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## Stewardship of Creation: Some Implications for Economic Theory and Policy.

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STEWARDSHIP OF CREATION: SOME IMPLICATIONS FOR ECONOMIC  
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*The Louisiana State University and Agricultural and Mechanical Col.*

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STEWARDSHIP OF CREATION:  
SOME IMPLICATIONS FOR  
ECONOMIC THEORY AND POLICY

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The Department of Economics

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## ABSTRACT

Neoclassical economic theory defines an optimal or efficient allocation of natural resources as one which secures the maximum output of preferred goods and services, or as an allocation in which the resources are used in their highest valued uses. The theory is based on two important normative assumptions: the welfare of the community is an increasing function of the individual's welfare, and an individual is better off in a freely chosen position. These assumptions form a subjective theory of value which locates the source of intrinsic value in the individual's tastes and preferences; value or wealth is whatever satisfies the individual's desires. An alternative objective theory of value is a biblically based theory which locates the source of value in an objectively good creation as created and sustained by God. In this biblical and historical Hebrew-Christian position, human beings are stewards (not owners) responsible for proper care (welfare) of all of God's creation.

A biblically based theory of stewardship of creation does not agree that all values are reducible to personal preferences. Consequently, it rejects Pareto optimality as either a necessary or sufficient criterion for the optimal allocation of resources. Nor does it accept the related conclusion that resources will be optimally allocated when property rights are well defined and exchangeable. Stewardship theory thus rejects the fundamental normative conclusions of neoclassical economic theory about efficiency.

Neoclassical economic theory seems to be persuasive for those who only recognize the need to resolve conflicts in individual subjective valuations. Thus, for conflicts over truly innocuous tastes and preferences competitive markets function well (with a few well recognized exceptions). But for the conflicts between individuals over objective valuations, competitive markets and neoclassical theory are inadequate and misleading. To resolve these conflicts, stewardship theory points to a double criterion of proper ends and economically efficient means. The criterion of proper ends will mean limits, duties and obligations, besides rights, on the part of human beings as stewards of a valuable and purposive creation.

## CHAPTER 1

### INTRODUCTION

What is the "optimal" allocation of our natural resources?<sup>1</sup>

This single question probably best captures the central problem for natural resources economists. Natural resources economists are not alone in their concern for the "optimal" use of natural resources. Moral and ethical philosophers have begun to study the question as witnessed to by the publication of numerous articles, books, and even the recent appearance of a journal, Environmental Ethics; all devoted to a basic question: what is the proper relationship between mankind and the rest of nature? Religious scholars also have begun to address the question of stewardship of nature in light of ethical and biblical principles.<sup>2</sup> And, of course, the so-called environmentalists and conservationists have long been involved with the question of "optimal" use of natural resources. Perhaps most economists will not be surprised at this broad range of interest. Perhaps some are actually familiar with the ethical and theological literature on natural resources, environments and nature. But

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<sup>1</sup>As we will discover, "optimal" is a loaded word, how one loads it seems to depend on one's professional area of expertise, but more importantly on one's theory of value.

<sup>2</sup>See, for example, Mary Evelyn Jegen and Bruno V. Manno, eds., The Earth is the Lord's (New York: Paulist Press, 1978); and Loren Wilkinson, ed., Earthkeeping: Christian Stewardship of Natural Resources (Grand Rapids: William B. Eerdmans Publishing Co., 1980).

relatively few have begun to integrate knowledge from these other disciplines relevant to the economic analysis of natural resources. The knowledge generated by these other disciplines is, of course, normative. It concerns the possible meanings of "optimal" in terms of norms, goals, means and ends, and values. Consequently, it helps to explain the normative roots of "optimal" as used in neoclassical economics.

The scientific question, "How are natural resources allocated?" becomes both positive and normative when we ask how they are allocated "optimally." To determine an "optimal" allocation the economist must first answer the normative question, "What is optimal?" Or, in the language of ethics, what is the good, worthwhile, desirable allocation of natural resources? What are the normative goals or ends in pursuit of which we shall use natural resources? What is the value of natural resources, of nature, of creation?

The normative end, widely accepted by economists is referred to as Pareto optimality or economic efficiency. Although widely accepted by economists, Pareto optimality has seldom been defended, or for that matter criticized (until recently) on its own normative, ethical grounds. Pareto optimality is now being questioned, for example, as to its implicit ethical assumptions regarding present and future generations.<sup>3</sup> It is argued that Pareto optimality, as it is usually

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<sup>3</sup>See, for example, E. J. Mishan, Introduction to Normative Economics (New York: Oxford University Press, 1981), pp. 501-5 and John V. Krutilla, and Anthony C. Fisher, The Economics of Natural Environments (Baltimore: Johns Hopkins University Press, 1975), pp. 65-69.

defined and applied, does not (but should) include the welfare of future generations as perceived by future generations. The welfare of future generations might be thought of as the ultimate opportunity cost of using a natural resource. The opportunity cost of using a natural resource in the present is that someone in the future cannot use it. If natural resources are scarce and their use necessarily entails irreversible entropic degradation and if our time frame is across generations then it appears in principle impossible to allocate resources such that no individual is made worse off.<sup>4</sup> In the words of Nicholas Georgescu-Roegen:

Economists are fond of saying that we cannot get something for nothing. The Entropy Law teaches us that the rule of biological life and, in man's case, of its economic continuation is far harsher. In entropy terms, the cost of any biological or economic enterprise is always greater than the product. In entropy terms,<sup>5</sup> any such activity necessarily results in a deficit.

Yet another fundamental criticism of the normative premises of Pareto optimality, developed in Chapter 2, that has received very little exposure in the economic literature is their moral subjectivity. I. M. D. Little is one of the first to clearly state the subjective moral premises of Pareto optimality and modern welfare economics:

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<sup>4</sup>A Pareto optimal move is one where at least one individual is made better off and no one else is made worse off.

<sup>5</sup>Nicholas Georgescu-Roegen, Energy and Economic Myths (New York: Pergamon Press, 1976), p. 55.

. . . value premises are essential to welfare economics because welfare conclusions are value judgements . . . . [Our] analysis presupposes only two value judgements, both of which we believe to be widely acceptable. The first is that the welfare of the community is an increasing function of the welfare of individuals. The second is that an individual is better off if he is in a chosen position.<sup>6</sup>

These premises define an individualistic philosophy of mankind, community and morality, known in moral philosophy as subjective moral relativism. Social welfare is simply a name for the sum of individual welfares; individual welfare has no definition other than what individuals choose on the basis of their subjective preferences. Subjective preferences are sovereign and cannot be judged or even compared in objective terms. There are no objective moral principles or values which can be rationally discussed as regards their truth content. In other words, a moral judgment is nothing more than a description of an attitude or preference of the individual making it. Objective moral philosophy is impossible. In contradistinction to "optimal" resource allocation based upon the theory of subjective moral relativism is the Hebrew-Christian view of mankind as stewards

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<sup>6</sup>I. M. D. Little, A Critique of Welfare Economics, 2nd ed. (London: Oxford University Press, 1957), p. 124. Contrast the second premise with the following passage from Richard B. Brandt, Value and Obligation (New York: Harcourt, Brace and World, 1961), p. 15: "It is a matter of universal agreement that there is sometimes a discrepancy between what people want and what is good for them to have or do. Every language, anthropologists tell us, contains words used to mark off what is considered really good or worthwhile from what people may like or want. Moreover, it is generally supposed that it is relatively easy for a person to know what he wants or would like to have but a much more difficult matter to learn what is worthwhile or what would be the objects of a reasonable desire."



of God's creation called to a discerning stewardship of all of creation for the Creator's good purposes.

The Hebrew-Christian view of stewardship, developed in Chapter 3, sees humans (individually and corporately) as responsible for the care and welfare of all creation. Simply put, the function and purpose of our stewardly dominion is to "cultivate and keep" the Creator's good purposes in creation-history. This theory of stewardship stands in stark contrast to Lynn White's now rather famous conclusion that the roots of our ecological crisis lie in the Old Testament view of man and nature where,

God planned all of this [creation] explicitly for man's benefit and rule: no item in the physical creation had any purpose save to serve man's purposes.<sup>7</sup>

White's view may, indeed, represent the predominant moral subjectivist view that creation simply consists of natural resources, but it does not represent the biblical view of stewardship where,

. . . stewardship is concerned with nothing less than man's responsibility to God as he participates in the whole technological-industrial-distributional system of his environment context. For stewardship is the active recognition of the sovereignty of God over his whole creation; over the creative and productive

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<sup>7</sup> Lynn White, Jr., "The Historical Roots of Our Ecological Crisis," Science 155 (1967), p. 1205. White's conclusion has received widespread acceptance and rehearsal. For example, in the area of environmental economics, Hugh H. Macaulay and Bruce Yandle, Environmental Use and the Market (Lexington, MA: Lexington Books, 1977), pp. 7-8, say: ". . . Judeo-Christian theology holds that after God created the world and everything in it, He proceeded to give man dominion over all creatures therein . . . . Other instructions given to man were to till the soil and to build homes and fires, all of which indicate that the welfare of man was the paramount consideration in running the world."

processes in which men share and the uses to which they put all of the resources and means that come under their care and control.<sup>8</sup>

Although the Bible reveals that mankind is to be a steward (not an owner) of all of creation, it does not reveal a ready-made set of political and economic ends, or the institutions to accomplish them.<sup>9</sup> This is not to say, however, that any end or institution is as good as another. It is the responsibility of the steward to seek after and search out the best (optimal) relational ends and institutional ways of organizing our lives in creation.

God has granted humanity the possibility of organizing its collective life through social, political, and economic structures. The positive role of these structures is outlined in the Bible, and should be affirmed and celebrated by all Christians. It is difficult to imagine an orderly, secure life of any sort without nation, family, law, commerce, and so on. At the same time, we must confess with humility that: 1) not all human structures have been affected by Christians or Christian principles; 2) not all Christians have felt or exercised any mandate to improve structures; and 3) not all that Christians have done with those structures has been ethically or biblically correct. As a result, the very structures that support our struggle to live as members of God's kingdom, restraining the influence of sinful acts, are themselves tainted with human sin.<sup>10</sup>

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<sup>8</sup> Albert Terrill Rasmussen, "Stewardship in an Economy of Abundance," in Stewardship in Contemporary Theology, ed. by Thomas K. Thompson (New York: Association Press, 1960), p. 232.

<sup>9</sup> Rather than political and economic ends (policies, projects) and institutions, the biblical witness points to the good required of the steward of creation. For example, "he has told you, O man, what is good; And what does the Lord require of you, But to do justice, to love kindness [or loyalty], And to walk humbly [or circumspectly] with your God (Micah 6:8)?"

<sup>10</sup> Loren Wilkinson, *ibid.*, pp. 73-74.

The final purpose of this dissertation, presented in Chapters 4 and 5, is to contrast neoclassical economic subjective theories of value, welfare, and property rights with a theory of stewardship. Stewardship theory contends that individual subjective preferences are not the sole arbiters of value. Valuation is both a subjective and objective enterprise. Creation has subjective value as it satisfies human preferences, but it ultimately has objective value as it satisfies the ends of its Creator. The actual political-economic process of discerning and responding to the objective value of creation is, of course, a human process and thus in some sense subjective, but not necessarily subjectivistic.<sup>11</sup> The subjectivistic proposal of the Sophist Protagoras ("man is the measure of all things") - a cornerstone of neoclassical economics - is changed to, "man is the measurer of all things."

Neoclassical theory has tried to correct for one problem with the Pareto criterion: its limited range of application to practical problems. The result - the "new welfare economics" of compensation tests and social welfare functions, however, has been severely criticized, perhaps, even defeated in its attempt to expand the criterion.<sup>12</sup> What has not been adequately criticized in this vast

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<sup>11</sup> Subjectivism refers to the philosophical theory that all value is subjectively derived and grounded; objective value is cognitively meaningless.

<sup>12</sup> See, for example, E. J. Mishan, Economic Efficiency and Social Welfare (London: George Allen and Unwin, 1981); S. K. Nath, A Re-appraisal of Welfare Economics (New York: Augustus M. Kelley, 1969); and William J. Baumol, Welfare Economics and the Theory of the State (Cambridge: Harvard University Press, 1965).

body of literature is the Pareto criterion itself. This literature takes to task the additional value judgments required by the various "new welfare economics," but uncritically accepts the value judgments necessary for Pareto optimality. A theory of stewardship, however, does not find the subjective premises of Pareto optimality either convincing or descriptive of objective-intrinsic values in creation. To put it bluntly, but succinctly, efficiency conclusions based on Pareto optimality only necessarily satisfy those individuals with subjective moral philosophies. Since this is hardly a defensible outcome for economic science, the role of neoclassical economics needs to be both narrowed and broadened. It needs to be narrowed to pronouncing on the economic efficiency of alternative means for achieving an objectively valuable end. It has no legitimate business pronouncing on the economic efficiency of alternative objective ends. As Lionel Robbins long ago warned:

. . . the use of the adjectives 'economical' and 'uneconomical' to describe certain policies is apt to be very misleading . . . . it is not intelligible to use them as regards ends themselves . . . . there are no economic ends. There are only economical and uneconomical ways of achieving given ends. We cannot say that the pursuit of given ends is uneconomical because the ends are uneconomical; we can only say it is uneconomical if the ends are pursued with an unnecessary expenditure of means . . . .<sup>13</sup>

In addition, neoclassical economics needs to be broadened to include a stewardship theory of objective valuation of ends. If

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<sup>13</sup>Lionel Robbins, An Essay on the Nature and Significance of Economic Science, 2nd ed. (London: Macmillan and Co., 1945), p. 145.

economics is going to aid us in determining the best ways to manage creation it must differentiate between means and ends, subjective and objective values. It doesn't help to know how to efficiently allocate means to achieve objectively unworthy ends. Nor does it help to know the subjective economic valuation of things used as means which are instead valuable ends and thus ought not to be used as means.

Economics from a stewardship perspective has a clear and direct impact on the new, so-called, economic theory of property rights. It will be shown that the conclusion that problems of externalities and common property resources can be solved by assigning, wherever possible, private property rights, is incorrect. The conclusion that privately owned natural resources will be efficiently allocated is, of course, based on the subjective premises of valuation. Stewardship, however, argues that so-called natural resources are properly valued and allocated only when both their subjective and objective values are recognized and accounted for. Absolute, unattenuated property rights implicitly deny objective value or at least the obligation to discern such value. In contrast, stewardship argues that before property rights can be properly assigned, the objective worth of their ends must be determined. Moreover, stewardship recognizes that creation (what we often blithely call natural resources) is not simply a means to the satisfaction of our individual subjective preferences. All of creation, human and nonhuman, living and nonliving, are properly "used" when we recognize - as best we can -

all their proper functions and relations, that is, their subjective and objective value. The process of stewarding creation, at times, entails assigning attenuated property rights (both private and public) to encourage or perhaps even to ensure objectively valuable ends and to discourage unworthy ones.

A good example of this process is the Federal Endangered Species Act which severely limits both individuals' and governmental agencies' rights to threaten the existence of endangered species. An examination of this act, presented in Chapter 5, shows in a very specific context the differences between a neoclassical and a stewardship approach to the best "use" of nonhuman species.

## CHAPTER 2

### THE OPTIMAL ALLOCATION OF NATURAL RESOURCES

What does it mean to say that a particular natural resource project or policy is optimal or economically efficient? First of all, it does not mean that the project or policy necessarily results in a preferable income distribution. It does mean, however, that compared to the alternative projects or policies, the optimal one "will contribute the most to natural income and product."<sup>1</sup>

Putting aside the question of preferable income distribution; is the optimal, efficient project the best project? On this question, neoclassical economists seem to disagree. Freeman, Haveman, and Kneese, for example, argue that the optimal allocation of resources by competitive markets (assuming a political mechanism for assuring an equitable distribution of resources and income) is the "best possible allocation of resources."

If these conditions [equitable distribution] hold, it can be said that the competitive market system yields the best possible allocation of resources. It achieves this optimum because it does the best that can be done with a given technology, resource endowment, set of tastes and preferences, and that particular distribution of resource ownership and its

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<sup>1</sup>John V. Krutilla and Otto Eckstein, Multiple Purpose River Development (Baltimore: The Johns Hopkins Press for Resources for the Future, 1964), p. 4.

associated distribution of income that society has chosen through an effective political mechanism.<sup>2</sup>

In similar fashion, Seneca and Taussig find it difficult to imagine anyone opposing the principle of efficiency or Pareto optimality (assuming, of course, no distributional problems.)

Efficiency is a deceptively simple and attractive objective for government economic policy. Who can oppose the principle that more of every good for everybody is desirable. Economists are careful to point out, of course, that greater efficiency in the Pareto Optimum sense means only that more of everything is potentially available for everybody . . . .<sup>3</sup>

Krutilla and Eckstein, however, argue that efficient does not mean best.

We will attempt, first, to demonstrate which among several alternatives for development, in a particular case, is the more efficient, that is, which will contribute the most to national income and product. We then will compare the income redistributive consequences of alternatives in a particular situation. In neither instance will we be equipped, as economic analysts, to judge which is the "best" alternative from a "public" standpoint. While our discipline equips us for expertise in the analysis of economic problems, it does

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<sup>2</sup>A. Myrick Freeman, Robert H. Haveman, and Allen V. Kneese, The Economics of Environmental Policy (New York: John Wiley and Sons, 1973), p. 70.

<sup>3</sup>Joseph J. Seneca and Michael K. Taussig, Environmental Economics, 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1979), p. 114. "More of every good for everybody is desirable" is somewhat ambiguous. It could be a tautology wherein the good is equated with desirable, and so, of course, more of every good, i.e., desirable thing, is desirable, i.e., good. But it is neither common practice nor reasonable to understand the principle of efficiency as a mere tautology. Tautologies are definitions not principles and they do not make for objectives of government economic policy. It appears then more reasonable to understand Seneca and Taussig as saying, "who can oppose the principle that more of every desired thing for everybody is desirable." This is a recognizable principle contending that the desirable (the good) is the desired; clearly a debatable normative theory of value.



not provide us with any expertise in making value judgments or prescribing ethical values.<sup>4</sup>

Krutilla and Eckstein do not think economists can say that the efficient alternative is the best alternative because:

Values in addition to economic efficiency are at stake . . . . aesthetic appeal, the improvements of public health and welfare . . . . preferences for private institutions as instruments for natural resources development . . . . belief that natural resources are a property of the entire community . . . . the socially desirable solution . . . depends on what weights attach to each of the separate issues within the larger policy context. Nevertheless, efficiency is a significant value in our society . . . the public interest requires that efficiency considerations be given due weight.<sup>5</sup>

The conflict among these economists as to the normative (ethical) nature of economic efficiency illustrates the confusion and differences of opinion generated when otherwise positive economists enter the field of welfare economics. The confusion is rooted in the positive-normative distinction. As we will see, it is quite possible to do positive, analytical tasks within welfare economics, but these tasks do not a positive welfare economics make. If economics is going to analyze alternative economic studies, or alternative allocations of resources in terms of better or worse then it must clearly state its ends, objectives, values or norms. This is seldom, if ever, denied, but often hedged about by referring to the norms as merely "postulated" or "taken as given." Apparently this hedging is due to the widely accepted view within the economics profession that norms or values cannot be rationally discussed because they are alledgedly

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<sup>4</sup>Krutilla and Eckstein, *ibid.*, p. 4.

<sup>5</sup>*Ibid.*, pp. 265, 277.

mere statements of subjective preferences.<sup>6</sup> This hedging merely adds to the confusion and ambiguity of the economic analysis and conclusions about resource allocation. The following section attempts to clearly identify and evaluate the norms of modern welfare economics.

