchange value," as represented by *oikonomia* and *chrematistica*, respectively, he was unable to draw the dividing line between a *natural economy* (*oikonomia*, supply) and an exchange economy (*chrematistica*). The difference in their employment is that in *chrematistica* the purpose of exchange value undergoes a transformation—from a system of providing commodities for use to setting the framework for the unlimited earning of money, and, eventually, for the accumulation of claims on wealth. Whereas in *oikonomia* the obtaining of "use value," *i. e.*, human improvement rather than production for its own sake and the *end*, it became the *means* to the end in *chrematistica*. However, it is through "need" that people's dependence on their natural environment as well as its productive utilization is reflected.

### III

IMMLER SEES St. Augustine as having practically abolished the Aristotelian union of nature and "use value;" natural (*valor naturalis*) and use value (*valor usualis*)

become distinct entities. "He differentiates between a *natural order of things* on the one hand and their *use value* on the other hand. A twofold fundamental valuation of nature is formed, one based on the point of view of a natural rational order, as laid down by the creation by God. The other one is based on man's use of things, tacitly arising out of individual utility" (p. 35).

Implied in this separation is that use value addresses itself primarily to the immediate satisfaction of individual desires and the resultant potential harm to the physical environment. "In the final analysis, St. Augustine says nothing else but those criteria of use value, which orient themselves solely to immediate and personal utility, must result in the destruction of parts of the physical environment and of its order" (p. 37). As Immler analyzes it, St. Augustine essentially presented use with the negation of the value of nature. He pointed to the relationship of man's value to nature and to the potential conflict between man's actions on the one hand and the requirements of nature or of the environment on the other hand. Although the potential harm to or destruction of the environment was not perceived as an issue at those times, nevertheless, this separation of natural and use value set the stage for environmental problems which were to surface many centuries later. "For the first time the thought emerges in St. Augustine's category of use value that man's valuation of his physical environment could lead to the destruction of nature, and, therefore, also of his own life" (p. 38).

It is with St. Thomas Aquinas that the partnership between man and nature completely ceases. The responsibility for nature is transferred to God. The human person is now thought to have the right to acquire goods according to his or her personal desires and needs, thus legitimizing humanity's subjugation of nature. "Man's encroachment on the physical environment becomes not only generally legitimized, it is justified on the basis of criteria which characterize such an intervention as an act of subjugating nature, executed in response to man's individual utility concerns" (p. 41). Use value is now no longer seen in its context with nature but in its relationship with exchange value.

Furthermore, labor assumes an important role not only in the determination of economic values but also as a social force which molds society. "With St. Thomas, work begins its triumphal procession as society's progressive transforming force. And, for him, this movement is tied to the question of the formation of private property" (p. 47). It justifies the creation of private property and wealth, and economic value theory is found to be devoid of a meaningful consideration of nature or the environment.

In Sir Thomas More, Immler finds a reconsideration of nature's due role in that he defines economic value in terms of the quality of life, calling for a

renewed partnership between man and his physical environment. Similarly, William Petty sees both nature and labor not only as sources of wealth but also of value; the two being of equal importance for the generation of exchange value. "Petty's ideal measure of value would have been to impute to each product both a labor and a nature component" (p. 69). As the author points out, Petty brought the separate entities of use value and exchange value together and thus becomes an important anticipator of a theory of value which is further developed by Adam Smith and Ricardo.

In contrast, Hobbes viewed nature as a free gift, provided by the generosity of God, to be utilized through man's labor for the acquisition of goods and wealth. "Hobbes saw only that nature which offered herself as wealth, property, and commodities. Under this presupposition, he could as a matter-of-fact assume that with the appropriation of property nature was also appeased" (p. 55).

#### IV

ADAM SMITH EQUATED socioeconomic value with exchange value. "He simply defined, so to speak, exchange society to be the natural form of society" (p. 129). Nature as such is ignored as an economic factor. "For Smith, nature no longer counts as an economic category, she is even disregarded in his concept of use value" (p. 133). Exchange value is determined solely by labor. No mention is made of how the productivity of nature influences the productivity of man and, therefore, contributes to social value.

Furthermore, social value is thought to manifest itself through traded commodities. "The social value of nature *must*, therefore, find its manifestation as a commodity" (p. 133). Those parts of the physical environment which do not find an expression in such commodities are assumed to possess no social value. But, ". . . significant parts of physical nature cannot assume a commodity form. The most important reasons for this are that a *definable differentiation* does not exist, a non-existing *divisibility*, and the impossibility of quantification. . . . According to exchange rationality, non-commodity nature possesses no use value" (p. 145). However, "no production facility, no production process, and no product exists *in isolation* of non-commodity nature. Rather, at *each* stage of production and at *each* phase of life, non-commodity nature belongs to commodity nature as water does to fish" (p. 158). This disregard of nature in the Smithian universe leads Immler to conjecture that economic freedom eventually degenerates into drudgery.