#### MODERN WELFARE ECONOMICS

The development of modern welfare economics has moved away from the explicit normative approach of the classicalists and toward the implicit normative approach of the neoclassical positivists. Welfare economics has rejected the Marshallian-Pigouvian assumption of interpersonal comparison of utility and the goal of maximizing total utility as its normative criterion of value (worthwhileness). Instead, it has accepted the Paretian goal of satisfying individual subjective preferences. The classical, utilitarian approach was discarded by so-called positive economists because it required the seemingly impossible tasks of measuring the individual's utility and redistributing individual utility or income (a frankly ethical task) in order to maximize the total. The Paretian goal, on the other hand, requires no measuring of utility nor ethical redistributing of utility or income, etc. It does not presume to pass judgment on the justness or fairness of either the initial or the final distribution of utility or income. More importantly, the positivist methodology purports

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<sup>6</sup>Paul Hayne, "The Abuse of the Positive-Normative Distinction by Economists," paper presented at a Conference of the Southern Economic Association, Atlanta, Georgia, November 1974, p. 10.

to examine economic welfare, in general, as a value-free, purely scientific enterprise. Its methodological strictures are supposed to eliminate ethical criteria. Its welfare conclusions are therefore supposed to be as positive and scientific as those of price theory. All of this was to be accomplished by rejecting the ethical assumption of interpersonal utility comparisons and by defining welfare in terms of efficient resource allocation.<sup>7</sup> Whether or not efficient resource allocation requires normative criteria is a crucial problem which is discussed below. But first let us continue with this brief historical sketch of modern welfare economics.

The development of modern welfare economics can be described as an expansion out from its core of Pareto optimality and then back again. The attempts to expand upon Pareto's optimum conditions stem from two basic problems. First, there are an infinite number of Pareto optimum positions and only "the optimum" (which depends upon the best income distribution) is necessarily better than any other position. Second, there is no criterion for the best income distribution. According to Little, these two problems result in the possibility that,

. . . an "optimum" situation [on the contract curve] . . . which corresponds to a bad distribution of income, may well be worse than a "sub-optimum" position corresponding to a good distribution of income. It therefore follows that it

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<sup>7</sup> John Elliott, "Fact, Value, and Economic Policy Objectives," Review of Social Economy 38 (April 1980), p. 10.

cannot be said that an increase in welfare would follow from putting the "optimum" condition into practice, even assuming that there was a community to which the analysis could be applied . . . . Pareto did not, indeed, clearly say when one situation could be said to be better than another. He only laid down some of the necessary conditions which must be fulfilled if it is to be impossible to make some individual "better off" without making any other "worse off."<sup>8</sup>

The attempts to expand upon the Pareto conditions has led to what Little identifies as at least three schools, besides the strictly Paretian school.<sup>9</sup> These schools can be labeled: 1) Kaldor-Hicks-Scitovsky; 2) ethical or social welfare function; and 3) Little. The Kaldor-Hicks-Scitovsky school provides us with the sufficient conditions for an "increase in general economic welfare." The conditions are that the gainers from some change could compensate the losers and the losers could not bribe the gainers not to make the change. Since actual compensation is not required, economic welfare remains independent of distribution. The ethical or social welfare function school approach is to identify the necessary conditions for a Pareto optimum and the sufficient conditions for the Pareto optimum, which is the ideal distribution of economic welfare among individuals. Needless to say, not much progress has been made in determining the social welfare function which would reveal the Pareto optimum. The Little school has developed a "sufficient criterion for deciding when a change is economically desirable," which has features of both of

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<sup>8</sup> I. M. D. Little, A Critique of Welfare Economics, 2nd ed. (London: Oxford University Press, 1957), pp. 84-85.

<sup>9</sup> Ibid., pp. 84-93, 117-24.

the above two schools. A change is desirable if "it results in a good redistribution of welfare" and if "the potential losers could not bribe the potential gainers to vote against the change."<sup>10</sup> As Little notes, his conditions permit the deduction of all the Pareto optimum conditions with the added stipulation that a value judgment has to be made on the redistribution of welfare.

In addition to trying to solve the problem of income distribution, all three schools have tried to expand on Pareto optimality which severely limits the practical application of welfare economics to situations where no one is made worse off. The limited use, if not complete irrelevancy, of Pareto optimality is addressed by T. W. Hutchison.

. . . if it is argued "that all contemporary welfare economics says is that where universal consent does not exist, then welfare economists simply are unable to declare whether there has been an increase in welfare in the cases in which some people feel better off and others feel worse off," then, certainly, the conclusion seems to follow . . . that "in most cases welfare economics is irrelevant." In fact, analysis in Pareto-optimum terms seems confined to situations not restricted by scarcity in a relevant politico-economic sense, that is to situations in which more can be had of one desideratum (A's welfare) without diminishing some other desideratum (B's welfare).<sup>11</sup>

Whether or not the three schools have made any progress in expanding welfare economics beyond Pareto optimality is open to debate. Less debatable is the common appeal to the Pareto optimality

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<sup>10</sup>Ibid., p. 123.

<sup>11</sup>T. W. Hutchison, "Positive" Economics and Policy Objectives (Cambridge: Harvard University Press, 1964), p. 164, quoting H. Leibenstein, "Notes on Welfare Economics and the Theory of Democracy," Economic Journal (June 1962), p. 311.

of competitive markets for defining the optimum resource allocation (always assuming no distributional problems). That is to say, Pareto optimality is often (but not always) used as a normative criterion.

#### ECONOMIC EFFICIENCY AND POSITIVE WELFARE ECONOMICS

There seems to be some agreement that positive welfare economics is possible if the economist merely analyzes alternatives with respect to some postulated norm and describes the results but does not prescribe or advocate them. Apparently the reasoning is that to use a norm to rank and describe alternative projects or policies as better or worse is positive economics, whereas to advocate the adoption of the best alternative would be to practice normative economics. This rather ingenious definition of positive welfare economics as anything short of advocacy does, however, put severe restrictions on the positive economist. As Mishan well notes:

Indeed, there is now no ground on which the economist, qua economist, may challenge the allocative decisions reached by the political process. He may, of course, always draw attention to the economic consequences of the course of action to be adopted and give his opinion that, on balance, they are favorable or unfavorable. What he cannot do, however, is to pronounce the politically determined allocation to be good or bad by reference to an independent economic criterion. Put otherwise, he may no longer judge the allocation to be "economically efficient" or "economically inefficient" by reference to a criterion that transcends current expressions of political opinion.<sup>12</sup>

Perhaps Mishan's position appears unreasonable. To be sure, the positive economist cannot advocate economic efficient allocations;

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<sup>12</sup>E. J. Mishan, Economic Efficiency and Social Welfare (London: George Allen Unwin, 1981), pp. 259-60.

but may he not even judge (describe) an allocation to be economically efficient or inefficient? The answer is: no, he may not; for which of the infinite number of norms that can be merely postulated by the positive economist should be used to define "economic efficiency?" Mishan's point is that if the positive economist cannot defend or rank normative criteria either on objective ethical grounds or as "sanctioned by society . . . . independent of any political expression about allocative matters . . . [and] grounded in an ethical consensus," then his language must be extremely circumspect.<sup>13</sup> In other words, "economic efficiency" might just as well be used to describe the allocation of resources obtained through the political process as through the market process; the choice is arbitrary as regards positive welfare economics.

Mishan's point is crucial, but not new. It was also made by Lionel Robbins who succinctly mapped out the territory of positive economics in his book, An Essay on the Nature and Significance of Economic Science. He identified the border between positive and normative economics and indicated what can and cannot be done within positive economics. The limitations on the positive economist, according to Robbins, are quite demanding.

And suppose . . . we had succeeded in showing that certain policies had the effect of increasing "social utility," even so it would be totally illegitimate to argue that such a conclusion by itself warranted the inference that these policies ought to be carried out . . . .

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<sup>13</sup>Ibid., p. 260.

Exactly the same type of stricture may be applied to any attempt to make the criteria of free equilibrium in the price system at the same time the criteria of economic justification . . . . freedom to choose may not be regarded as an ultimate good. The creation of a state of affairs offering the maximum freedom of choice may not be thought desirable, having regard to other social ends. . . . There is nothing in the corpus of economic analysis which in itself affords any justification for regarding these ends as good or bad. Economic analysis can simply point out the implications as regards the disposal of means of production of the various patterns of ends which may be chosen.

For this reason, the use of the adjectives "economical" and "uneconomical" to describe certain policies is apt to be very misleading . . . . it is not intelligible to use them as regards ends themselves . . . . there are no economic ends. There are only economical and uneconomical ways of achieving given ends. We cannot say that the pursuit of given ends is uneconomical because the ends are uneconomical; we can only say it is uneconomical if the ends are pursued with an unnecessary expenditure of means . . . .<sup>14</sup>

Robbins' strictures on the use of "economical" (economic efficiency) and "uneconomical" apply to economics in general, be it positive or normative. His point is that "economical" or "economic efficiency" apply to alternative means not to alternative ends. In other words, it is not intelligible to label market valuations as economically efficient and political valuations as inefficient. Furthermore, it is inappropriate to label as efficient or inefficient alternative policies or projects that have different ends or objectives. Only alternative means to achieve the same ends may be judged efficient or inefficient.

In addition to Mishan and Robbins, Hla Myint expresses doubt about advocating economic efficiency as a criterion of value for

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<sup>14</sup>Lionel Robbins, An Essay on the Nature and Significance of Economic Science, 2nd ed. (London: Macmillan and Co., 1945), pp. 142-45.



passing judgment on the acceptability of patterns of resource allocation.

. . . interpersonal comparisons of utility can be avoided by the Paretian formulation of the Optimum and the principle of Compensation . . . . welfare analysis need not involve any normative value judgments so long as we take the wants of the individuals to be given and constant and confine our study to the purely mechanical efficiency of the economic system in satisfying these given wants. At this pure subjective level of analysis our propositions are logically as stringent as those of price economics. But, since we stop short at this neutral concept of mechanical efficiency, we are still on an intermediate plane of discourse and although our propositions deal with quantities of satisfaction they are in some ways still as inconclusive as those at the physical level as a guide to practical action. Thus when we have demonstrated that a particular pattern of allocating the resources satisfies the given wants better than others, this does not amount to a categorical imperative that this pattern ought to be adopted. To obtain that we need a further premise, viz. that these given wants are of the same ethical quality of goodness. It is easy to make the mistake of slipping this premise implicitly into the argument . . . .<sup>15</sup>

If we agree that Mishan, Myint, and Robbins have accurately circumscribed positive welfare economics to the function of evaluating alternative means for achieving the same ends, then we surely must conclude that Freeman, Haveman, Kneese, Seneca and Taussig, if not also Krutilla and Eckstein, are not positive economists. Indeed, we might even despair of finding a single positive economist among us, if to be one means we cannot even advocate "freedom to choose" because it just might "not be regarded as an ultimate good." But even if "freedom to choose" were regarded as an ultimate good (end),

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<sup>15</sup>Hla Myint, Theories of Welfare Economics (New York: Augustus M. Kelley, 1962), pp. 198-99.

the positive economist qua positive economist could neither advocate it as an economic end, nor equate it with economic efficiency. Ethical, normative values or the processes that achieve them do not become positive, scientific criteria (e.g. economical) simply because they are unanimously agreed upon.

It is clear that Freeman, Haveman, and Kneese fail to pass Robbins' stricture against making "free equilibrium in the price system at the same time the criteria of economic justification . . . ." when they say,

If these conditions [equitable distribution] hold, it can be said that the competitive market system yields the best possible allocation of resources.<sup>16</sup>

It can be argued that Krutilla and Eckstein also fail as positive economists but on more subtle, less well recognized grounds. And yet it is precisely the subtlety and seeming acceptability of their position that makes it more important for us to recognize it.

Krutilla and Eckstein violate Robbins' warning that because economic analysis does not provide any justification for regarding social ends as good or bad, "the use of the adjectives 'economical' and 'uneconomical' to describe certain policies is apt to be very misleading . . . ." Indeed, the misuse of "economical," "economic efficiency," and "optimal" is rampant.

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<sup>16</sup>Freeman, Haveman, and Kneese, *ibid.*, p. 70. The most that can be said is that competitive markets (under certain conditions) yield a Pareto optimum allocation; which is far different from saying, "the best possible allocation."

Economic efficiency when used in place of Pareto optimality is a deceptive term that spuriously connotes scientific objectivity, rather than its true subjective, normative nature. Whereas Robbins argued that, "We cannot say that the pursuit of given ends is uneconomical because the ends are uneconomical . . . ." that is exactly what economists are saying when comparing non-market with market allocations. When an economist presumes to rank policies and institutions with different allocational ends according to their economic efficiency, he has left the domain of positive welfare economics. Economic efficiency has become Pareto optimality, rather than Robbins' positive, scientific economical expenditure of means. Allocational ends may be Pareto optimal or not, but they are neither economically efficient nor inefficient, at least not as ends.

Still another way of explaining the misuse of economic efficiency is to note that the general or normal meaning of efficiency requires a comparison of the level of useful output to the total output. Economic efficiency, when used in place of Pareto optimality, refers only to maximum total output. Typically, it is assumed that all the output is useful and in some cases rhetorically asserted as such: "Who can oppose the principle that more of every good for everybody is desirable."<sup>17</sup> Such an assumption is equivalent to slipping in the ethical premise that individual subjective preferences are the good.

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<sup>17</sup>Seneca and Taussig, *ibid.*, p. 114.

Frank H. Knight also recognized this problem of an efficiency concept which ignores the question of value or usefulness of the output.

It is impossible to form any concept of "social efficiency" in the absence of some general measure of value. Even in physics and engineering, "efficiency" is strictly a value category; there is no such thing as mechanical efficiency . . . . The efficiency of any machine means the ratio between the useful output and the total output . . . . There is no more important function of a first course in economics than to make the student see that the whole problem of social management is a value problem; that mechanical or technical efficiency is a meaningless combination of words.<sup>18</sup>

As prominent as economic efficiency is in our vocabulary, we certainly do not think it to be a "meaningless combination of words." Krutilla and Eckstein, for example, say "efficiency is a significant value in our society . . . the public interest requires that efficiency considerations be given due weight."<sup>19</sup> But what do they mean by "efficiency": economical expenditure of means to achieve some given end or Pareto optimality? Surely the former is of value (assuming the given end is worthy of pursuit), but the latter is problematic, as we will better see in the next section.

Krutilla and Eckstein do not make the mistake of thinking that all ethical values are accounted for in the market's so-called efficient allocation of resources; they are, however, mistaken if they think they have not made an ethical judgment - despite their disclaimer

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<sup>18</sup>Frank H. Knight, The Ethics of Competition (New York: Harper and Brothers, 1936), pp. 42-43.

<sup>19</sup>Krutilla and Eckstein, *ibid.*, p. 277.

of "any expertise in making value judgment or prescribing ethical values." Their value judgment or ethical premise is, as we have seen, that "economic efficiency" (Pareto optimality) is of value and ought to be used to judge between alternative allocational projects or policies.

This ethical premise, so taken for granted by neoclassical economists who otherwise eschew all thought of making value judgments, typically goes unnoticed or at least undefended. Krutilla and Eckstein, for example, assert but do not defend their ethical prescription that: "economic efficiency in a free society must begin with the preferences of individuals."

The concept of economic efficiency for a free society must include some notion of maximizing the output of those items most preferred by the members of the community per unit of input of those resources which are relatively the more scarce. That is, beginning with the preferences of individuals making up a free society, our concept of economic efficiency will require for any given resource endowment and state of technological knowledge, the maximum level of the preferred composition of output.<sup>20</sup>

Asserting or simply assuming individual subjective preferences as the criterion of value for an efficient or optimum allocation of resources is standard neoclassical fare. Moreover, this ethical

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<sup>20</sup>Krutilla and Eckstein, *ibid.*, p. 16. Contrast this notion of economic efficiency with J. M. Clark's notion of welfare, in Economic Institutions and Human Welfare (New York: Alfred A. Knopf, 1961), p. 116: "Welfare is here conceived in terms of needs, rather than of an indiscriminating list of desires. It calls for healthy and responsible individuals, organized in a healthy society which in turn is responsible to and for its members."

premise is effectively forgotten when expressed in terms of the market's ability to secure the optimum allocation of resources.

Coase, for example, on factory smoke regulation, says,

The aim of such regulation should not be to eliminate smoke pollution but rather to secure the optimum amount of smoke pollution, this being the amount which will maximize the value of production.<sup>21</sup>

The casual reader might think that Coase has managed to remain a positive economist by advocating what a market for smoke would achieve if its formation were possible. Perhaps Coase even thinks so, as he goes on to say,

In this article, the analysis has been confined, as is usual in this part of economics, to comparisons of the value of production, as measured by the market. But it is, of course, desirable that the choice between different social arrangements for the solution of economic problems should be carried out in broader terms than this and that the total effect of these arrangements in all spheres of life should be taken into account. As Frank H. Knight has so often emphasized, problems of welfare economics must ultimately dissolve into a study of aesthetics and morals.<sup>22</sup>

Coase seems to give the impression that his economic analysis, confined to the "value of production, as measured by the market," has thereby remained positive. And only by expanding the analysis, of the "optimum" amount of smoke pollution, into other "spheres of life" would the analysis "dissolve into a study of aesthetics and morals." Such an impression is quite common and quite wrong.

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<sup>21</sup>R. H. Coase, "The Problem of Social Cost," The Journal of Law and Economics 3 (October 1960), p. 42.

<sup>22</sup>*Ibid.*, p. 43.

Economic welfare problems do not have to be expanded into other spheres of life, or other disciplines before values and morals are encountered. The reason Frank H. Knight emphasized that problems of welfare economics ultimately dissolve into morals and ethics is because welfare economics is grounded upon moral and ethical premises.

It is true within limits that the purpose of economic activity is to satisfy wants, and the fact raises a group of questions for consideration in an appraisal of any system of economic organization . . . . It is hardly necessary to remark that the questions which wants and whose wants are to be satisfied are in fact closely bound up together. The system's answer . . . constitutes its social economic value scale; and very different social value scales may be formed from the same set of individual wants . . . . The striking fact in modern life is the virtually complete separation between the spiritual ethics which constitutes its accepted theory of conduct and the unethical, uncriticized notion of efficiency which forms its substitute for a practical working ideal.<sup>23</sup>

And finally, in the words of J. de V. Graaff:

Theoretical welfare economics proceeds from a number of definite assumptions, factual and ethical, which are seldom stated explicitly. If their nature were more widely appreciated by professional economists, it is improbable that the conventional conclusions of welfare theory would continue to be stated with as little caution as is at present the custom.<sup>24</sup>

Let us now turn to the ethical premises of welfare economics to see what they are and how worthy they may or may not be.

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<sup>23</sup>Knight, *ibid.*, pp. 45, 73.

<sup>24</sup>J. de V. Graaff, Theoretical Welfare Economics (Cambridge: Cambridge University Press, 1967), p. 1.

### THE ETHICAL PREMISES OF WELFARE ECONOMICS

The goal of a positive, scientific welfare economics extends back to Pareto and Weber. The goal required the minimization or, if possible, the elimination of normative judgments from economic science. Pareto was able to eliminate the interpersonal comparisons of utility required by the classical utilitarian approach. But, as he well recognized, his theory did not eliminate all norms.

. . . one has to state just what norms - they have to be to some extent arbitrary - one intends to follow in determining the entities that one is trying to define. Pure economics has succeeded in doing that. It has taken a single norm, the individual's satisfaction, and it has further set down that of that satisfaction he is the only judge. So economic "utility" or "ophelimity" came to be defined.<sup>25</sup>

Pareto recognized that his theory was grounded upon the norm of individual satisfaction, with the individual as the only judge. He also, and perhaps more importantly, recognized that this norm is merely arbitrarily postulated. He does not argue that this norm is ethically better than others and thereby avoids the obvious excursion into moral philosophy. This excursion was to take place, however, in his sociology which would provide a "positive basis for policy." In the words of Vincent Tarascio,

In his sociological discussion, Pareto dropped the term "ophelimity" (economic satisfaction) and spoke of community "utility" . . . . as the term was used by Pareto, it is important to keep in mind that this has

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<sup>25</sup>Vilfredo Pareto, The Mind and Society, trans. Andrew Bongiorno and Arthur Livingston (New York: Dover Publications, 1963), p. 1458.



nothing to do with economic "utility" theory as we use the term today - it is a social concept, deriving from ethical, moral, religious, political, etc., as well as economic causes. In fact, Pareto originally made the distinction between "ophelimity" and "utility" to avoid confusion between strictly economic and "sociological" (both economic and non-economic) considerations . . . . Pareto was fully aware of the restrictive nature of the Pareto Optimum criterion of "welfare" . . . . The distinction between Pareto's "ophelimity" theory and "utility" theory has generally been overlooked, resulting in some misleading impressions regarding this aspect of his work.<sup>26</sup>

In other words, Pareto recognized the rather arbitrarily postulated norm of individual satisfaction and thus carefully differentiated between this norm as a criterion of value for "ophelimity" and what he called community "utility." The latter would be developed in his sociology.

. . . in his sociology, he attempted to provide another type of "objective" criterion - the "real" norms of society. Hence Pareto's endeavors represented a program aimed at establishing a positive basis for policy.<sup>27</sup>

Tarascio puts quotation marks around "real," apparently because, as he explains, even those norms of society are not necessarily asserted to be true, but may be only postulated.

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<sup>26</sup>Vincent J. Tarascio, Pareto's Methodological Approach to Economics (Chapel Hill: The University of North Carolina, 1968), pp. 83-84.

<sup>27</sup>Ibid., p. 130. Tarascio helps us to understand his meaning of "objective" by using it in a footnote on page 129: "Although welfare economics deals with what ought to be, it does so "objectively," since it does not involve interpersonal comparisons of individual utilities by the observer. Pareto, it will be recalled, carried the same reasoning to his sociological "utility" theory: he believed that the identification of the "real" norms of a society would allow "objective" social welfare judgments for policy purposes."

No value-judgments inevitably have to be asserted even in discussions of policies, which can always be treated in the perfectly "positive" technical-hypothetical mood by simply postulating (not asserting) particular objectives, and examining to what extent different policy-measures attain them.<sup>28</sup>

Thus, Pareto fully realized the necessity of at least arbitrarily postulating norms before welfare analysis can take place. Moreover, the function of positive welfare analysis is to determine "to what extent different policy-measures attain them." The purpose is to determine which policies or projects obtain a particular norm with the least expenditure of resources. The purpose is not (cannot be) to rank various norms; nor is it to rank policies or institutions which seek to obtain different norms or ends. Thus, to say that policy "A" is "optimal" is merely to say that it is judged less costly than the alternatives means for obtaining some particular norm and therefore may not be optimal for obtaining some other norm.

As we have seen, not all contemporary economists are equally careful to point out, or perhaps even recognize, the arbitrary normative foundation for determining so-called "optimum" or "efficient" economic policies. An exception is I. M. D. Little:

The above analysis presupposes only two value judgments, both of which we believe to be widely acceptable. The first is that the welfare of the community is an increasing function of the welfare of individuals. The second is that an individual is better off if he is in a chosen position. We found that value premises are essential to welfare economics because welfare conclusions are value judgments, and because value conclusions require value

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<sup>28</sup> Ibid., pp. 116-17.

premises . . . . These foundations are, in our opinion, sound. If welfare economics is found to be useless, it is not because there is anything shifty about the philosophical or logical foundations. We claim to have stated the required postulates in a clear, precise manner. It only remains to accept or reject them. It will be presumed, in what follows, that they are accepted.<sup>29</sup>

Little clearly recognizes the necessity of postulating norms if one is going to analyze policies or states of affairs in terms of better or worse. The two presupposed norms (premises) are familiar to the economist and lead to the Pareto definition of an optimum. The second norm is also familiar to the moral philosopher who would categorize it as an example of moral or ethical relativism. What is the philosophical nature of morally relative versus objective norms?

#### MORAL OR ETHICAL RELATIVISM

Moral relativism is a philosophical theory that views moral principles as relative or subjective rather than objective. That is, moral principles cannot be rationally discussed as regards their truth content or authoritative appeal. There is no authoritative moral truth to which rational men can appeal. There is no authoritative moral reality external to the individual that is what it is regardless of the opinions individuals entertain about it. Thus, value judgments or moral principles are at best relative or at worst meaningless or emotive. They are classified into three types:

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<sup>29</sup>Little, *ibid.*, p. 124.

culturally relative, subjectively (individually) relative and emotive.<sup>30</sup> Culturally relative moral judgments merely describe the shared attitudes and preferences of the particular culture of which the individual making the judgments is a member. Subjective moral judgments are nothing more than descriptions of attitudes and preferences of the individual making them. And finally, to say that a moral judgment is emotive is to say that it is cognitively meaningless; it is an emotion, a taste. For example, when one says "stealing is wrong or bad," all one really is saying is "stealing - ough!"<sup>31</sup>

The one thing that these three different types of moral relativism have in common is their opposition and challenge to objective moral judgments. If moral relativism is true then two individuals could disagree over some fundamental moral principle and both be correct as long as they were from different cultures or had different attitudes and preferences.

Notice that it is not truth that is said to be relative and subjective, but only moral principles. To argue for a subjective view of truth is to speak nonsense due to its self-contradiction. For

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<sup>30</sup>Jeffrie G. Murphy, "The Possibility of Moral Philosophy," mimeograph, University of Arizona, Philosophy, Department, p. 13.

<sup>31</sup>Ibid., pp. 13-14. Consider the following example in Edwin G. Dolan, Basic Economics, 2nd ed. (Hinsdale, Ill.: The Dryden Press, 1980), p. 13: "The mention of economic policies such as the price controls or budget deficits tends to set little lights labeled 'hurrah' or 'ugh' flashing in our minds . . . . 1. If Policy X is followed, Outcome Y will result. 2. Outcome Y is a good (or bad) thing. 3. Therefore, hurrah (or ugh) for Policy X."

example, to say that proposition "A" is true only for the individual who believes it true, is itself a proposition which would be true only for the individual who believes it and thus does not apply to anyone else. It is not possible to have an objective, non-contradictory definition of truth as subjective.

It is, however, possible to speak objectively about and rationally discuss moral relativism. Although the moral principles only describe culturally or individually accepted preferences (or emotions) there is the possibility that the culture or individual is misinformed about its preferences. Therefore rational discussion about moral principles can take place, albeit of a rather limited scope. The function of such rational discussion would not be to find objective moral truths when supposedly none exist. Rather it would be for the purpose of correctly identifying existing cultural or individual-subjective preferences. In this limited sense, objective, rational discussion of moral judgments can take place. But, such discussion is limited, for in Lionel Robbins' famous words,

If we disagree about ends [subjective preferences] it is a case of thy blood or mine - or live and let live, according to the importance of the difference, or the relative strength of our opponents. But if we disagree about means, then scientific analysis can often help us to resolve our differences.<sup>32</sup>

With this understanding of moral relativism, we can examine Little's second value premise. It is postulated that the individual is better off if he or she is in a chosen position. It seems fair to

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<sup>32</sup>Robbins, *ibid.*, p. 150.

assume that Little does not mean to imply that individuals never make mistakes in judging how best to get to a chosen position. It also seems fair to assume that Little does not mean to imply that the individual once at a chosen position may not decide that it is not what he expected and thus he may not perceive himself to be better off. To assume otherwise would be to assume perfect knowledge, but this does not seem necessary. Furthermore, it seems reasonable to understand both of Little's two premises as nontautological, fundamental assumptions (premises), rather than tautologies. In other words, his premises as with all premises may be either true or false, whereas tautologies are definitional - neither true nor false, but rather either useful or not. Tautologies, therefore, cannot serve as premises that are supposed to function as true statements and as criteria of value.

Little's appeal to the wide acceptability of his two premises is an appeal to cultural relativism, i.e., norms are merely the shared attitudes and preferences of the culture. Whether or not the premises are widely accepted is an empirically verifiable question about which Little presents no data nor cites any references.<sup>33</sup> Regardless of their acceptability of relative truth, there still remains the problem

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<sup>33</sup>In these days of the supposed prevalence of the "moral majority" and their view of objective morals, one may entertain serious doubts about the wise acceptability of subjective moral relativism. One is also led to recognize that grave mistakes can be made in the name of objective morals. Interestingly, the moral relativist cannot criticize the "moral majority" - only a moral objectivist can argue that the moral majority is objectively mistaken in some of its views.

of moral relativity versus moral objectivity. It is not, however, the purpose of this chapter to defend one or the other, but rather to establish the fact that welfare economics is arbitrarily based upon the former.

If welfare economics merely postulates relative, subjective criteria of value, in what sense can it perform economic welfare analysis? The answer is fairly obvious: welfare economics, arbitrarily postulating individual subjective preferences as its criterion of value can only perform economic welfare analysis arbitrarily and incompletely. To say that competitive markets are economically efficient or that policy "A" is Pareto optimal is not to say that they are best or ought to be used; unless, of course, the economist is prepared to rigorously define subjective moral relativism as true, rather than arbitrarily postulating it as true. Short of defending his relative premises, the economist should at least avoid the persuasive and deceptive positive sounding words, such as, optimum, best, economic efficiency, etc.<sup>34</sup> A more accurate statement would

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<sup>34</sup>The following passages taken from S. K. Nath, A Reappraisal of Welfare Economics (New York: Augustus M. Kelley, 1969), p. 152, indicate that even economists are deceived: "It should not be necessary to point out that, despite its slightly misleading name, the concept of a Pareto optimum is completely objective and that our discussions are thus of a positive rather than a normative nature." M. J. Farrell, "The Convexity Assumptions in the Theory of Competitive Markets," Journal of Political Economy (1959), p. 378. "We notice, moreover, that the necessary condition ['maximizing a market preference function'] is a condition of economic efficiency whilst the additional condition for sufficiency (namely a "just" money income distribution) involves a value judgment. This suggests that we may continue to use the market preference function without inhibitions and in the usual way in discussions of such topics as "optimum tariffs," or "ideal" tax systems, provided that we bear in mind that we are concerned with

be to say that competitive markets or policy "A" obtains a Pareto outcome as contrasted with other possibilities, e.g., egalitarian, utilitarian, Rawlsian, or steady-state, to name only a few. As Samuelson has said,

It is a legitimate exercise of economic analysis to examine the consequences of various value judgments, whether or not they are shared by the theorist, just as the study of comparative ethics is itself a science like any other branch of anthropology.<sup>35</sup>

### CONCLUSION

To recognize that modern welfare economics is based upon subjective moral relativism is to also recognize that a morally objective or purposive approach is an obvious alternative. To recognize the difference between moral relativism and objectivism is to recognize the irrelevance of the supposed "widely acceptable" premises of welfare economics. For a morally objective approach to economic welfare analysis, the relevant question is: are these subjective premises objectively true? The answer is "no, not necessarily." The individual is not necessarily better off because he is in a chosen position, but only if he has chosen the good and avoided the evil. In addition, the welfare of the community is not a simple aggregation of the welfare of totally private, independent individuals. The welfare of the community is a function of (among other things)

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questions of economic efficiency and not with questions of justice and injustice." I. F. Pearce, A Contribution to Demand Analysis (Oxford, 1964).

<sup>35</sup> Paul A. Samuelson, Foundations of Economic Analysis (New York: Atheneum, 1965), p. 220.



good and proper human relationships which promote, for example, justice and love. Nor is the optimal allocation of natural resources that which secures the maximum output of goods and services. How can we justify the identification of a welfare optimum with a maximum output of taste-adequate goods? Why should such maximization be superior to Aristotle's vision of "happy man . . . . able to act according to virtue with moderate means" or to the medieval ideal of a traditional standard of living or to some other "homeostatic" goal?<sup>36</sup>

The purpose of this dissertation, however, is not to simply replace these two arbitrary, subjective premises of welfare economics with a few objective premises; something perhaps equivalent to a Kantian categorical imperative or a Rawlsian "maximin" criterion. Rather, it is to expand the scope of neoclassical economics; to introduce to the economic debate the biblical and historical Hebrew-Christian view of mankind as stewards responsible for proper care (welfare) of all of God's creation. Thus, the following chapter develops a stewardship view of mankind as responsible for the welfare of creation.

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<sup>36</sup>Adolph Lowe, "The Normative Roots of Economic Value," in Human Values and Economic Policy, ed. by Sidney Hook (New York: New York University Press, 1967), pp. 175-76. He goes on to argue that, ". . . there is indeed one state of resource supply and technology in which the attainment of any life goal is conditional on maximization of production. This is a state of destitution in which the available stock of resources and the output produced from it do not rise above the threshold that assures physical survival" (p. 176).

### CHAPTER 3

#### A BIBLICAL CONCEPT OF HUMANS AS STEWARDS OF GOD'S CREATION

The biblical concept of humans as stewards of God's creation is, for the most part, foreign to modern, scientific man. The ancient Hebrews and early Christians, in contrast to modern man, knew nothing of an autonomous Nature, Mother Nature or the Laws of Nature. The ancient Hebrews, indeed, had no word equivalent to our word, nature. This, perhaps, is less surprising when we consider a modern definition of nature: "The creative and regulative physical power which is conceived of as operating in the physical world and as the immediate cause of all its phenomena." As H. Wheeler Robinson has noted, "The only way to render this idea [of nature] into Hebrew would be to say simply 'God.'"<sup>1</sup> In agreement with Robinson is another theologian, B. W. Anderson:

The idea "nature" as an autonomous sphere governed by natural law or set in motion by a First Cause is not found in the OT. The Creator stands in personal relationship to his creation. It is the divine decree . . . that determines order . . . and it can even be said that Yahweh has made a covenant with the day and the night (Jer. 33:20).<sup>2</sup>

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<sup>1</sup>H. Wheeler Robinson, Inspiration and Revelation in the Old Testament (Oxford: The Clarendon Press, 1946), p. 1.

<sup>2</sup>Bernhard W. Anderson, "Creation," Interpreter's Dictionary of the Bible (New York: Abingdon Press, 1962), vol. 1, p. 729.

To understand the biblical concept of man as steward of God's creation it is necessary to understand the ancient Hebrews' and Christians' perceptions of creation and the relationship between the Creator and creation, including man.

#### A BIBLICAL VIEW OF CREATION

Current studies of the ancient Hebrews' perception of creation - partially generated by a renewed interest in creation theology due to the perceived environmental crisis - are far from unanimous in their conclusions. Three easily distinguishable theologies or "models of God" and creation are emerging today which purport to be the Hebrews' (and Christians') perception as recorded in the Old Testament.

#### Models of God and Creation

1. God, self-sufficient and aloof, rather arbitrarily creates the world and deeds it over to man. God is sharply separated from and unaffected by creation - a mere product of his will. This thumb-nail sketch of the so-called "monarchical" relationship between God, man and nature is said (by a few) to represent the dominant model in the Old Testament. Theologian, Harvey Cox<sup>3</sup> and historian, Lynn White, Jr.<sup>4</sup> are two of the better known adherents to this interpretation. According to White:

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<sup>3</sup>Harvey Cox, The Secular City (New York: Macmillan, 1965).

<sup>4</sup>Lynn White, Jr., "The Historical Roots of Our Ecological Crisis," Science 155 (1967).

God planned all of this [creation] explicitly for man's benefit and rule: no item in the physical creation had any purpose save to serve man's purposes. And, although man's body is made of clay, he is not simply part of nature: he is made in God's image.<sup>5</sup>

Two other theologians recognized for their "monarchical" theologies are Karl Barth and Emil Brunner. John Macquarrie, a critic of the monarchical view, sees the physical world devalued and profaned by Brunner in his book, Christianity and Civilization, because Brunner sees the world as a more or less arbitrary product of divine will. Brunner sums it up in two equations:

God minus the world = God

The world minus God = Zero.<sup>6</sup>

According to this view, "The Hebrew understanding of creation . . . separates nature from God. Nature thus becomes 'disenchanted' and can be seen in a 'matter-of-fact' way."<sup>7</sup>

Richard Baer accuses both Barth and Brunner of suffering from "cosmological nearsightedness" when they argue that nature is simply the stage for the God-man encounter.<sup>8</sup> In agreement with Baer's criticism is Paul Santmire:

We should be aware, however, that the biblical picture of nature has not only been neglected in scholarly

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<sup>5</sup>Ibid., p. 1205.

<sup>6</sup>John Macquarrie, "Creation and Environment," The Expository Times 83 (1971), p. 7.

<sup>7</sup>Ibid., p. 4.

<sup>8</sup>Richard A. Baer, Jr., "Conservation: An Arena for the Church's Action," The Christian Century (January 1969), p. 41.

study, but frequently obscured . . . . The problem has been an overly narrow focus. Karl Barth is typical in this respect when he states that the interest of the biblical writers is God's activity in relation to man. In similar vein Emil Brunner remarks that "the cosmic element in the Bible is never anything more than the 'scenery' in which the history of mankind takes place."<sup>9</sup>

Besides Cox, White, Barth, and Brunner, Macquarrie also sees

John Calvin as presenting an extreme monarchical view:

Everything happens by divine will. The world itself is a product of a free act of God's will, and he might equally well have refrained from creating, so that in no sense is the world organic to God.<sup>10</sup>

Macquarrie further argues that with a "doctrine of voluntary creation" the world has no intrinsic worth, but only utilitarian worth.<sup>11</sup> Baer, however, finds no scriptural basis for a utilitarian view of nature. Although Scripture obviously demythologizes the pagan views of nature, nature remains deeply respected.<sup>12</sup> This will be shown later in this chapter.

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<sup>9</sup>Paul Santmire, Brother Earth: Nature, God and Ecology in a Time of Crisis (New York: T. Nelson, 1970), p. 81.

<sup>10</sup>Macquarrie, *ibid.*, p. 7.

<sup>11</sup>*Ibid.*

<sup>12</sup>Richard A. Baer, Jr., "Conservation Problems More Human Than Technological," Catalyst II (1967), p. 5. Santmire (n. 9 above) perceptively notes that our 20th century utilitarian approach to nature weakens our faith in God, especially our understanding of justification. He contrasts our time with that of Calvin and Luther's where, "men of faith could sense the presence and activity of God in nature, as well as in history . . . having heard in the preaching of justification by grace through faith alone that my salvation is sure and certain . . . I can learn to sense that the same God of grace and power is at work in, and controls finally, my environment . . . . But if I cannot sense God's activity in the world around me . . . there will be little or no sense of liberation of my earthly life." Santmire, *ibid.*, pp. 68-69.

It is this "monarchical" view of God with its concomitant utilitarian approach to nature that Macquarrie sees as dominant in the Old Testament, but it is not the only one. He argues for another, a more "earthy" interpretation where God is imminent in nature, not sharply separated from the world. He concludes, "obscure and fragmentary though it may be, there are at least traces of [this] alternative model, which we may call the organic model."<sup>13</sup>

2. The "organic" model understands the world as eternally emanating from God. The world is not an arbitrary creation. But although God does not need to create, because he is a "creative spirit" creation "flows" from his nature. Since God is organically connected with creation, he is affected by the absence of creation. Consequently, the organic model accepts only one of Brunner's equations:

The world minus God = Zero,  
for the world would cease to exist if God were not.

Proponents of the organic model (e.g., Macquarrie, and Frederick Elder)<sup>14</sup> advocate an attitude of wonder and mystic communion between man and nature. Critical of this position is Hendrick Aay who argues that Elder's view of a miraculous and mystic relationship with nature

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<sup>13</sup>Macquarrie, *ibid.*, p. 6. Unfortunately, Macquarrie does not cite any Old Testament texts to support his organic model.

<sup>14</sup>Frederick Elder, Crisis in Eden (Nashville: Abingdon Press, 1970).

will not combat and defeat our mechanistic, dehumanized view of life and nature. Rather, Aay foresees it setting up a "tension between nature and civilization."<sup>15</sup>

The literature on the "organic" model is sparse, and unfortunately, for the purposes of this study, does not derive from an examination of the Old Testament. Rather it seems to derive from pragmatic reasoning in order to develop an environmental ethic designed to solve such current problems as pollution and natural resource depletion.

3. In contrast to both the "monarchical" model (where God is aloof from his creation and humans are free to reign as tyrants) and the "organic" model (which comes dangerously close to pantheism) is what we may call the "covenantal" model. This model will now be developed by examining four fundamental concepts which try to explain the interrelationship in the Old Testament between the Creator and creation. These concepts are: 1) Creation as order, 2) Creation as history, 3) Creation and covenant, 4) Creation and purpose.