"It is the assumed concurrence of social value with nature that the crucial mistake, which Smith made with regard to nature, is to be found. His society consisted of manifold market relations. Natural freedom in society, *i.e.*, the

leitmotiv of Adam Smith's economic liberalism, however, must lead to man's bondage with nature. Social value determination engenders a permanent and deepening conflict with man's natural conditions of life. Economic freedom and natural-physical drudgery represent, therefore, two sides of the same coin" (p. 172).

Ricardo defined labor as an abstract quantity which generates abstract social value, disregarding nature. "He presupposes an infinitely available and infinitely self-regenerating nature. To him, however, this nature is not even worth mentioning, *i.e.*, worthy of analyses. . . . his value theory always assumes a definite nature. The inexhaustibility of nature is a logical consequence of the assumption of the unlimited generation of commodities through labor" (p. 187).

Ricardo and his predecessors overlooked the fact that a deteriorating natural environment must lead to declining productivity of labor and, therefore, to rising exchange values. "The more the, as such not recognized, productivity of nature declines, the greater the value of commodities appears to be since for the same volume of output more labor time needs to be expended. A lower level of the natural forces of productivity results in an increase in exchange value with the productivity of labor appearing to have diminished" (p. 190). "In theory, the conflict between labor and nature reaches a certain culmination point in Ricardo" (p. 180). With Locke, nature is a gift of God; with Ricardo, she is simply there and indestructible, regardless of what one does with or to her.

"Ricardo's great error in differentiating between value and wealth is to be found in the assumption that nature does her 'work' for free. Nature, however, stipulates certain conditions in return for her readiness to provide produce free of charge. . . . One, that nature and her productive powers be understood and appreciated. Two, that the limitation of her abundance be recognized. And three, that an economy be developed which, within the framework of the interrelationship between work and nature, makes nature's scarce wealth not only available to man without mutual destruction, but facilitates its expansion" (p. 200). In Immler's opinion, Ricardo's paradigm violates all three of these conditions.

"When—in contrast to Ricardo—the presupposition of a limited nature is extended to all production and reproduction, then his pessimism covers a much wider range. It would result in an apocalyptic vision of an unresolvable conflict between value and nature, which would manifest in a diabolic treadmill: the more value is produced, the less of nature remains—in the abstract, infinitely generated value degenerates into an annihilated nature" (p. 237).

Marx recognized the interrelationship of man with nature and admitted that a commodity represents both exchange and use values. "In particular he shows



that the alienation of labor at the same time also implies an alienation from nature" (p. 240). Nevertheless, Marx deals with use value only in passing. "External nature is considered as a prerequisite for production, but not as an equal partner of labor. Man, as part of nature, subjugates nature through his labor" (p. 250). He grossly underestimated the causes, effects, and consequences of the exploitation of nature. The generation of surplus value and the deterioration of the natural environment depicts the contradiction of value and nature in the Marxian paradigm. "Marx failed to see that the labor theory of value possessed theoretical and practical validity only as long as the productive powers of external nature could be acquired intact; however, that it results in perverse value manifestations to the extent that the endangered external nature must be restored through labor" (p. 289).

"Marx was unaware . . . that natural substance, in its original and in its cultivated form also represents a social relationship which definitely influences the value paradigm and vice versa. . . . that the work as well as the reproduction processes of individuals depend directly upon physical nature and on its greater or lesser productivity" (p. 255). "In that Marx does not differentiate between the productive power of labor and that of nature, the attributes of nature are blocked out through the concept of abstract labor" (p. 275).

"The destruction of nature, through the valuation of abstract productivity, *i. e.*, as labor quantum, becomes a significant source for the creation of surplus value. Indeed, Marx foresaw in the contradiction between abstract value and real nature an ecological conflict. However, he did not perceive that this conflict arose from one source, the existence of which he categorically denied: that nature participates in the creation of value" (p. 280). ". . . the laws of historical evolution are unilaterally oriented to *social* relations but not to *natural* relations of society. They are the consequences of the analysis of *value* relations but not of *physical-natural* relations in society" (p. 292).

v

PART 2 OF IMMLER'S WORK deals in great detail with various aspects of Physiocratic thought, especially as exhibited through the writings of Francois Quesnay. As such it represents a profound analysis of Physiocracy in general. The basic question which Immler raises in reference to the issue under review is whether the Physiocratic paradigm as such could be applied today. The answer, of course, has to be in the negative. But Quesnay, nevertheless, can point the direction in which contemporary society could be moving.