#### Creation as Order

The Creator commands and a creature or inanimate object is not only brought into being, but is given its own particular nature and tasks. The stars, sun and moon, e.g., are God's servants with

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<sup>15</sup>Hendrick Aay, "Confronting the Ecological Crisis: The Kingdom of God in Geographical Perspective," Vanguard (November 1972), p. 12.

appointed functions. They are not independent gods controlling man's life as was commonly believed by Israel's neighbors.<sup>16</sup>

Then God said, "Let there be lights in the expanse of the heavens to separate the day from the night, and let them be for signs, and for seasons, and for days and years . . . ." (Gen. 1:14)<sup>17</sup>

Moreover, the earth itself "is not just the fertile 'mother,' from whose womb all life proceeds and to which it returns (Job 1:21, Eccles. 4:1), but is God's creature who produces vegetation and animals at his command."<sup>18</sup> For example:

Then God said, "Let the earth sprout vegetation, plants yielding seed, and fruit trees bearing fruit after their kind, with seed in them, on the earth," and it was so. And the earth brought forth . . . . (Gen. 1:11,12)

Then God said, "Let the earth bring forth living creatures after their kind: Cattle and creeping things and beasts of the earth after their kind;" and it was so. (Gen. 1:24)

Furthermore, the order and regularity of creation are promised to Noah and are established as a covenant between Yahweh and creation:

While the earth remains,  
Seedtime and harvest,  
And cold and heat,  
And summer and winter,  
And day and night  
Shall not cease. (Gen. 8:22)

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<sup>16</sup> Anderson, *ibid.*, p. 729.

<sup>17</sup> Biblical quotations are taken from the New American Standard Bible.

<sup>18</sup> Anderson, *ibid.*, p. 729.



When the bow is in the cloud, then I will  
look upon it, to remember the everlasting covenant  
between God and every living creature of all  
flesh that is on the earth. (Gen. 9:16; cf. 9:13-17)

Additional examples of Yahweh establishing order are numerous:

Do you know the ordinances of the heavens,  
Or fix their rule over the earth? (Job 38:33)

Thou didst set a boundary that they may not pass over;  
That they may not return to cover the earth. (Ps. 104:9)

He has also established them forever and ever;  
He has made a decree which will not pass away. (Ps. 148:6)

Who gives rain in its season,  
Both the autumn rain and the spring rain,  
Who keeps for us  
The appointed weeks of the harvest. (Jer. 5:24)

Thus says the Lord,  
Who gives the sun for light by day,  
And the fixed order of the moon  
and the stars for light by night,  
Who stirs up the sea so that its waves roar;  
the Lord of hosts is His name:  
"If this fixed order departs  
From before Me," declares the Lord,  
"Then the offspring of Israel also shall cease  
From being a nation before Me for ever." (Jer. 31:35,36)

Jeremiah also expresses the Israelite view that all creation  
belongs inalienably to God the Creator and thus he is in control,  
nothing is impossible to him.

Ah Lord God! Behold, Thou hast made the heavens and  
the earth by Thy great power and Thine outstretched  
arm! Nothing is too difficult for Thee . . . (Jer. 32:17)

Finally, Gerhard Trenkler summarizes the magnitude of this creative  
act depicting the absolute lordship of the Creator over creation:

Matter belongs inalienably to him. Nothing is impossible to him (Jer. 32:17). Viewed from his standpoint the cosmos shrinks to the dimensions of a mere toy. He measures the oceans in the hollow of his hand and marks off the heavens with a span (Is. 40:22). He sets Leviathan, the monster, swimming about in the sea like a goldfish in an aquarium (Ps. 104:26). All nature belongs to him: he overthrows mountains, shakes the earth out of its place, commands the sun (Job 9:57), and so on.<sup>19</sup>

Clearly the Israelites' view of creation is the antithesis to the modern view of autonomous Nature. Their view of order in creation radically disagrees with the modern mechanistic view of the laws of nature as imminent forces forming a universe. In disagreement with this modern view and in the spirit of the Old Testament, Donald MacKay argues that "The laws of nature we discover are not alternatives to divine activity, but only our codification of that activity in its normal manifestations."<sup>20</sup> In other words, we do not have a mechanical system of autonomous laws working in creation, but a Creator working in and through his laws.

### Creation as History

The ancient Hebrew view of creation also stands in contrast to the views of Israel's neighbors.

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<sup>19</sup> Gerhard Trenkler, "Creation," Sacramentum Verbi: An Encyclopedia of Biblical Theology (New York: Herder and Herder, 1970), p. 148.

<sup>20</sup> Donald M. MacKay, The Clock Work Image (Downers Grove, Illinois: Inter Varsity Press, 1974), p. 60.

In various ways ancient people affirmed that the world emerged out of primordial chaos. In Babylonian mythology the origin of the three-storied universe was traced to a fierce struggle between divine powers that emerged from uncreated chaos - Marduk the god of order and Tiamat the goddess of chaos . . . . Although the Bible takes for granted the contours of ancient cosmology, it has demythologized the ancient understanding of existence. The Old Testament contains no theogony, no myth which traces creation to a primordial battle between divine powers, no ritual which enables men to repeat the mythological drama and thereby ensure the supremacy of the national god. Mythological allusions have been torn out of their ancient context of polytheism and nature religion, and have acquired a completely new meaning within the historical syntax of Israel's faith.<sup>21</sup>

Israel's "creation faith" as expressed in the creation stories of Genesis, Isaiah, and various psalms (e.g., Pss. 8; 19; 104) presupposes and yet radically transforms the cosmological views of antiquity. Yahweh's creative work was understood and expressed as a polemic against the creation stories of the Babylonians, Egyptians, and Canaanites.<sup>22</sup> Genesis begins not with "In the beginning chaos," but with "In the beginning God." No struggle takes place between order and chaos; rather, God simply and powerfully says, "Let there be." Thus the pagan cosmogonies of Israel's neighbors are denied by Israel's creation faith. Creation of the cosmos out of primordial-eternal stuff is rejected by Israel. Only Yahweh is eternal. Israel does not speculate about an origin of Yahweh.

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<sup>21</sup>Anderson, *ibid.*, p. 726.

<sup>22</sup>Anderson, *ibid.*, p. 727; Cf. John Reumann, Creation and New Creation (Minneapolis: Augsburg Publishing House, 1973), pp. 33-34; and Claus Westermann, Creation, trans. John J. Scullion (Philadelphia: Fortress Press, 1974), pp. 44-45.

Nor are Israel's creation stories meant to be cosmogonies. While affirming that Yahweh is the Creator, the Hebrews are somewhat relaxed about how Yahweh created the world. As Claus Westermann points out:

The Old Testament never speaks of belief in the Creator . . . and Creation or belief in Creation never occurs in the confessions of faith of the Old Testament . . . . One can easily see the reason: for the man of the Old Testament it was not possible that the world could have originated in any other way. Creation was not an article of faith because there was simply no alternative . . . . The question, how did God create the world, could never have been a question of faith for the man of the Old Testament. There could be quite different opinions about this . . . . Consequently the Old Testament presents not one but many Creation accounts.<sup>23</sup>

Thus, the biblical stories of creation are not prescientific attempts to explain the origin or evolution of the universe; rather they reveal the Who and wherefore of creation. They reveal that Creator, creation, and history are inseparably related.

. . . creation is the starting point of history. It sets the stage for the unfolding of the divine purpose and inaugurates a historical drama within which first Israel and, in the fulness of time, the church were destined to play a key role . . . . In this view, creation is a temporal event, the beginning of a movement of history.<sup>24</sup>

This means that creation is an open system not closed; its future is not wholly or necessarily determined by past or present. It is open to communication from without. The final state is different from the beginning. Creation as historical event is three things: beginning,

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<sup>23</sup>Westermann, *ibid.*, p. 5.

<sup>24</sup>Anderson, *ibid.*, p. 727.

present activity, and future consumation (restoration). Creation as historical-relational-event, rather than autonomous nature, is perhaps the main thread running through the ancient Hebrews' view of creation.

Understanding creation as historical event means for instance, that the creation stories of Genesis 1 and 2 are, "inseparable from the narratives that follow it: the call of Abraham, the deliverance from Egypt, the guidance through the wilderness, and the inheritance of the Promised Land."<sup>25</sup> The God who acted in the beginning continues to act and work in creation-history. The One who creates light and darkness also brings peace and calamity (Is. 45:7); brings down princes and undercuts the rulers of the earth (Is. 40:23); forms the people Israel for himself (Is. 43:21) and makes all people great according to his will (1 Chr. 29:11,12).<sup>26</sup>

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<sup>25</sup>Anderson, *ibid.*

<sup>26</sup>Although the importance of Israel's creation faith is its concept of creation as historical event, this does not rule out the acceptance of some of its neighbors' cosmological views. A three-storied universe is taken for granted: heaven, earth, and underworld (Ex. 20:4). "According to this *Weltbild*, the earth is a flat surface, corrugated by mountains and divided by rivers and lakes. Above the earth--like a huge dome--is spread the firmament, which holds back the heavenly ocean and supports the dwelling place of the gods (Gen. 1:8, Ps. 148:4). The earth itself is founded upon pillars which are sunk into the subterranean waters (Pss. 24:2, 104:5), in the depths of which is located Sheol. In this view, the habitable world is surrounded by the waters of chaos, which, unless held back, would engulf the world in chaos (Gen. 7:11; cf. 1:6)." Anderson, *ibid.*, pp. 725-26.

### Creation and Covenant

The Israelites not only had the security of a world and history inseparably linked by a personal Creator, but they were promised continuity: a continuing relationship between Creator and creation. The source and form of this promise is a covenant initiated by the Creator. Numerous covenants were established: already mentioned was the covenant made between Yahweh and creation after the flood (Gen. 9:11-17). In Genesis 15 and 17 God initiates a covenant with Abraham. Abraham is promised to be the father of a multitude of nations, and the land of Canaan is promised to Abraham and his descendents. Notice that the covenant is conceived and established by God, not Abraham. It is God's covenant in that he will fulfill the promises therein. Abraham accepted Sara's plan for producing Ishmael as heir, but God had made an absolute covenant with Abraham, that is, Isaac, not Ishmael, was God's plan to fulfill the covenant. Therefore Isaac would still be born according to God's plan, despite Sara's advanced age.

Israel thus understood the relationship between the Creator and creation as essentially that of a covenant.

For the belief that "heaven and earth" or "everything" (Ps. 8:6; Is. 44:24) is dependent upon Yahweh the Creator is a derivative from Israel's covenant understanding that her whole life is dependent upon the God who delivered his people and bound them to himself. The covenant, rather than rational principle, is the ground of the unity of creation.<sup>27</sup>

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<sup>27</sup>Anderson, *ibid.*, p. 727.

The covenant was a pledge of Yahweh's allegiance to creation; it would be upheld by his sustaining activity. This faith is expressed in numerous passages (e.g., Jer. 10:13; Pss. 65:9,10; Lev. 26:4f.; Job 5:10):

Thou dost visit the earth, and cause it to overflow;  
 Thou dost greatly enrich it;  
 The stream of God is full of water;  
 Thou dost prepare their grain, for thus Thou dost  
     prepare the earth.  
 Thou dost water its furrows abundantly;  
 Thou dost settle its ridges;  
 Thou dost soften it with showers;  
 Thou dost bless its growth. (Ps. 65:9,10)

It is in Isaiah, however, that we find the covenantal relationship between Yahweh and creation fully developed and applied to Israel's historical situation.

The Israelite faith in the Yahweh of covenant (and exodus, e.g., out of Egypt) was shattered by the Babylonian captivity. The Babylonian nature-gods appeared to have swallowed up the tiny nation of Israel and its God. Isaiah, therefore, makes a spirited appeal to remember that Yahweh is the God of Creation and covenant. Isaiah reaffirms and attempts to reestablish Israel's faith in Yahweh as Creator and Sustainer of history. Yahweh is not depicted as simply in control of creation - this would be too similar to baal worship - but also in control of history. The link between creation and history is re-established to reveal the power and sovereignty of Yahweh in contrast to the impotent Babylonian nature-gods.<sup>28</sup>

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<sup>28</sup>A. D. Matthews, "The Prophetic Doctrine of Creation," Church Quarterly Review 166 (1965), pp. 148-49.

Moreover, Yahweh alone is the God behind the deeds that Isaiah often describes by the Hebrew word "bara" (create or make). These deeds have been revealed beforehand so that the "stiff-necked" Israelites might know whose hand created them and might not say, "My idol has done them, and my graven image and my molten image have commanded them" (Is. 48:5).

They are created now and not long ago;  
And before today you have not heard them,  
Lest you should say, "behold, I knew them." (Is. 48:7)

Here is Yahweh in a seemingly direct and current act of creation. Apparently before now these new things (that is, deliverance from Babylon) had not been created, but now, that is, the day of Isaiah's prophetic utterance, they were created even though they would not appear in human history for some time.<sup>29</sup> This is a good example of the Hebrew link between Yahweh as Creator and as covenantal Sustainer of history. In yet another place, Isaiah uses a past historic event and incorporates the creation element of Yahweh's power:

But now thus says Yahweh;  
he who created you, O Jacob,  
he who formed you, O Israel:  
"Fear not, for I have redeemed you;  
I have called you by name, you are mine." (Is. 43:1)

Thus we see that Isaiah's thought is similar to the early Israelites: Yahweh is the God of Creation and History. But Isaiah has much more to say about this God of Creation and History than these two passages

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<sup>29</sup> Edward J. Young, The Book of Isaiah (Grand Rapids: Eerdmans, 1972), vol. 3, pp. 250-52.



reveal. Isaiah mounts a spirited attack on the idols and nature-gods of the Babylonian exile period.

The whole of Isaiah 40 is concerned with the greatness of Yahweh over against idols and nature-gods. His greatness is explained in terms of his power in and over creation; He is the Lord of Creation. It is he who measured the waters, marked off the heavens and weighed the mountains (Is. 40:12). Idols are made by men; it even takes a skilled craftsman to make an idol that will not fall over (Is. 40:20). The folly of idolatry is humorously ridiculed in Is. 44, where a tree is cut down and used for firewood and an idol:

And no one recalls, nor is there knowledge, or understanding to say, "I have burned half of it in the fire, and also have baked bread over its coals. I roast meat and eat it. Then I make the rest of it into an abomination, I fall down before a block of wood!" (Is. 44:19)

The stars which were of particular interest to the Babylonian religious system of nature-gods and idol worship are brought into proper perspective by Yahweh:

Lift up your eyes on high.  
And see who has created these stars,  
The One who leads forth their host by number  
He calls them all by name; (Is. 40:26)

Whereas Babylonian cosmogony held that chaos first existed, and out of this the gods emerged, Isaiah declares: Yahweh is the "first" and "last." He formed the cosmos and did not create it to be chaos, but formed it to be inhabited (Is. 45:18).

The Babylonian nature-gods included forces of nature, chaotic forces of darkness of the depths of the earth which could bring chaos

and woe. To these supposed forces, before which the Babylonians burned incense, Yahweh says:

I am the Lord, and there is no other,  
The One forming light and creating darkness,  
Who makes happiness and creates woe;  
I am the Lord who does all these. (Is. 45:6f.)

Yahweh also ridicules the Babylonian New Year Festival when, according to StuhlmueLLer, "the Enuma Elis [Babylonian creation story] was chanted and the creation gods were carried through the streets . . . ." <sup>30</sup> Yahweh's response is:

They have no knowledge,  
Who carry about their wooden idols . . .  
Who has announced this from of old . . . ?  
Is it not I, the Lord?  
And there is no other God besides Me. (Is. 45:20f.)

Yahweh taunts the nature-gods to announce and declare what is going to take place (Is. 41:22). But there is no response, they are of no account (Is. 41:24). These false gods are divested of their false powers and toppled from their stolen positions. They are reduced to wind and waste:

Behold all of them are false;  
Their works are worthless,  
Their molten images are wind and emptiness. (Is. 41:29)

Thus Isaiah dealt for the Israelites a devastating blow to the gods of the Babylonian state religion. This was no small victory for the exiled nation, for the people of Israel found themselves engulfed by these monstrous, deified powers of chaos and heavenly bodies. In

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<sup>30</sup>Carrol StuhlmueLLer, "The Theology of Creation in Second Isaiah," Catholic Biblical Quarterly XXI (1959), p. 450.

exile the nation of Israel appeared to be consumed by the Babylonian gods. Thus the prophetic annihilation of these gods was necessary if the Israelites were to understand the true nature of their exile.

Isaiah shows them that the exalted Babylonian deities of darkness and chaos are not as imagined, but as God's obedient servants:<sup>31</sup>

I was angry with My people,  
I profaned My heritage,  
And gave them into your hand . . . . (Is. 47:6)  
But evil will come to you . . . . (Is. 47:1)  
There is none to save you. (Is. 47:15)

And to the Israelites Yahweh says:

Behold, I have refined you, but not as silver;  
I have tested you in the furnace of affliction.  
For My own sake, for my own sake, I will act;  
For how can My name be profaned?  
And My glory I will not give to another. (Is. 48:10f.)

The children of Israel had lost faith in Yahweh, their God of Covenant, Creation, and History. They had turned away from the God of their fathers to practice all sorts of abominations and idolatry. Indeed, for these very reasons came the destruction of Jerusalem and the exile to Babylon. Isaiah was given the message that not only would the exile take place, but also that Israel would be restored. But how could he convince a people who had lost faith in their God of Covenant (and exodus from Egypt) that they would be restored in a new exodus from Babylon? He did this particularly by revising their faith in Yahweh as Creator and thus Sustainer.

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<sup>31</sup>Ibid., p. 448.

In Isaiah 48, it is Yahweh the Lord of Creation; the "first" and the "last," who called out Israel in the past and who will now deliver them from Babylon. It is Yahweh-Creator who founded the earth, the one who spread out the heavens with his right hand, who now calls them to assemble and listen (Is. 48:13). It is Yahweh-Creator who reveals future deeds of deliverance. It is the Lord of Creation, their Redeemer, (17) who says, "Go forth from Babylon! Flee from the Chaldeans! (20)."

A final example shows Isaiah's desire to link the power and purposes of Yahweh the Creator-Redeemer-Sustainer with the future restoration of Israel:

Thus says the Lord, your Redeemer, and the one who formed you from the womb; I, the Lord, am the maker of all things, stretching out the earth all alone, causing the omens of boasters to fail, making fools out of diviners, causing wise men to draw back, and turning their knowledge into foolishness . . . . It is I who says of Jerusalem, "She shall be inhabited!" And of the cities of Judah, "They shall be built." (Is. 44:24-26)

### Creation and Purpose

Purpose and meaning in creation are grounded in the God of Order, History, and Covenant. Creation has purpose and meaning because it is established by and for the eternal purposes of the Creator rather than by chance, fate, or even man.

. . . creation faith affirm that God alone is the creator of the meaning which supports all human history and the natural world which is the theater of the historical drama. Human history or nature do not secrete their own meaning. Rather, God's revelation creates the meaning which undergirds all existence. His Creative Word is the source of all being. So the psalmist affirms: By the

word of the Lord the heavens were made and all their host by the breath of his mouth. Hence it is folly for men and nations to act as though their plans were determining the meaning of life. Let all the earth fear the Lord; let all inhabitants of the world stand in awe of him! For he spoke, and it came to be; he commanded, and it stood forth (Ps. 33:6-9).<sup>32</sup>

For the ancient Hebrew the ultimate purpose of creation is the glory, praise<sup>33</sup> and joy<sup>34</sup> of the Creator as effected by all of creation, each in its own way. Psalm 148 enlists a whole host of animate beings and inanimate objects to praise their Creator; which they do by simply being what they were created to be:

Let them praise the name of the Lord,  
For He commanded and they were created.  
He has also established them forever and ever;  
He has made a decree which will not pass away.  
Praise the Lord from the earth,  
Sea-monsters and all deeps;

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<sup>32</sup>Bernhard W. Anderson, "The Earth is the Lord's: An Essay on the Biblical Doctrine of Creation," Interpretation IX (January 1955), p. 6.

<sup>33</sup>Gerhard Trenkler, *ibid.*, p. 149. In his opinion, the most important aspects of the relationship of the creature to his creator are "praise, trust and solidarity of all created things."

<sup>34</sup>Kenneth Henry Maahs, "The Theology of Human Ecological Responsibility in the Old Testament," (Ph.D. dissertation, Southern Baptist Theological Seminary, March, 1972), p. 130: "According to Arthur Weiser, [The Psalms: A Commentary, trans. Herbert Hartwell (Philadelphia: The Westminster Press, 1962), p. 669] Psalm 104 serves to forward one essential religious concept: God has created the world for His own enjoyment in order that it might serve His purposes, the chief religious purpose (v. 26) being ". . . God's joy in his creature ('to play with him'), a joy that is entirely detached from any thought of human calculation or expediency (cf. Job 40:29)."