"In fact, one finds within Physiocratic social theory *nature* as the most important category from which the laws of nature, ethics, economic rationality, and all socioeconomic relations are derived" (p. 417).

Quesnay's basic determinant of value is to be found in nature; he has a nature and not a labor theory of value. The periodic reproduction of the net product implies the permanent regeneration of the natural environment as a productive factor, its growth and productiveness. Labor is seen as useful to the extent to which it aids in the generation of the net product.

"The economic policy of the Physiocrats addressed itself first of all to the physical-material side of production, only secondarily to value, or to the monetary side. . . . It consists of, *first of all*, that the productive powers of nature be understood as physical-material energy. *Secondly*, a systematic economic utilization of natural productive powers gives a point of departure for a theory of physical production. *Third*, the thought of the preservation and cultivation of the natural conditions of production is expressed, which in turn points to an elementary theory of material reproduction" (p. 316).

Quesnay sees the issue of freedom in terms of the unity of the inner and external nature of the person, although he neglected the former. Freedom is to be understood not only as individual rights but, more importantly, as duties and responsibilities. As a result, the economizing of nature becomes the organizing principle of production.

"A 'pillar' in the Physiocratic theory of reproduction is, therefore, the recognition that production must always encompass reproduction. That is, a constant development of output also necessitates a permanent restoring of the conditions of production and that an accelerated generation of output presupposes improved and extended conditions of production" (p. 330).

"The Physiocrats learned that, *first*, nature's productive powers were available for society's utilization without (short-term) cost. *Second*, that this power of nature was not unconditionally available, that it was damagable and destroyable, and that it had to be preserved through economic measures. *Third*, that through a systematic organization of the production process an enormous augmentation of the productive powers of nature could be attained" (p. 330).

"The whole Physiocratic theory of production was dominated by their view of use values. . . . Since Quesnay emphasized that that part of the exchange value of a commodity—which remained after all costs, including labor costs, had been subtracted—represents a gift of nature, and that this gift would be greater the larger the exchange value of a commodity that could be realized, nature has become for him part of exchange value" (p. 337). "What the Physiocrats didn't sufficiently realize, and also didn't want to see, was the interrelationship between the external powers of nature and man's labor" (p. 340). "The point of departure for Physiocracy is (therefore) a one-sided theory of natural value in which human labor was not attributed its rightful share in the net product" (p. 341).

“In the final analysis the Physiocratic paradigm failed in that real evolution bypassed it. The bourgeois view of the world required an economy which conferred the power of social change to labor—first in concrete, then in abstract form” (p. 420).

## VI

IMMLER POINTS to the increasing number of environmental problems. He takes this as evidence that traditional economic theories have disregarded the productiveness of nature as an economic factor, and, therefore, lack meaning and validity. However, by doing so in general terms, he himself may be charged with having fallen subject to the apocalyptic fallacy, as Blaug calls it, *i. e.*, being eventually right in the long run without necessarily for the right reasons.

The author calls for a political economy which assigns equal importance to human beings and nature. This demands a profound understanding of the productiveness of nature and the necessity for its preservation and reproduction. This, in turn, demands the creation of conditions which assure that the material wealth of nature is not diminished but maintained and expanded. “What is involved with regard to physical reproduction is to create those conditions for the social production process which assure that nature’s material wealth, including human labor, is not destroyed but preserved and expanded” (p. 426).

Does the author’s recommendation have validity and meaning? It possesses validity in that it addresses itself to issues of crucial importance with regard to the environment. Does it have meaning? That is, can it be put into actual practice? Here, the answer, under prevailing ways of thinking, is not clear. More is involved than just the modification and/or replacement of theories of value. It demands a change in society’s value structure, perhaps to accept a condition of being less acquisitive and less materialistic as far as the accumulation of wealth is concerned.

## Notes

1. John Leighly, ed., *Land and Life* (A Selection from the Writings of Carl Ortwin Sauer), (Berkeley, CA: Univ. of California Press, 1963), p. 4.
2. Carl Ortwin Sauer, “Folkways of Social Science,” in Leighly, *Land and Life*; p. 387.
3. Carl O. Sauer, “The Agency of Man on Earth,” in William L. Thomas, Jr., ed., *Man’s Role in Changing the Face of the Earth* (Chicago: Univ. of Chicago Press, 1956), p. 68.
4. Jeremy Rifkin, *Entropy* (New York: Viking Press, 1980), pp. 237–38.