Fire and hail, snow and clouds;  
 Stormy wind, fulfilling His word;  
 Mountains and all hills;  
 Fruit trees and all cedars;  
 Beasts and all cattle;  
 Creeping things and winged fowl;  
 Kings of the earth and all peoples;  
 Princes and all judges of the earth;  
 Both young men and virgins;  
 Old men and children.  
 Let them praise the name of the Lord. (Ps. 148:5-13)

The heavens are telling of the glory of God;  
 And the firmament is declaring the work of his hands. (Ps. 19:1)

All Thy works shall give thanks to Thee, O Lord,  
 And Thy godly ones shall bless Thee. (Ps. 145:10)

All of creation exists to praise the Creator by being what it was created to be and doing what it was created to do. "The Lord has made everything for its own purpose (Prov. 16:4)." Thus are the high mountains a home for the wild goats and the rocky cliffs for the badgers (Ps. 104:18). The grass he grows for the cattle, vegetation for cultivation by man, and trees for the birds (Ps. 104:14-17). Each living creature looks to God and he gives them their food; he satisfies their desire (Ps. 145:15-16). Even the formidable lion receives his prey from God (Job 38:39). And finally God says to all his creatures, including man:

Be fruitful and multiply, and fill the waters in the seas, and let birds multiply on the earth . . . .  
 Let the earth bring forth living creatures after their kind: cattle and creeping things and beasts of the earth after their kind; and it was so . . . and God saw that it was good (Gen. 1:22, 24-25).<sup>35</sup>

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<sup>35</sup>Langdon Gilkey, Maker of Heaven and Earth (Garden City, New York: Doubleday and Company, 1965), p. 78: ". . . when theologians have spoken of the act of creation; they have used the analogy of

And in the words of Bernhard Anderson,

. . . the doctrine of creation affirms that every creature is assigned a place in God's plan in order that it may perform its appointed role in serving and glorifying the Creator.

This is magnificently portrayed in the Priestly creation story [Gen. 1]. God "calls" each thing by its name, that is, he exercises his sovereignty by designating the peculiar nature and function of each creature. The heavenly bodies, for instance, are not celestial beings who control man's life, as was supposed in the astrological cults of antiquity; rather, they are servants of God whose appointed function is to designate the seasons and to separate the day from the night . . . .

It is man, however, who occupies a special place in the liturgy of creation . . . . His task is to glorify God by filling the earth and subduing it, thereby acting as the appointed servant of his sovereign. In the J creation story [Gen. 2 and 3] the same truth is stated . . . . he stands in an "I and thou" relation with his Maker and may be obedient, or disobedient, to the task which is given him: to dress and keep the garden.<sup>36</sup>

The man of God, although he knew himself to be dependent and contingent like all creatures also knew that he was called into a covenantal relationship to serve God and his purposes.<sup>37</sup> He knew that he was called to be a part of creation-history that is purposeful and is going someplace; indeed, he was to be a steward of creation and a

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human historical action. They have emphasized that this act was a free and intended act on the part of God, and that the purpose of this act was that 'it was good.'"

<sup>36</sup>Anderson, "The Earth is the Lord's," *ibid.*, pp. 14-15.

<sup>37</sup>Gilkey, *ibid.*, pp. 201, 204-5; and Anderson, "The Earth is the Lord's," *ibid.*, p. 16. "The natural world is man's God-given habitat, wherein he is to find joy in the service of God. Thus the doctrine of creation frees man from the alternatives between which human thought often moves: either the materialistic enjoyment of the natural world for its own sake, or the verdict that the world of change and death is essentially meaningless," Anderson, "Creation," *ibid.*, p. 729.

history maker. He was called to expend his energies in the meaningfulness of the "God created moment," not to seek to escape the concreteness and contingency of the moment.<sup>38</sup> He knew that his ultimate source of meaning and security in creation could only be found in the Creator. Only in God could he be free of the terror and tyranny of his own contingency and temporality. Only when he acknowledged his dependence upon God as his ultimate source of existence and purpose could he fully enter into creation and celebrate his dependence and contingency in it. Only because he understood that his finite creatureliness was good and significant could he celebrate his role as steward and history maker called in service to God.<sup>39</sup>

Moreover, and in a more positive view, the ancient Israelite affirmed his creaturely existence as good because he was created in the image of God - imago Dei. But what might that mean? Anderson argues:

. . . the main import of the statement about the imago Dei is not to define man's essence in comparison to God, but to accent the special function which God has assigned to man in the creation. Man is designed to be God's representative, for he is the representation or image of God . . . . Hence the statement about the imago Dei is appropriately followed immediately by the further statement that God gives man a special blessing and commands him to exercise dominion over the earth.

The dignity of man is not based upon something intrinsic to human nature, such as "the infinite value of human personality." Man's worth [and identity] lies in his

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<sup>38</sup> Gilkey, *ibid.*, p. 305.

<sup>39</sup> Gilkey, *ibid.*, pp. 121, 229-35; and Bernhard W. Anderson, Creation Versus Chaos (New York: Association Press, 1967), p. 81.



relation to God. He is the creature whom God addresses, visits, and meets in fellowship; but above all he is dignified by the task which his sovereign gives him. This special eminence of man in God's creation excites the wonder and praise of the psalmist:

"When I look at thy heavens, the work of thy fingers,  
the moon and the stars which thou hast established;  
What is man that thou art mindful of him,  
and the son of man that thou dost care for him?  
Yet thou has made him little less than God,  
and dost crown him with glory and honor.  
Thou hast given him dominion over the works of thy hands,  
thou hast put all things under his feet . . ."  
(Ps. 8:3-6) . . . .

As in Genesis 1, this high status endows man with a function given to no other creature: to have dominion over the nonhuman creation. Man's rule on earth is to be exercised within the sovereignty of God. His "glory and honor" is the task which God has given him.<sup>40</sup>

Walther Eichrodt, commenting on the imago Dei and Psalm 8, reminds us, lest we forget, of the relative nature of our dominion.

. . . as a result of his being made in the image of God, Man acquires not only supreme value, but also the power for his work in the world, the programme of which is summed up in the divine blessing: "Be fruitful and multiply, and fill the earth and subdue it!" . . . His duty of realizing the task laid upon him by God subordinates Man to the mighty teleological world movement, which by its own inner logic moves inexorably toward the concept of history.<sup>41</sup>

And concerning Psalm 8 he says:

The almost defiant sense of power, and the naive joy in what man can achieve, as evinced in the lively description of his kingdom, [vv. 7-9] rings with all the

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<sup>40</sup> Anderson, "The Earth is the Lord's," *ibid.*, pp. 17-18.

<sup>41</sup> Walther Eichrodt, Theology of the Old Testament, 2 vols., trans. J. A. Baker (Philadelphia: The Westminster Press, 1961-67), vol. 2 (1967), p. 110.

self-confidence of antiquity,<sup>42</sup> and is given a distinctive twist only by the fact that it is combined with the most profound reverence before the almighty Lord of creation. What makes the free sovereign power of the latter impressive is precisely the fact that the one whom he clothes with royal status is a weak and insignificant creature who by himself could never be more than an eloquent testimony to the complete impotence of created things . . . . it is God's inconceivably marvellous power which alone is the basis of human self-confidence . . . . it is a spiritual factor which determines the value Man sets upon himself, namely his consciousness of partnership with God, a privilege of which no other creature is considered worthy.<sup>43</sup>

The New Testament reinforces the Old Testament's view of man's "partnership with God," of man's "worth and identity in his relationship with God." Indeed, probably the central message of the New Testament is that God, in the person and work of Jesus, is redeeming and restoring humankind to their proper relationship with their Creator and to their proper task in creation.

Through Jesus Christ the ultimate purpose of God is revealed to be personal, fellowship with His creature man . . . . For it is through man's personal trust and obedience that God's rule over man and man's enactment of God's purpose are both achieved . . . . the life of faith and obedience is a life in which the divine sovereignty is fulfilled, and in which God's rule over His creation is most perfectly accomplished. Moreover, as a being rooted in God, man fulfills his own essential structure only through personal fellowship with God: the creature becomes himself when he lives in total dependence upon his Creator. Only through faith in God is man able to love his fellows,

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<sup>42</sup>According to Eichrodt, Psalm 8 "is often compared to the hymn in praise of Man's dominion in the Antigone by Sophocles." Eichrodt, *ibid.*, p. 120.

<sup>43</sup>Eichrodt, *ibid.*, pp. 120-21.

and so to realize in his life the harmony of creation which is God's own ultimate purpose in history.<sup>44</sup>

Both the Old and New Testaments speak with much similarity on the role of God as Creator and Sustainer, and also of God's judgment and ultimate restoration of creation.<sup>45</sup>

The eschatological aspect of the creation faith is more evident in J [Gen. 2 and 3] and the prophets than in the Priestly Source [Gen. 1] which lacks the story of Adam's revolt against his Creator. While the priest emphasizes God's sovereignty over the present world, the prophet sees the present under the stigma of divine judgment. For man, whose every imagination of the heart is only evil continually (Gen. 6:5), mars the goodness of the creation and thereby provokes the Creator to destroy the works of his hands. The contrast between God's original intention for his creation and the sorry reality of the present is so sharp that, according to prophets, God himself must act, bringing judgment upon the world in order that he may create a new heaven and a new earth . . . . Here, again, we see that from the Christian viewpoint the doctrine of Creation cannot be separated from Heilsgeschichte - the history of the saving acts of God which is fulfilled in Jesus Christ. The whole of human history and all of nature stand under God's signature in Christ. In Christ is laid bare the meaning which undergirds all existence; through him men acknowledge the God upon whom they are completely dependent; from him they hear anew the summons to a task within God's plan. From this standpoint of faith the Christian community traces the purpose of God backward to the beginning, saying that "In Christ all things were created," and it traces the purpose forward to the consummation of history, saying that "God will sum up all things in Christ."<sup>46</sup>

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<sup>44</sup>Gilkey, *ibid.*, pp. 275-76.

<sup>45</sup>"The chief difference is, of course, that the New Testament gives Jesus Christ a place in this, as agent or mediator of the creation." John Reumann, *ibid.*, p. 84. For similarities between the New and Old Testaments on creation see, for example: John 1; Rom. 8:19-23; 1 Cor. 8:6; 10:26; 2 Cor. 9:7-12; Eph. 2:10; Philip. 2:6-11; Col. 1:15-20; 3:10; Heb. 1:2-3; Rev. 21.

<sup>46</sup>Anderson, "The Earth is the Lord's," *ibid.*, pp. 19-20.

### Conclusion

Environmental exigencies have stirred up studies in the history of man's attitudes toward and perceptions of nature. Lynn White's now famous article, "The Historical Roots of Our Ecological Crisis," is one such study. He comes to the conclusion that the roots of the crisis lie in the Old Testament view of man and nature where,

God planned all of this [creation] explicitly for man's benefit and rule: no item in the physical creation had any purpose save to serve man's purposes. And, although man's body is made of clay, he is not simply part of nature: he is made in God's image.<sup>47</sup>

In that same year, 1967, another study was published, but much less publicized, which does not concur with White. It was Traces on the Rhodian Shore by Clarence Glacken.

Most striking, for our themes, is the idea of the dominion of man as expressed in Genesis, and repeatedly expressed in other writings, notably Psalm 8. But one must not read these passages with modern spectacles, which is easy to do in an age like ours when "man's control over nature" is a phrase that comes as easily as a morning greeting . . . . Man's power as a vice-regent of God on earth is part of the design of the creation and there is in this fully elaborated conception far less room for arrogance and pride than the bare reading of the words would suggest.<sup>48</sup>

I would certainly agree with Glacken that a reading of Genesis 1 and 2 and Psalm 8 - without modern ideas of dominion as domination and tyranny - will reveal no sense of arrogant pride in the biblical view of creation. Also in disagreement with White is James Barr who

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<sup>47</sup>White, *ibid.*, p. 1205.

<sup>48</sup>Clarence J. Glacken, Traces on the Rhodian Shore (Berkeley: University of California Press, 1967), p. 166.

contends that "man made in the image of God" does not mean that as God is sovereign over all, so man is likewise.<sup>49</sup>

As God's living image on earth, man is to act as his representative. He is the administrator of God's works . . . . Man is to exercise sovereignty within God's sovereignty, so that all earthly creatures may be related to God through him.<sup>50</sup>

God remains the Creator, Sustainer and Ruler of creation and all it contains. He is personally, intimately and powerfully involved in sustaining and ruling over all creatures and inanimate things for their well-being and thus His own praise, glory and joy.

The people of God understood themselves and the rest of creation to be utterly dependent on the Creator for order, history and purpose in creation. Even in their role of exercising sovereignty over creation they knew themselves to be functioning within and under the sovereignty of God. Their creaturely sovereignty was real but not absolute. Furthermore, the function and purpose of their sovereignty was to be servants of God to obtain His good purposes in creation-history. Commenting on the role of man as expressed in Genesis 2:15, John Black says:

The burden of the passage in Genesis is clear enough: God put man into the world in order that he should look after it. The ultimate ownership of the world was never for a moment in doubt . . . . Man is frequently reminded of his subordinate position; he may have been put on earth to look after it, but there is no suggestion of ownership at the time of creation, nor is there any

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<sup>49</sup>James Barr, "Man and Nature - The Ecological Controversy and the Old Testament," Bulletin, The John Rylands University Library 55 (1972), p. 19.

<sup>50</sup>Anderson, "Creation," *ibid.*, p. 729.

suggestion that in the course of time man might come to inherit the earth for himself, for instance as a reward for good management. Accordingly, the conclusion must be that the Hebrews believed that one reason for man's presence on earth was that he should look after it on behalf of God.<sup>51</sup>

Gilkey profoundly summarizes the biblical view of man in creation.

Under God, a divine purpose, in which our lives may by grace participate, runs through the chronological sequence of time. And because of God's love and power, no evil, whether of fate, sin, or death, can permanently separate our lives from that ultimately significant service

In Christian faith, concrete finite existence is given an eternal meaning which does not absorb but enhances the uniqueness of an individual person. A finite individual person, with all his peculiar talents, is not only freed from the terrors of contingency, the distortions of sin, and the fears of transiency, but also he is used creatively for a significant work in his actual situation. As a creature dependent on his Creator, each man's life in time can become good and meaningful. It is, therefore, finally through his faith in God as redeeming love, and his obedience to God's calling as providential Ruler, that the Christian can experience and understand the real goodness of God's creation. And the concrete meaning of his own creation as a unique individual person is revealed to him only when he finds that unique self restored to its Creator and called to its own peculiar task in God's history.<sup>52</sup>

The dependence of man - indeed, all of creation - upon the sustaining work of the Creator is emphasized again and again in Scripture. This theme is so important to biblical people that really very little, in comparison, is said about the particulars of man's task as steward of creation. The emphasis is almost always on the initiating activity of God and the appropriate response of obedience

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<sup>51</sup> John N. Black, The Dominion of Man (Edinburgh: Edinburgh University Press, 1970), pp. 48-49.

<sup>52</sup> Gilkey, *ibid.*, p. 309.

by man. But what is the appropriate response of obedience by man the steward? What does it mean to "have dominion" or "cultivate and keep" the earth? Although the Bible does not provide us with a program for "creation management" (that is man's task as steward), it does provide us with a vision of the principles and values of proper stewardship.

#### THE BIBLICAL VIEW OF STEWARDSHIP

What does it mean to "have dominion . . . over the earth"? One man's answer to this question, which is pictured in the following account, is not unusual, indeed, it may reflect a common notion.

Gavin Maxwell, the well-known writer of books about otters, described, in an article in the Observer for October 13, 1963, how he lost two lovely otter cubs brought back from Nigeria: "A minister of the Church of Scotland, walking along the foreshore with a shotgun, found them at play by the tide's edge and shot them. One was killed outright, the other died of her wounds in the water. The minister," added Maxwell bitterly, "expressed regret, but reminded a journalist: 'The Lord gave man control over the beasts of the field . . . .'"<sup>53</sup>

Putting aside the apparent violation of private property, does dominion entail license or responsibility in exercising our physical, technological powers in creation? And if not license, but rather responsibility is called for, then what does responsible dominion entail? Recent studies on this fundamental biblical and environmental question have begun to unearth a biblical vision of humankind as stewards of God's creation. Moreover, exegetical and word

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<sup>53</sup>C. F. D. Moule, Man and Nature in the New Testament (Philadelphia: Fortress Press, 1967), p. 1.

studies are providing the necessary foundation for understanding key words and concepts, such as: dominion or rule (radah) and stewardship (oikonomia).<sup>54</sup> More work, however, remains to be done in systematizing a technology and philosophy (ethic) of stewardship which addresses contemporary problems.<sup>55</sup>

The concept of stewardship appears to have been rediscovered around the turn of the century by the Protestant churches in the United States. At first it was restricted to mean tithing or service within the church and its congregational life. The concept slowly broadened and the United Stewardship Council of the Churches of Christ in America was formed in 1920. The council, after considering 150 suggestions, produced a definition of stewardship in 1946, which read;

Christian stewardship is the practice of systematic and proportionate giving of time, abilities, and material possessions, based upon the conviction that these are trusts from God to be used in his service for the benefit of all mankind in grateful acknowledgment of Christ's redeeming love.<sup>56</sup>

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<sup>54</sup>Economists will no doubt recognize oikonomia for as John Reumann notes, "From this term oikonomia, which views the cosmos as a well-organized city-state (polis) or household (oikos), we get our term 'economics,' denoting the management of this (cosmic) household." See his book *Creation and New Creation*, p. 11.

<sup>55</sup>Our lack of a robust theology of stewardship is, of course, partially due to the newness of perceived environmental problems, but more importantly due to the heavy theological emphasis on redemption to the exclusion of creation since the Enlightenment.

<sup>56</sup>Helge Brattgard, God's Stewards: A Theological Study of the Principles and Practices of Stewardship, trans. Gene J. Lund (Minneapolis: Augsburg, 1963), p. 5.



This definition was soon criticized for implying that stewardship was simply a function of "giving" rather than a "God-man relationship of a total nature . . . ." <sup>57</sup> Subsequent studies further broadened the concept and produced more inclusive definitions. For example, from three early, prominent writers on stewardship:

No area of his [man's] existence is excluded from the claims of Christ upon him. Because the Lordship of Christ includes everything - both in heaven and earth - all of life is sacred . . . . When Paul said, "Whatsoever ye do, do all to the glory of God" (1 Cor. 10:31), he made specific mention of the everyday need of eating and drinking . . . . in the language of the New Testament, stewardship means, simply, to be a worker together with Christ (2 Cor. 6:1). <sup>58</sup>

Acknowledgment of the absolute sovereignty of God and of the instrumental nature of the things he has created leads to another basic thought of stewardship; the thought of responsible trusteeship. We are neither the lords of creation nor slaves of "the elemental spirits of the universe" [Col. 2:8] but stewards to whom the Creator and Owner of all things has entrusted what belongs to him for the realization of his purpose with regard to it. <sup>59</sup>

. . . stewardship is concerned with nothing less than man's responsibility to God as he participates in the whole technological-industrial-distributional system of his environment context. For stewardship is the active recognition of the sovereignty of God over his whole creation; over the creative and productive processes in which men share and the uses to which they put all

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<sup>57</sup>Ibid.

<sup>58</sup>A. C. Conrad, The Divine Economy: A Study in Stewardship (Grand Rapids: Eerdmans, 1954), pp. 122, 157-58.

<sup>59</sup>T. A. Kantonen, A Theology for Christian Stewardship (Philadelphia: Muhlenberg Press, 1956), p. 36.

of the resources and means that come under their care and control.<sup>60</sup>

Thus, the biblical concept of stewardship has grown from a limited notion of individual tithing for the support of the local church into a fairly inclusive view of responsible living under the sovereignty of God. And yet, as T. K. Thompson notes, our understanding of stewardship has not progressed very far if it simply means "the practice of the Christian religion," however true that may be.<sup>61</sup> It would be helpful if we could begin to discern between responsible and irresponsible stewardship; for who today is not calling for "responsible and wise use of our environment?"

#### Stewardship as Responsible Dominion Over Creation

In a study of the Hebrew root word radah (dominion or rule), James Limburg observes that the word, as used outside of Gen. 1:26-28, always denotes human relationships. For example, it is used as the rule of a king over his subjects (1 Kings 4:24; Ps. 72:8; Ezek. 34:4); a master over a hired servant (Lev. 25:43); chief officers over laborers (1 Kings 5:16).<sup>62</sup> He suggests that a "king/people

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<sup>60</sup>Albert Terrill Rasmussen, "Stewardship in an Economy of Abundance," in Stewardship in Contemporary Theology, ed. by Thomas K. Thompson (New York: Association Press, 1960), p. 232.

<sup>61</sup>Thomas K. Thompson, "The Praxis of Stewardship in North America," in Christian Stewardship in Ecumenical Confrontation (New York: National Council of the Churches of Christ in the U.S.A., 1961), p. 28.

<sup>62</sup>James Limburg, "What Does it Mean to 'Have Dominion Over the Earth'?" Dialog 10 (1971) pp. 221-23. Cf. Claus Westermann, *ibid.*, pp. 51-53.

relationship provides the model for understanding the man/earth-and-its-creatures relationship as portrayed in Genesis 1:26-28."<sup>63</sup> Two of the texts cited provide first a positive, then a negative description of the proper rule of a king over his people. The first text reads:

May he judge Thy people with righteousness,  
And Thine afflicted with justice . . . .  
May he vindicate the afflicted of the people,  
Save the children of the needy,  
And crush the oppressor . . . .  
For he will deliver the needy when he cries for help,  
The afflicted also, and him who has no helper,  
He will have compassion on the poor and needy,  
And the lives of the needy he will save.  
He will rescue their life from oppression and violence;  
And their blood will be precious in his sight . . . .  
(Ps. 72:2, 4, 12-14)

Contrary to those who think the biblical injunction "have dominion" means arrogant, despotic, tyrannical exploitation, Psalm 72 describes the dominion of the king as judging with righteousness and justice which results in saving the oppressed and needy and crushing the oppressor.<sup>64</sup>

The second text, which provides a negative example of kingly rule, is an indictment brought against the kings of Israel who were not shepherding the people,

Woe, shepherds of Israel who have been feeding themselves!  
Should not the shepherd feed the flock? You eat the fat  
and clothe yourselves with the wool, you slaughter the fat  
sheep without feeding the flock. Those who are sickly

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<sup>63</sup> Ibid., p. 222.

<sup>64</sup> Three examples of misunderstood notions of dominion are: Lynn White, *ibid.*, p. 1205; Ian L. McHarg, Design With Nature (Garden City, N.Y.: The Natural History Press, 1969), p. 26; and Hugh H. Macaulay and Bruce Yandle, Environmental Use and the Market (Lexington, MA: Lexington Books, 1977), pp. 7-8.

you have not strengthened, the diseased you have not healed, the broken you have not bound up, the scattered you have not brought back, nor have you sought for the lost; but with force and with severity you have dominated them. (Ezek. 34:2b-4)

Limburg concludes that radah, as employed by the author of Genesis 1:26-28, in no way implies domination or exploitation.

To rule with "force and harshness," i.e., to exploit rather than to care for, is to misrule! . . . to "have dominion" over the earth and its creatures . . . . man is called to exercise responsible care for the fish, the birds, the cattle, that which creeps on the earth, even the earth itself.<sup>65</sup>

#### A Moral Relationship Between Man and Creation

Further light has been shed upon this biblical view of the steward as a shepherd-king by the recognition of a moral relationship between man and creation. Among the relevant texts the classic is the encounter between God and a disobedient Adam in Genesis 3:17-19 where creation itself suffers as a result of man's sin. A second well known text is Isaiah 11:5-9 where, apparently in response to the wise and righteous ruler from Jesse's stock, nature is blessed with a harmony of peaceful relationships.<sup>66</sup> Another vivid example is Hosea 4:1-3 where deception, murder, stealing, adultery and violence have

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<sup>65</sup> Limburg, *ibid.*, p. 223. Cf. Eichrodt, *ibid.*, p. 127; Eric C. Rust, Science and Faith: Towards a Theological Understanding of Nature (New York: Oxford University Press, 1967), pp. 307-8; Emil Brunner, Christianity and Civilization, 2 vols. (London: Nisbet and Co., 1948-49) vol. 1 (1949), p. 89; Hugh Montefiore, Can Man Survive? (London: Fontana, 1970), pp. 55, 71-72; and Carl E. Braaten, Christ and Counter-Christ: Apocalyptic Themes in Theology and Culture (Philadelphia: Fortress, 1972), pp. 129-31.

<sup>66</sup> Moule, *ibid.*, pp. 5-6.

replaced faithfulness, kindness and knowledge of God, thus causing all parts of creation to suffer.

Therefore the land mourns,  
And every one who lives in it languishes  
Along with the beasts of the field and the  
birds of the sky;  
And also the fish of the sea disappear. (Hosea 4:3)

For a final example from the Old Testament, Rust observes that the promised land of Israel was wed to God:

"Beulah" land, married to Yahweh, just as they themselves were Yahweh's people [Isa. 62:4] . . . . So long as Yahweh is with His people and they are not cut off from Him by sin, so long Israel will be Beulah land; but when they are cast off and forsaken, it becomes "Desolate" . . . .<sup>67</sup>

The most striking example of this thought found in the New Testament occurs in Romans 8. Moule paraphrases Rom. 8:19-23:

For creation, with eager expectancy, is waiting for the revealing of the sons of God. For creation was subjected to frustration, not by its own choice but because of Adam's sin which pulled down nature with it, since God had created Adam to be in close connection with nature. But the disaster was not unattended by hope - the hope that nature, too, with man, will be released from its servitude to decay, into the glorious freedom which characterizes man when he is a true and obedient son of God. For, up to the present time, we know that the whole of creation joins together in common groaning and agony; and not only creation in general, but we Christians too - even though we have the Holy Spirit as a foretaste of that hope - groan inwardly in

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<sup>67</sup>Eric C. Rust, Nature and Man in Biblical Thought, Lutterworth Library (London: Lutterworth Press, 1953), vol. 40, p. 51. Cf. Eichrodt, *ibid.*, p. 119. The biblical texts cited are only a few of many where man's sin results in the land being defiled, for example: Deut. 24:4; Lev. 18:25-28; 20:22; Jer. 2:7; 3:1f.; 16:18; Ezek. 36:17f.

our longing for that adoption as sons which means the release of our bodily existence from decay . . . .<sup>68</sup>

A summary statement by Rust provides an overview of the biblically perceived moral relationship between man and creation.

The relation of the people to God is reflected in their relation to, and in the state of, the natural order in which their life is lived. Let man sin, and the whole cosmos turns against him. Let man reject the living God and his judgment is reflected in the way in which the natural order hits back at him . . . . A lack of concern for his fellows and the divine plan of fellowship leads to a lack of harmony in the whole universe, in which the balance of nature is upset and in which nature itself becomes the medium of the divine judgment upon a sinful civilization or people.<sup>69</sup>

The conclusion to be drawn is that man, called to be a steward of creation, can and does reject his calling to the peril of creation including his own good life. He rejects it by denying his dependence upon the Creator. He rejects it by "worshipping" the creation (natural or man-made) and thereby becoming spiritually dependent upon

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<sup>68</sup>Moule, *ibid.*, p. 10. For similarity cf. Robinson, *ibid.*, pp. 31-32. Reflecting on Romans 8, Joseph Sittler says, "One is not falling into words only in sentiment or poetic fancy but extrapolating from a clear theological position when he makes the affirmation that Christianly Lake Michigan must be regarded as 'groaning in travail, waiting to be set free from its bondage of decay.' . . . A proper doctrine of creation and redemption would make it perfectly clear that from a Christian point of view the ecological crisis presents us not simply with moral tasks but requires of us a freshly renovated and fundamental theology of the first article whereby the Christian faith defines whence the Creation was formed, and why, and by whom, and to what end." "Ecological Commitment as Theological Responsibility," Zygon 5 (June 1970), p. 179.

<sup>69</sup>Rust, Nature and Man in Biblical Thought, *ibid.* For similarity cf. Moule, *ibid.*, pp. 13-14; and Robinson, *ibid.*, pp. 31-32.

it rather than upon the Creator. Man can be a steward and exercise dominion over creation only as he is spiritually (although, not physically) independent of it. To be a steward is to be free from the dread of a contingent creation; it is to know, with Job, that in the Lord's hand, "is the life of every living thing, and the breath of all mankind (Job 12:10)."

### God's Sovereignty and Ownership

Job recognizes, as his friends have not, that the Creator is not only transcendent, but also the sovereign "giver and maintainer of life . . . . Job is not the cosmic housekeeper. God is."<sup>70</sup> A partial understanding of God's sovereignty over creation vis-a-vis man's stewardship, is that God retains complete ownership of creation.<sup>71</sup>

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<sup>70</sup> James M. Houston, I Believe in the Creator (Grand Rapids: Eerdmans, 1980), pp. 197-98.

<sup>71</sup> Indeed, only a partial understanding is possible because in Houston's words (pp. 196-99), "The mystery of the meaning of creation is God's, and man can never fully explore it. This is eloquently described in the didactic poem of Job 28. Man as Homo faber can accomplish incredible feats . . . . But the most precious reality of all is the mystery of creation, which he will never discover by his own unaided skills. Only God knows its place and purpose. It is beyond the reach of man. Thus to say the creation is ordered and meaningful . . . is not to say it is fully understandable . . . . the writer of Ecclesiastes, Qoheleth, points out that the created world cannot be an end in itself. This is the 'vanity of vanities' . . . to assume that man can absolutise any created things as if it were God the Creator, or as if it were a compensation for His absence . . . . So Job's repentance lies in accepting once again that he is only a creature, who can trust the Creator when he cannot know His ways."

It is the Creator's prerogative to declare:  
 "The world and all that is in it is mine  
 [Ps. 50:12]"; "Every beast of the forest is  
 mine, the cattle on a thousand hills [Ps. 50:10]";  
 "The silver is mine, and the gold is mine [Hag. 2:8]."  
 If God is God, then man can actually never own  
 anything.<sup>72</sup>

Brattgard calls into question a modern view of "our possessions" in contrast to Luther's view.

Modern man is often said to believe in the good God who is Creator of all . . . . But to do this, according to Luther, one must live his life as a steward. It is thus that one recognizes his total dependence upon the Creator, at the same time that he permits his gifts to go through his hands in order to serve others and to praise God. This kind of faith excludes the egotistical ideas that there is something which really belongs to man, which he has at his own disposal.<sup>73</sup>

Also questioning a modern view of possessions, Quanbeck comments on the so-called "stewardship parables" of Jesus.

The teaching of Jesus in these parables differs radically from our viewpoint today. It is first of all a denial of man's autonomy, of his freedom and competence to manage his own affairs. Man owns nothing at all in the biblical view, not even his own life. He has been placed in the world through God's sovereign freedom, is maintained in life and health through God's sustaining goodness, and possesses all that he has as a trust from his Creator. Man's presumption of autonomy is not a sign of his peculiar glory as the crown of creation, as is often supposed in liberal humanism, but rather an expression of his sin, of the egocentricity that separates him from God and flaws his life. Man is most truly

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<sup>72</sup> Kantonen, *ibid.*, p. 33.

<sup>73</sup> Brattgard, *ibid.*, p. 142. Also see his comments (p. 86) on the sabbatical year and the year of jubilee which were "of special assistance to the Israelites who were to live in a right relationship to property and ownership . . . ."



himself, not when he struts about in pride of ability and possession, but when he sees himself as a creature of God and submits to the will of his Creator which is his true happiness.<sup>74</sup>

Needless to say, few moderns - Christians or otherwise - manage their possessions or property as gifts from God who remains absolute owner. That is to say, the biblical concept of stewardship, for the most part, is not in operation either individually or institutionally. More important than the question of what extent it may or may not be presently operative, however, is the question: how would it affect our economic theory of "optimal" resource allocation? As we will see in the next chapter, a biblical theory of stewardship - as a normative foundation for our economic theories of value, welfare, and "optimal" allocation - has some radical implications for neoclassical economic theory founded on individualistic, subjectivistic premises.

### Conclusion

The biblical goal and task for man in relation to creation is to be God's steward. He is given the responsibility of discerning, developing and exercising dominion over the earth that it might not be a "waste place, but rather be inhabited" (Isa. 45:18). Lynn White

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<sup>74</sup>Warren A. Quanbeck, "Stewardship in the Teachings of Jesus," in Stewardship in Contemporary Theology, *ibid.* pp. 47-48. For similar conclusions about the absolute ownership of property by God and the relative rights of stewardship of man, cf., Black, *ibid.*, p. 60; Brunner, *ibid.*, p. 95; Conrad, *ibid.*, pp. 156-57; Denys L. Munby, Christianity and Economic Problems (London: Macmillan, 1956), p. 37; and Richard L. Scheef, Jr., "Stewardship in the Old Testament," in Stewardship in Contemporary Theology, *ibid.* pp. 19-20.

has argued that our ecological crisis is spiritual; but the crisis is not - as he believes - due to the biblical vision of man's dominion over creation. Just the opposite; it is due to the lack of such a vision; a vision of man's dominion as a stewardship of the welfare of all creation.

Although the Bible reveals that man is to be the steward and not the owner - fundamentally responsible to and dependent upon the Creator not the creation - it does not reveal a ready-made set of "Christian" political and economic institutions. This is not to say, however, that any institution or relationship is as good as another. It is to say that perfect institutions, as well as, perfect knowledge are as common as perfect human beings. Consequently, the steward is not called to ground his faith and hope in institutions or individuals but in God. And yet, Scripture is rife with principles for doing good and ruling wisely, but lest we slip into a simplistic, reductionistic view of biblical wisdom and its vision of stewardship let us be reminded of this fallacy in Job's friends. As Houston notes:

Unlike Proverbs, which teaches that there are ordinances that are useful in gaining wisdom, the book of Job teaches that to live in a meaningful world one needs to cultivate proper attitudes rather than depend upon simple answers. Relating to God is more profound than knowing about God . . . . The mystery of the meaning of creation is God's, and man can never fully explore it [cf. Job 28] . . . . The mistake made by Job's three friends . . . is to reduce God to workable definitions, so that they depend on systems of knowledge and belief, not the living Creator.<sup>75</sup>

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<sup>75</sup> Houston, *ibid.*, pp. 196-97.

In other words, the steward is not called to do what only the Creator can do, that is, inaugurate and complete his kingdom. The Christian's hope is a New Heaven and New Earth wherein God will dwell with his people (Rev. 21:1-2). Nevertheless, our calling as we live in the "between times" is to live as signs of the coming kingdom which, indeed, becomes an annunciation, anticipation, and even an approximation of God's eschatological kingdom.<sup>76</sup>

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<sup>76</sup>Carl E. Braaten, Eschatology and Ethics (Minneapolis: Augsburg Publishing House, 1974), pp. 109-11.

## CHAPTER 4

### SOME IMPLICATIONS OF STEWARDSHIP FOR ECONOMIC THEORY AND POLICY

A biblical theory of humankind's stewardship of a good and valuable creation has recently begun to emerge as a model for human valuation and choice. The theory reaffirms a long-standing Hebrew-Christian tradition: "that creation exists to glorify God, not to provide happiness to human beings;"<sup>1</sup> and "that man is not so much the possessor of the world as a tenant on his Master's estate."<sup>2</sup> It follows that the general purpose of mankind as tenant is to manage the estate according to its general purpose: to glorify its Creator. To fully determine how creation might be managed, in order to glorify the Creator, is neither a task for the fainthearted nor for a single dissertation. A much more manageable endeavor is the following: First, contrast neoclassical economic theory's subjective view of value with a stewardship theory of objective value. Second, determine whether or not the normative premises and conclusions of Pareto optimal allocation of natural resources are compatible with stewardship premises and conclusions. Third, contrast the so-called new

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<sup>1</sup>Roger L. Shinn, "Calvin Revisited, Revised," Christianity and Crisis 42 (July 12, 1982), p. 219.

<sup>2</sup>R. V. Young, Jr., "A Conservative View of Environmental Affairs," Environmental Ethics 1 (Fall 1979), p. 254.

economic theory of property rights with a stewardship approach to property. Fourth, in the last chapter (Chapter 5), show how a stewardship theory of objective value calls for an allocation of resources different from neoclassical theory in the specific area of renewable resources and the extinction of species. Before embarking on this task it will be helpful to begin by defining some crucial terms.

#### OBJECTIVE AND SUBJECTIVE VALUE

Georgescu-Roegen, in his article on "Utility,"<sup>3</sup> points to four different views of value in its long and tortuous history. First, the position of the "ancient Greeks" was that value is "an intrinsic quality of the object of value and a subjective evaluation by the user."<sup>4</sup> Second, moving away from the Greek view,

economic thought was dominated for centuries by commodity fetishism: "the value of a thing lies in the things itself," as we find it frankly stated by J. B. Say. . . . value is determined by the amount of labor crystallized in the commodity.<sup>5</sup>

The third view,

a reaction against commodity fetishism . . . swung to the opposite extreme: "A thing does not have

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<sup>3</sup>Nicholas Georgescu-Roegen, "Utility," in International Encyclopedia of the Social Sciences, ed. by David L. Sills (New York: The Macmillan Co. and The Free Press, 1968), vol. 16, pp. 236-67.

<sup>4</sup>Ibid., p. 237.

<sup>5</sup>Ibid.

value because, as it is assumed, it costs; but it costs because it has value [in use], "as Condillac . . . was to summarize the position . . . ."<sup>6</sup>

The fourth view is, of course, our contemporary utility theory, where, "in value, utility and scarcity (both in their modern meanings) are linked together through the whole economic process."<sup>7</sup>

Presumably, the "modern meaning" of utility is a subjective, individual view of pleasurable or desirability. This is not, however, the only possible meaning of utility. De Roover writes that San Bernardino of Siena developed a theory of value that included scarcity and two views of utility:

value is composed of three elements: (1) usefulness (virtuositas); (2) scarcity (raritas); and (3) pleasurable or desirability (complacibilitas) . . . . Virtuositas is, he explains, a virtue, or property, inherent in the goods themselves, of satisfying, either directly or indirectly, human wants. It may, therefore, be defined as objective utility. Complacibilitas is undeniably a subjective factor which depends upon the mood and preferences of the consumer . . . .

The distinction between virtuositas and complacibilitas, objective and subjective utility, in my opinion, is quite a fruitful idea and it is perhaps regrettable that modern economists did not accept it, with the result that they became involved in hedonism and pleasure-pain calculus.<sup>8</sup>

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<sup>6</sup>Ibid.

<sup>7</sup>Ibid.

<sup>8</sup>Raymond De Roover, San Bernardino of Siena and Sant'Antonino of Florence (Boston: The Kress Library of Business and Economics, 1967), p. 18.

San Bernardino's distinction between objective (virtuositas) and subjective (complacibilitas) utility is helpful because it points to the further distinction between objective and subjective value. Frankena clearly differentiates between the two:

'Value' . . . is often used (a) to refer to what is valued, judged to have value, thought to be good, or desired. The expressions 'his values,' 'her value system,' and 'American values' refer to what a man, a woman, and Americans value or think to be good . . . . Behind this widespread usage lies the covert assumption that nothing really has objective value, that 'value'<sup>9</sup> means being valued and 'good' means being thought good.

This is the meaning of 'subjective value' as it is used in this dissertation. Something has value if a human subject deems it so. Something has value because it is so valued, the reverse is not true; thus we would not say that something is valued because it has value (according to the subjective definition). To say this, Frankena explains, would be a way of defining 'objective value.'

But the term 'value' is also used to mean (b) what has value or is valuable, or good, as opposed to what is regarded as good or valuable. Then 'values' means 'things that have value,' 'things that are good,' or 'goods' and, for some users, also things that are right, obligatory, beautiful, or even true.<sup>10</sup>

Thus, if something is objectively valuable it is so regardless of human valuation. Human valuation of objective values can produce conclusions that are either right or wrong. Since, our knowledge of

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<sup>9</sup>William K. Frankena, "Value and Valuation," in The Encyclopedia of Philosophy, ed. by Paul Edwards (New York: The Macmillan Co. and The Free Press, 1967), vol. 8, p. 230.

<sup>10</sup>Ibid.

objective value is itself objective, in the same way that theoretical knowledge is objective, it may be either correct or mistaken. Thus, like all human objective knowledge, knowledge of creation's objective value is believed to be true, even though we know that it might conceivably be false.<sup>11</sup> Our knowledge of the objective value of creation may be false precisely because objective value does not derive from our individual subjective preferences. It is entirely different from individual subjective valuation. Individual subjective preferences themselves cannot be correct or incorrect; only the individual may be correct or incorrect about what his subjective preferences really are. He may be mistaken about his preference for vanilla rather than chocolate ice cream, but his preference itself cannot be mistaken, it is whatever it is.

The idea of creation having objective worth is not peculiar to a biblically based theory. Other religious and non-religious theories of the "inherent-intrinsic value" of nature are emerging which argue,

that there is something morally objectionable in the destruction of natural systems, or at least in their wholesale elimination, and this is precisely the belief that natural systems, or economically "useless" species do possess an intrinsic value. That is, it is an attempt to articulate the rejection of the anthropocentric view that all value ultimately, resides in human interests and concerns.<sup>12</sup>

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<sup>11</sup> This material draws heavily from Michael Polanyi, Personal Knowledge (Chicago: The University of Chicago Press, 1962).

<sup>12</sup> William Godfrey-Smith, "The Value of Wilderness," Environmental Ethics 1 (Winter 1979), p. 312. See also, for example, J. Baird Callicott, "Elements of an Environmental Ethic: Moral Considerability and the Biotic Community," Environmental Ethics 1 (Spring 1979), pp. 71-81; Charles Y. Deknatel, "Questions About Environmental Ethics -



The practical outcome of this theory of intrinsic value would be institutional changes which recognize such value. Laurence Tribe announces his intentions in this regard:

I propose giving institutional expression to the perception that "nature exists for itself" by taking steps to recognize "rights" in natural objects, not as a way of broadening the class of wants to be aggregated by a utilitarian calculus, but rather as part of a structure for approaching a shared agreement about our responsibilities as persons - responsibilities to one another and to the world.<sup>13</sup>

Consider the similar approach, taken by Earl Murphy, to use the institution of property rights to incorporate nature's intrinsic worth into our environmental decisions.

There must be a way to locate within human institutions as the rules of property the perception of a worth in nature requiring protection from human demand and having importance independently of any conferral of value by human activity . . . .

The rules of property and the bureaucratic mechanism may set the constraints, so that no demand generating activity can act independently of such limits.<sup>14</sup>

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Toward a Research Agenda with a Focus on Public Policy," Environmental Ethics 2 (Winter 1980), pp. 353-62; Paul W. Taylor, "The Ethics of Respect for Nature," Environmental Ethics 3 (Fall 1981), pp. 197-218; and Holmes Rolston III, "Are Values in Nature Subjective or Objective?" Environmental Ethics 4 (Summer 1982), pp. 125-51.

<sup>13</sup>Laurence H. Tribe, "Ways Not to Think About Plastic Trees," in When Values Conflict, ed. by Laurence H. Tribe, Corinne S. Schelling, and John Voss (Cambridge, MA: Ballinger Publishing Co., 1976), p. 62.

<sup>14</sup>Earl F. Murphy, Nature, Bureaucracy and the Rules of Property: Regulating the Renewing Environment (Amsterdam: North-Holland Publishing Co., 1977), p. 203.

And finally, Robert Dorfman speaks of the need for environmental policy analysis to include "higher values" that "transcend the economic calculus." He also argues that these values are objectively knowable and can be agreed upon, but not proved as though they were merely the valid conclusions of a simple syllogism.

For higher values to be integrated into a policy analysis there must be widespread agreement about them - or at least about the qualities to be sought in the process for arriving at such substantive value agreement. Fortunately, in any society there is often such agreement, though this circumstance is frequently denied. The denial arises from confusing what is "objectively provable" with what is generally agreed. The fact that there is no way to "prove" that denuding forests is bad is perfectly consistent with universal agreement that it is bad . . . . In the environmental field, the road to wisdom is a decision process that forces explicit recognition that the environment has values that transcend the economic calculus.<sup>15</sup>

Although Dorfman does not clearly explain or define these "higher values" that "transcend the economic calculus," as we will see, it is objective values that transcend the subjective valuation of neo-classical economics.

#### SUBJECTIVE VALUE AND NEOCLASSICAL ECONOMICS

Modern neoclassical economists, whether empiricists or a priori rationalists - with all their epistemological differences - generally agree that economics is the study of individuals whose actions aim to

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<sup>15</sup> Robert Dorfman, "An Afterword: Humane Values and Environmental Decisions," in When Values Conflict, ed. by Laurence H. Tribe, Corinne S. Schelling, and John Voss (Cambridge, MA: Ballinger Publishing Co., 1976), pp. 167-73.

maximize their utility (expected). For the empiricist this is an observed fact about individuals. For the rationalist, it is somehow known a priori. For those economists between these extremes, it may be either an assumption or a tautology. Regardless of their broad epistemological differences, they generally agree that the subject matter of economic science is individuals who attempt to maximize their utility. They also tend to agree that whatever utility is, even though seldom defined, it is a function of the individual's subjective preferences or valuations (with a positive first derivative and a negative second derivative). Here is the important difference between "economic man" and a "steward": whereas economic man only values subjectively, the steward's task is to value both subjectively and objectively. For example, the steward, like economic man, chooses between red and green neckties according to his subjective preferences. Unlike economic man, however, he is not to choose between a fancier car and an adequate diet for his family according to his subjective preferences, but rather according to what he believes to be objectively good and proper. Thus, the steward may be willing to sacrifice his subjective preferences and diminish his subjective utility in order to either increase his objective utility or choose according to what he believes to be objectively valuable, or perhaps both.<sup>16</sup>

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<sup>16</sup>The standard rebuttal to this type of example is that the individual chooses to give his family an adequate diet because this is a greater subjective preference for him than is the fancier car, not because it is objectively good to do so. Or, that even though the individual may consider some of his preferences as objectively

The idea of objective value influencing individual choice and action apart from a utility function is foreign to the standard subjective approach as expressed in the following passage by Furubotn and Pejovich:

. . . regardless of the number, character, or diversity of the goals established by an individual decision maker, the goals can always be conceived as arguments in some type of utility function . . . .<sup>17</sup>

Thus, the objective of all individual goals (choices, preferences) is to increase the individual's utility. Utility is usually conceived as subjective utility (but the idea of objective utility would not seem to violate the basic principle). This is the subjective theory of value, where individual utility is the ultimate criterion of value. Such a theory rules out the stewardship idea of the objective value of things, because objective value does not depend upon individual utility for its value.

It is difficult to know who or how many economists subscribe to a subjective theory of value, because it is seldom examined in any detail. Do individuals always make choices according to their desire for utility or do they sometimes sacrifice utility and choose according to an objective value other than their own utility (which may be, of course, objectively valuable)? The passage above by Furubotn and

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grounded and others as not, he still behaves as if he were maximizing a utility function with preferences as arguments, and thus not according to the idea of objective value or good. These views of human behavior, known as Psychological Egoism, are discussed below.

<sup>17</sup>Eirik G. Furubotn and Svetozar Pejovich, "Property Rights and Economic Theory: A Survey of Recent Literature," Journal of Economic Literature 10 (December 1972), p. 1138.

Pejovich seems to imply all choices are and can be (can only be?) explained in terms of utility and self-interest. On the other hand, Heilbroner and Thurow seem to say something different.

Economic theory is therefore a study of the effects of one aspect of human behavior as it motivates people to undertake their worldly activities. Very often, as economists well know, other aspects will override or blunt the acquisitive, maximizing orientation . . . . [But] economists do not think that political or religious or other such motives regularly overwhelm maximizing behavior.<sup>18</sup>

Nor does Frank Knight believe that all valuation is based on our preferences or desires.

People report and feel two different types of motivation for their acts. There is the wish or preference which is treated by the actor and by outsiders as final, as a brute fact. On the other hand, people make value judgments of various sorts in explanation of their acts; and explanation runs into justification. In other words, no one can really treat motive objectively or describe a motive without implications of good and bad. Thus not only do men desire more or less distinctly from valuing, but they desire because they value and also value without desiring. Indeed the bulk of human valuations, in connection with truth, beauty and morals, are largely or altogether independent of desire for any concrete thing or result.<sup>19</sup>

The most extreme interpretation of the Furubotn and Pejovich passage is that individuals are psychologically incapable of doing anything but promoting their own self-interest. This subjectivist

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<sup>18</sup>Robert L. Heilbroner and Lester C. Thurow, The Economic Problem, 6th ed. (Englewood Cliffs: Prentice-Hall, 1981), p. 87.

<sup>19</sup>Frank H. Knight, "Value and Price," Encyclopedia of the Social Sciences, ed. by Edwin R. A. Seligman (New York: The Macmillan Co., 1934), vol. 15, p. 221.

theory, called Psychological Egoism,<sup>20</sup> has some serious flaws as a scientific theory. According to this theory, for example, the individual who says that he helped the little old lady across the street because it was the proper or good thing to do, is deceiving himself with artificial moral rhetoric. The theory argues that if we dig beneath this rhetoric we will find the true motives to be a sense of personal pride or righteousness, or, at the very least, the avoidance of social criticism or guilt feelings.<sup>21</sup> The problem with this theory is that rather than rationally explaining the motives of such behavior, it results in a paradoxical relationship between the motives and the behavior; as explained by Murphy:

It is indeed true that men sometimes feel good about or proud of performing unselfish acts. But the good feeling comes only because of the perception that our act was not motivated selfishly, not motivated by the desire for the good feeling. If it had been, then there would be nothing to feel good about, nothing to be proud of.<sup>22</sup>

At the root of the problem with this theory is its failure to distinguish between two distinctly different meanings of an individual's desires.<sup>23</sup> The first meaning is that everything we do (freely),

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<sup>20</sup>Jeffrie G. Murphy, "The Possibility of Moral Philosophy," University of Arizona, Philosophy Department (Mimeographed), p. 26; and William K. Frankena, Ethics (Englewood Cliffs, N.J.: Prentice-Hall, 1963), p. 19.

<sup>21</sup>*Ibid.*

<sup>22</sup>*Ibid.*, p. 28.

<sup>23</sup>P. H. Nowell-Smith, Ethics (London: Penguin Books, 1954), p. 142, offers the following explanation of the two different uses of "desires." "It is a tautology that all my desires, inclinations, wantings, likings, and enjoyments are mine; but it is a plain falsehood that what I desire, like, want, or enjoy is necessarily my own

we do because we want or desire to do it. This merely means that our actions are explained in terms of our wants or desires. "I did X because I desired to do X." That is all the first meaning of desire means. Desire in this sense tells us nothing about the motives behind our desired actions. The second meaning of desire concerns our motives. Some of the things we do, we do with ourselves (self-interest, utility, pleasure, etc.) as the object of our desires. "I did Y because I desired to benefit myself." Y is the type of goal that can be included in a utility function because the objective of Y is the individual's utility. Whereas all our actions or choices are determined by our desire to do them (first meaning), that does not necessarily mean that we are the object of our desires (second meaning). "I did X because I desired to do good," cannot - without introducing a paradox - be reduced to an argument in an individual's utility function. X may or may not give the individual utility. Even if X does result in utility for the individual, it is difficult to see how it could be conceived as an argument in a utility function since its objective was not utility. To include X in a utility function is to introduce the paradox explained above.<sup>24</sup> The objective of the arguments in a utility function is utility, but the objective of X is its intrinsic, objective value. To include X in a utility

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pleasure or my own anything else; and it is also a plain falsehood that a man who does what he wants to do or 'acts from inclination' always acts selfishly."

<sup>24</sup>That is, it is impossible to derive utility from an objectively good act, which of itself offers no utility to the individual, if the act is done merely to gain utility.

function is to deny its objective value, but there is no good reason for doing this other than merely asserting that all actions are done to maximize utility. Rather than asserting either a tautological theory (we do what we desire), or a theory of Psychological Egoism, the neoclassical economist could agree with Heilbroner and Thurow, "Very often, as economists well know, other aspects will override or blunt the acquisitive, maximizing orientation."<sup>25</sup> Which of these positions is predominant among economists is most difficult, if not impossible to discern, because these fundamental aspects of the subjective theory of value as utility are seldom discussed. Let us then discuss them.

The subjective theory of value as utility is, of course, based on the work of the great Austrian economists: Carl Menger, E. von Bohm-Bawerk, and Friedrich von Wieser. The genius of their work is evidenced by its ability to convince economists that a subjective theory of value would best explain the workings of the market place. It was, however, with some reluctance that the classical economists relinquished their "costs of production" theory of value and prices or exchange value as a measure of welfare. Jacob Viner charges Alfred Marshall, among others, with such a reluctance.

In several notable instances economists who have formally accepted the utility analysis but were not well disposed toward a calculus in subjective terms have found irksome its questioning of the validity of objective measurement of welfare, and by minimizing, on one pretext or another, the degree of conflict between analysis in utility terms and analysis in objective terms . . . have succeeded in

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<sup>25</sup>Heilbroner and Thurow, *ibid.*, p. 87.



reverting to measurement of welfare in terms of price, while retaining the language and the superficial appearances of subjective measurement.<sup>26</sup>

The Austrian subjective theory of value, besides successfully challenging classical economic value theories, withstood a challenge from another subjective theory: B. M. Anderson's theory of "social value." Anderson argued against both the classical and the Austrian schools.

Value as treated by the cost theories, or value as a sum of money costs, is a blind thing, a product rather than an end, and fails utterly as a guiding, motivating principle for economic activity. It is the merit of the Austrian School to have pointed this out. But the abstract individual factors which the Austrians have established are just as helpless in explaining the motivation of social activity.<sup>27</sup>

Anderson developed a theory where value was seen as a motivating force embodied in the object of value, not the subject. "Here, then, is value 'stripped for racing': a quantity of motivating force, power over the actions of a man, embodied in an object."<sup>28</sup> At first blush this appears to be an objective theory of value, but Anderson is careful to dispel this notion.

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<sup>26</sup>Jacob Viner, The Long View and the Short (Glencoe, Ill.: The Free Press, 1958), p. 201.

<sup>27</sup>B. M. Anderson, Jr., Social Value (Boston: Houghton Mifflin Co., 1911), pp. 198-99.

<sup>28</sup>*Ibid.*, p. 106.

What I wish to insist upon is that no implication, either optimistic or pessimistic, as to the existing social order, can be drawn from the theory defended in this book. Whether or not economic values in particular cases correspond with ethical values, whether or not goods are ranked on the basis of their import for the ultimate welfare of society, and the extent to which this is the case, will depend on the extent to which the ethical forces in society prevail over the antiethical forces. The theory as such is neutral.<sup>29</sup>

This passage alone does not make it clear that Anderson's "social value" is a subjective theory. Coupled, however, with the following passage, "social value" is revealed to be subjective, since it merely replaces the individual with society, as the arbiter of value.

The Austrian theory, and the cost theory . . . all fail alike to lead us to an ultimate quantity of value . . . they abstract the individual mind from its connection with the social whole . . . this abstraction is necessitated by the individualist, subjectivistic conception of society . . . growing out of the skeptical philosophy of Hume . . . present day sociology has rejected this conception of society . . . [making] it possible to treat society as a whole as the source of the values of goods . . . .<sup>30</sup>

Replacing the individual with society is merely to relocate the subjective arbiter in an otherwise subjective theory. Thus, the short battle between the Austrian and "social value" schools was not a battle between subjectivism and objectivism.

In the Austrian defense of subjective value and utility, objective value and utility are defined, more or less, as the physical or mechanical results from using a good.

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<sup>29</sup>Ibid., p. 196.

<sup>30</sup>Ibid., pp. 197-98.

Consider, for example, the following definitions of subjective and objective value offered by William Smart:

Value, in the subjective sense, we may call, generally, the importance which a good is considered to possess with reference to the wellbeing of a person . . . a good is valuable to me when I consider that my wellbeing is associated with or dependent on the possession of it - that it 'avails' towards my wellbeing.

Value, in the objective sense, is a relation of power or capacity between a good and an objective result . . . . Thus while the subjective value of coal to me is the amount of 'good' I get from the fire, its objective value is the temperature which it maintains in the room; . . or the money it brings me if I sell it . . . .<sup>31</sup>

His definition of subjective value is quite in keeping with the normal understanding of a subjective theory of valuation. That is, something has value only in reference to and determined by the subject (in this case individual) and his well-being or utility. His definition of objective value, however, is totally unrelated to objective value as the philosophical countertype to subjective value. Thus, rather than defining objective value, for example, as: "the importance which a good possess intrinsically as a part of a good creation," it is defined as some physical characteristic. To take objective value out of the ethical realm by defining it as a temperature or price is a rather ineffectual way to eliminate the philosophical alternative to subjective valuation. The objective value

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<sup>31</sup>William Smart, An Introduction to the Theory of Value (London: Macmillan and Co., 1926), pp. 5-6. Smart offers no explanation for why the warmth that the individual gets from the fire is not also an "objective result" and thus an objective value or, perhaps better, objective utility.

or utility of particular things or actions or relationships may or may not exist, but it cannot be reduced to either individual subjective value or temperatures or velocities or whatever. Defining away the opposition is always one of the easier but more spurious ways to fight a battle.

Given Smart's initial definition of subjective value there are two logically related definitions of objective value. One is anthropocentric and the other is not. An anthropocentric definition of objective value would read something like: "Value, in the objective sense, is the importance which a good possess with reference to the well-being of a person. A good is valuable to me when my well-being is associated with or dependent on the possession of it - that it avails towards my well-being." The deletion of the phrase, "I consider that," from Smart's subjective definition, causes it to become objective although remaining individualistic or anthropocentric. This definition would accord well with De Roover's definition of objective utility. The individual's well-being has become an objective utility. The individual's well-being has become an objective notion subject to objective definitions of human well-being which may or may not agree with an individual's subjective preferences. In similar fashion, a nonanthropocentric or stewardship definition of objective value might read something like: "Value, in the objective-stewardship sense, is the importance which a thing possesses with reference to the well-being of God's creation. A part of creation is valuable when it is properly functioning and relating to the rest

of creation according to its Creator's good and valuable purposes." Thus, we have at least two very different ways for valuing: subjectively and objectively. How do people value?

The Austrian approach to a theory of value, according to Smart, is based on analysis of actual human conduct. "The theory of value, therefore, must begin with a careful analysis of what the word means in the mouths of ordinary people."<sup>32</sup> From this analysis Smart distills three things about value.

First, that, in probably the great majority of cases, the word has some direct or indirect reference to human life . . . .

Second, that men, as not only imperfect in nature but erring in judgment, have made an easy extension of the term "human life" to cover "human desire," . . . . The economic "want" is not necessarily a rational or a healthy want - and political economy, as primarily analytic, must not be censured for the statement, nor condemned as if it approved of the fact - but simply a want, and the things which satisfy such wants we call "goods." The desirable is interpreted in economics by the desired.

Third, that the element of scarcity somehow plays a large part in many, and seems to have a share in all, estimates of value.<sup>33</sup>

Smart offers no empirical evidence to support his supposed careful analysis from which he claims that "ordinary people" (whoever they are) by and large exhibit a subjective philosophy of value. Even if this were true, it does not follow that those "unordinary people," with apparently an objective philosophy of value, do not count as

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<sup>32</sup>Ibid., p. 9.

<sup>33</sup>Ibid., p. 10.

worthy of economic investigation and theory.<sup>34</sup> What is more likely, is that subjective valuation well describes the behavior of individuals choosing between red and green neckties - "the great majority of cases" - but not between feeding their children and fancier cars, or between electric can openers and the snail darter as a species. Furthermore, Smart's subjectivist "conclusions" (assumptions) lead him to make the dubious statement that in economics, "The desirable is . . . the desired." This is only true if value is subjective; it is certainly false if it is objective.<sup>35</sup>

Continuing his analysis, Smart distinguishes between things valuable and things useful, by noticing that the so-called "free gifts of nature" are useful, but in their abundance, are not considered valuable. From this he concludes:

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<sup>34</sup> A subjective theory of value is a fundamental presupposition of neoclassical economics, a well accepted value judgment. Paul Heyne commenting on the ethical, normative assumptions necessary for scientific inquiry says about economists: "They believe that the value judgments which enter inevitably into scientific inquiry are trivial or ones which all serious inquiries hold in common. But if the claim was ever defensible, it is no longer . . . . Economists are accused of doing economics on the basis of analytical preconceptions that cause them to count as solutions [e.g., subjective valuation] what their critics perceive as problems and that prevent them from even seeing certain social relationships as in any sense problematic." "Economics and Ethics: The Problem of Dialogue," in Belief and Ethics, ed. by W. W. Schroeder and Gibson Winter (Chicago: CSSR, 1978), p. 186.

<sup>35</sup> John Elliott, "Fact, Value, and Economic Policy Objectives," Review of Social Economy 38 (April 1980), p. 8, argues, "The good . . . is not that which we desire, but that which is desirable, not that which we prefer, but that which is preferable . . ."

Evidently Usefulness or Utility is the larger conception of the two, and embraces Value. But if all valuable things are useful, while all useful things are not valuable, value must emerge at some particular limiting point of utility. Value, then, will be based on utility - utility, limited in some particular way, but still utility.<sup>36</sup>

Quoting F. von Wieser, he goes on to conclude:

"Utility and not Value," says Wieser, is "the supreme principle of all economy; where value and utility come into conflict, utility must conquer." The statement is suggestive. The economic goal of civilization is to turn the whole natural environment of man from a relation of hostility or indifference into a relation of utility.<sup>37</sup>

In similar Austrian fashion, Wieser states:

all the utility which goods afford - amounts in the last resort to satisfaction of wants, and the opinion that the value of goods arises from their use may be more exactly stated by saying that it rests upon the satisfaction of wants which they furnish. It is the satisfaction of wants which, in the first instance, has value, or "worth" or "importance" to us. Satisfaction is that which is really desired, and is worthy of desire; and, as we do not desire goods for themselves, but for the satisfaction they give, so do we value them only for that satisfaction. The value of goods is derived from the value of wants . . . .

What it is that gives value to the satisfaction itself we shall not here attempt to explain.<sup>38</sup>

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<sup>36</sup>Smart, *ibid.*, p. 12.

<sup>37</sup>*Ibid.*, p. 13. Thus does the goal of civilization from the perspective of a subjective theory of value as utility contrast with the stewardship goal to cultivate, keep, and replenish a good creation which exists (including ourselves) to glorify God.

<sup>38</sup>Friedrich von Wieser, Natural Value, trans. by Christian A. Malloch (New York: G. E. Stechert and Co., 1930), pp. 6-7, emphasis added. Thus, by avoiding the question of the value of individual preference, Wieser avoids the question of ultimately grounding value in "something which is held to be good or valuable in itself." William Godfrey-Smith, "The Value of Wilderness," Environmental Ethics 1 (Winter 1979), p. 309.

Thus, we are to conclude that "ordinary people" do not desire or value anything, action, or relation because it is good objectively, but only if it avails the individual's subjective wants.

It is a commonplace that value is not inherent in things: it is not so well recognized that neither is utility. There is nothing "useful" except in relation to a being who finds it so, but even the useful is not "of use" if that being has already enough or too much of it.<sup>39</sup>

As with Smart, Wieser appeals to the supposed "commonplace" knowledge that people do not recognize value in creation objectively, but only in reference to human satisfaction. This is a rather obvious methodological ploy to give the impression that "ordinary people" have indeed been analyzed to find out how they make valuations. What is actually being done is to define "ordinary people" as those who value subjectively and "extraordinary people" (non-existent?) as those who perhaps value objectively or both.

Is it extraordinary for an individual to believe that other individuals are valuable, worthy and important parts of creation apart from our individual desires for satisfaction or utility? Is it not a commonplace that value is intrinsic in human beings; that they are objectively valuable as mere human beings irrespective of their usefulness in satisfying another's subjective desires? Is it not ordinary to affirm this philosophical-theological view of human beings and extraordinary to deny it?

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<sup>39</sup> Ibid., p. vii.



Are human beings the only things in creation that violate Wieser's statement: "value is not inherent in things . . . . There is nothing 'useful' except in relation to a being who finds it so?" A theory of stewardship answers no. The recognition of objective value in creation is an affirmation that things have ultimate value in relation to their Creator and to their purposes for existence. In the words of Charles Hartshorne:

My religious faith is in a God who takes delight in the creation. Moreover, I hold that the ultimate value of human life, or of anything else, consists entirely in the contribution it makes to the divine life. Whatever importance we, and those we can help or harm, have is without residue measured by and consists in the delight God takes in our existence . . . .

And I say that, while rational animals make a special contribution to the Summum Bonum, every creature makes some contribution, however humble it may be.<sup>40</sup>

This specifically biblical-stewardship view of objective valuation is not the only basis upon which people ground their objective views of valuation. "Environmental ethics" has arisen as a speciality within ethical philosophy as an effort to examine and articulate the valuation of nature and to affect environmental policy. Environmental ethicists are not, perhaps needless to say, in complete agreement on the subjective-objective nature of valuation, nor is it likely that they ever will be.<sup>41</sup> This should not be surprising, however, since

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<sup>40</sup>Charles H. Hartshorne, "The Rights of the Subhuman World," Environmental Ethics 1 (Spring 1979), pp. 49-50.

<sup>41</sup>By the same token, it is unlikely that "ordinary people" will ever be in complete agreement about subjective versus objective values, regardless of the Austrian assertions to the contrary.

the subject matter is about fundamental presuppositions about the nature of man and the nature of nature. But absolute agreement is a false goal; the basic function of both environmental ethics and stewardship (religious and non-religious) is to show the relevance of an objective theory of value for our political and economic actions in nature. A theory of objective value shows, as we will see, that economic conclusions about "optimal" natural resource allocation, and property rights assignments based on the criterion of Pareto optimality (economic efficiency) are only true in a world of subjective value. Pareto optimal allocation of resources in creation is not necessarily the correct, or best solution and can be part of the problem.

#### STEWARDSHIP VERSUS PARETO OPTIMALITY

Is a Pareto optimal allocation of natural resources an optimal allocation in light of a theory of stewardship? Is economic efficiency, defined in subjective terms, a good criterion when judged by objective terms?<sup>42</sup> In other words, would a theory of stewardship agree that competitive markets, which allocate natural resources

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<sup>42</sup>According to Edwin G. Dolan, Basic Economics, 2nd ed., (Hinsdale, Ill.: The Dryden Press, 1980), p. 15, "Most economists think that efficiency itself is a good thing." If this is true then all the worse for most economists, because the bare concept of efficiency is valueless, it is neither good nor bad. Efficiency takes on value only in reference to the value of the end which is to be efficiently accomplished. Efficiency is a good "thing" if the end is a good thing and efficiency is a bad "thing" if the end is bad. The efficient killing of Jews in a gas chamber is not better than the inefficient method of shooting them even if most economists think efficiency itself is a good thing.

among competing uses according to individual subjective valuations, is an optimal, good way to manage creation? To answer these questions let us begin by analyzing the subjective foundations of Pareto optimality and economic efficiency. For, as we will see, it is their subjective view of value that stewardship rejects.

A Pareto optimal, economically efficient change is one where at least one individual is made better off and no other individual is made worse off. This criterion for a welfare improvement may appear unassailable to the subjective moral relativist, except, of course, for questions of equity and justice of the resulting distribution. But, the subjectivist argues, if we assume these other values are adequately handled by the various social, political institutions how could one possibly disagree that a Pareto optimal change is not a good thing? Recall the words of Freeman, Haveman, and Kneese, from Chapter 2:

If these conditions [equitable distribution] hold, it can be said that the competitive market system yields the best possible allocation of resources. It achieves this optimum because it does the best that can be done with a given technology, resource endowment, set of tastes and preferences, and that particular distribution of resource ownership and its associated distribution of income that society has chosen through an effective political mechanism.<sup>43</sup>

Also recall the words of Seneca and Taussig:

Efficiency is a deceptively simple and attractive objective for government economic policy. Who can oppose the principle that more of every good for everybody is desirable. Economists are careful to point out,

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<sup>43</sup>Freeman, Haveman, Kneese, *ibid.*, p. 70.

of course, that greater efficiency in the Pareto Optimum sense means only that more of everything is potentially available for everybody . . . .<sup>44</sup>

A theory of stewardship has no quarrel with the logic and analytics used to reason from the subjective premises (explicit and implicit) to the conclusion that competitive markets yield a Pareto outcome (assuming no third party problems). Stewardship does not, however, accept the subjective premises as true, and consequently rejects the notion that Pareto optimality - the outcome of competitive resource markets - is the best or optimal allocation of resources.

For the subjective theorist it is good to allocate resources according to the "given . . . set of tastes and preferences." This is the subjective definition of good. The good is determined subjectively by each individual according to tastes and preferences. Thus, for subjectivism it is only logical to say that a Pareto or competitive market allocation is the best (meaning good) allocation.<sup>45</sup> As we learned in Chapter 2, the careful, consistent, positive economists (e.g., Robbins, Myint, and Graaff) avoid labeling Pareto optimality as economic efficiency or good or best. If, however, Dolan is correct that "Most economists think that efficiency itself is a good

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<sup>44</sup>Seneca, Taussig, *ibid.*, p. 114. Efficiency is deceptive, but it is anything but simple and attractive - in its subjectivist guise - to stewardship. Moreover, Seneca and Taussig add to the deceptiveness of efficiency by equating it with Pareto optimality.

<sup>45</sup>We are granting the assumption of equitable distribution. And therefore "best" allocation means better than any other allocation with the same equitable distribution assumed.

thing,<sup>46</sup> then these economists have accepted subjectivism as their underlying theory of value. It should be reiterated that only with some underlying theory of value can the Pareto criterion (and efficiency) be a criterion of value, that is, a criterion of better or worse, or welfare or welfare improvement. Without a theory of value the Pareto "criterion" is not a criterion of anything, it is merely an inconclusive outcome. For as Myint has said:

. . . welfare analysis need not involve any normative value judgments so long as we take the wants of the individuals to be given and constant and confine our study to the purely mechanical efficiency of the economic system in satisfying these given wants. At this pure subjective level of analysis our propositions are logically as stringent as those of price economics. But, since we stop short at this neutral concept of mechanical efficiency, we are still on an intermediate plane or discourse and although our propositions deal with quantities of satisfaction they are in some ways still as inconclusive as those at the physical level as a guide to practical action. Thus when we have demonstrated that a particular pattern of allocating the resources satisfies the given wants better than others, this does not amount to a categorical imperative that this pattern ought to be adopted. To obtain that we need a further premise, viz. that these given wants are of the same ethical quality of goodness. It is easy to make the mistake of slipping this premise implicitly into the argument . . . .<sup>47</sup>

Myint refers to this analysis as "welfare analysis" of the given wants of individuals, and yet without a theory of value (subjective, or objective) the word "welfare" has no meaning. In his own words, "Since we stop short at this neutral concept of mechanical efficiency

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<sup>46</sup>See footnote 42 above.

<sup>47</sup>Myint, *ibid.*, pp. 198-99.

. . . our propositions . . . are in some ways still as inconclusive as those at the physical level as a guide to practical action." Note carefully, that this inconclusiveness is not due to other contending values (e.g. equity, etc.) which must also be considered. The propositions are inconclusive because without a definition of welfare, a proposition which is supposed to describe an increase in welfare is meaningless. Without a theory of value, (or as Myint says, "normative value judgments" to define welfare, and thus Pareto optimality as a welfare criterion) Pareto optimality is a criterion of something, but we have no idea what. Positive economic analysis of welfare is possible, but only after welfare is defined according to some theory of value. Pareto optimality, apart from a theory of value, is at best a meaningless combination of words and at worse an outcome which merely satisfies the preferences of Vilfredo Pareto or the person advocating them.

It would seem that Dolan is correct: that most economists think that economic efficiency and Pareto optimality mean something and use these terms to meaningfully differentiate between policies as better or worse. That is, a theory of value is being assumed, whether or not it is made explicit. As Myint has shown, one can "take the wants of the individuals as given," and one can show that "a particular pattern of allocating the resources satisfies the given wants better than others," but it takes a theory of value concerning the goodness or badness of those subjective wants and the relevance of objective value to pronounce one pattern optimal. Indeed, it would require the

subjective theory: that individual preferences, each and every one, are good (valuable), in order to say that the competitive market allocation of resources is the optimum. This is exactly what Little is presuming when he says that "an individual is better off if he is in a chosen position."<sup>48</sup> Little goes on to say that,

If welfare economics is found to be useless, it is not because there is anything shifty about the philosophical or logical foundations. We claim to have stated the required postulates in a clear, precise manner. It only remains to accept or reject them.<sup>49</sup>

Little is to be commended for his clarity, precision and honesty. Biblical stewardship, however, does not accept his subjective theory of value nor the conclusion that competitive markets yield an optimum allocation. Neither the individual, nor the community, nor the rest of creation is necessarily better off because the individual is in a chosen position; but only if he has chosen the good and avoided the evil. Individual preferences do not define and determine what is objectively good and valuable, rather they are to be judged by what is objectively good and valuable. Objective value, based on biblical principles, derives not from individual subjective preferences, but from the objective, purposes of the Creator for creation. Satisfaction of individual subjective preferences is not the criterion of value, but rather the purposive relationships, functions and activities established by God. To choose the good, stewardship argues, is

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<sup>48</sup>Little, *ibid.*, p. 124.

<sup>49</sup>*Ibid.*

to choose according to God's creational purposes. Furthermore, the good is an inclusive concept, it does not only include human relationships, but includes all creational or creaturely relationships. In such a world of purposive, valuable relationships, Pareto optimality palls in comparison. In a creation, which is good and valued by its Creator, subjective valuation is denied its claim as the ultimate arbiter of value. Thus, "subjective economic efficiency" and Pareto optimality are restricted to involving truly indifferent, innocuous tastes and preferences, that is, choices between green and red neckties and between chocolate and vanilla ice cream cones, etc.

The conclusion to restrict economic efficiency is also reached by Talbot Page.<sup>50</sup> He has done a more technical than philosophical analysis of the subjective valuations of the present value criterion as it applies to the intertemporal allocation of natural resources. He contrasts the present value criterion which allows individuals to discount future costs and benefits by their rates of time preference with a so-called conservation criterion which discounts by the marginal productivity rate of the resource or of the whole economy depending on the situation. About these two criteria he concludes:

The conservation criterion functions at the macro-economic level establishing a context for markets;

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<sup>50</sup>Talbot Page, Conservation and Economic Efficiency, published for Resources for the Future (Baltimore: The Johns Hopkins University Press, 1977).



the present value criterion functions at the micro-economic level of market efficiency. For policy analysis and prescription both levels are needed.<sup>51</sup>

The context which the conservation criterion is to establish is future livability; a sustainable allocation of resources which protects against the elimination of so-called essential resources without which human survival would be impossible.<sup>52</sup> Practically this means that market allocation of essential resources would be somehow controlled to ensure a sustainable allocation. Within this restricted market context the present value criterion as exemplified or mimicked by efficient markets is the appropriate criterion for the valuation of all other resources. Thus, the conservation criterion - with future livability as its objective social goal - calls for limits on the use of essential resources even though this violates the economic efficiency goal of the present value criterion. This result, as Page notes, is often although erroneously criticized.

The conservation criterion, or at least, its more ordinary manifestation as a sustainable yield criterion, is often criticized on the grounds that it does not maximize the present value of the yield's benefits. This reasoning is surely wrong. It is no more appropriate to conclude that the sustainable yield criterion is invalid because it does not satisfy the present value criterion than it is appropriate to conclude that the present value criterion is invalid because it does not satisfy the sustainable yield criterion. One cannot use one criterion to bludgeon another. They are on

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<sup>51</sup>Ibid., p. 205.

<sup>52</sup>Page does not enter the debate about the existence of essential resources. Rather, his analysis assumes that such resources do exist and proceeds to address the question of whether or not markets would exhaust them.

the same logical level. The most one can say at this point is that the two criterion conflict; they imply different states of the world.<sup>53</sup>

In reconciling the two conflicting criteria, Page has drawn the conclusion that only the non-essential resources may be allocated by the present value criterion whereas resources deemed essential for the goal of a sustainable future need to be allocated by the conservation criterion. The goal of the present value criterion is to maximize the subjective values of the present generation whereas the goal of the conservation criterion is to keep the resource base intact for the present and future generations. The latter goal requires that essential resources be treated differently, that they be allocated on a sustainable yield basis apart from pure market allocations. These conclusions are not fully shared by economists so it is all the more important to understand how they have been derived.

As was noted above, Page does not attempt to demonstrate that essential resources exist. Rather, he notes that this is a widely, albeit not completely, accepted belief of so-called conservationists who have a reasonable, if not full proof, basis for their beliefs, and therefore assumes it to be true. Given this assumption he proceeds to analyze the question of interest: is economic efficiency an adequate criterion to guarantee that essential resources will not be exhausted? The present value criterion is employed as a reasonable model of the criterion of economic efficiency since the two criteria

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<sup>53</sup>Page, *ibid.*, p. 188.

are closely related. The efficiency criterion is used to evaluate specific projects and particular markets in the short run and the present value criterion is used to evaluate both specific projects and projects on a macro level and also over short or long time spans. The connection between the two criteria,

is that for each distribution of market power in the present and implied intertemporal allocation of resource usage, there exists a social welfare function and discount rate such that maximization of the present value of this social welfare function under this discount rate leads to the same allocation of resource usage as given under the efficiency criterion. This is the sense of the statement that the present value criterion tends, more or less, to mimic what the market automatically does. In this sense the present value criterion is an intertemporal version of the efficiency criterion.<sup>54</sup>

The next step in setting up a model for the analysis is to simplify the present generation's decision making process about both the intragenerational allocation and intergenerational distribution of resources. This is accomplished by collapsing the present generation into one individual, Robinson Crusoe. This model is then used to determine the results of discounting Crusoe's future under two different resource situations. In the first case, Crusoe is cast upon an island with only a supply of corn which he may eat or plant. In the second case, Crusoe is less fortunate, he has only a large supply of hard tack.

In the first case, if Crusoe does not discount the future (i.e., the discount rate is zero) then he will arrange his planting and

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<sup>54</sup>Ibid., p. 163.

consumption so that he eats little in the early years and gluttonously in the later ones. If, on the other hand, he discounts the future by some positive rate then his consumption will be more egalitarian. Moreover, if he discounts by the productivity rate of the corn then his consumption would be completely egalitarian. This final possibility provides Page with the concept of intergenerational justice as egalitarian consumption and with the criterion that we discount by the rate of marginal productivity of the economy.<sup>55</sup>

In the second situation, if the initial stock of hardtack is large enough then Crusoe will be spared the difficult decision of when he is going to starve to death. Assuming this is the case, if Crusoe discounts by his time preference (assumed positive) then he will eat well in the early years and at a subsistence level in his final year (assumed to be known). If, on the other hand, he discounts by the productivity rate, which is zero, he will follow an egalitarian consumption pattern eating the same amount each year. Page notes that in this extreme "hardtack economy" it is impossible for market forces to bring the rate of productivity (zero) into equality with normally positive rates of time preference. The implication is that present generations, if allowed to discount resources according to their rates of time preference, will fare well but future generations will experience, at best, subsistence levels of consumption.

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<sup>55</sup>Ibid., p. 154.

In these simplified models each generation is collapsed into a single individual, Crusoe, with the succeeding generation being Crusoe one year later. These models allow Page to ignore the intragenerational distribution questions which Crusoe, a single individual, does not face and to focus on the intertemporal decision. Page argues that if we are willing to accept, as a formal solution to this decision, the scheme of aggregating discounted utility streams then,

We now have three possible candidates for an individual's definition of the 'discount rate': the rate at which he would loan money or some other commodity, the productivity of the economy, or his 'pure time preference' (his comparison of the worth of future utility in terms of present utility). If our desire is to be egalitarian over time in terms of a total measure of well-being, the above examples tell us that the proper discount rate is the rate of marginal productivity of the economy.<sup>56</sup>

Page's conclusion is based on the result that in the corn (renewable) economy not to discount (i.e., discount rate is zero) means that the present generation would live at a subsistence level so that future generations could live gluttonously. And to discount by time preference would be egalitarian only if it happened to equal the productivity rate. Whereas, discounting by the productivity rate produces an egalitarian allocation which, however naive it might be, is one possible definition of intergenerational fairness. Finally, in a hard tack economy to discount by the rate of productivity (zero) is the same thing as not discounting future generations. This results in an egalitarian consumption path, but it remains to determine the

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<sup>56</sup>Ibid.

level of consumption and thus the finite number of future generations that will exist. The higher the level of consumption above subsistence the fewer generations that will exist. This is equivalent to Crusoe deciding when he will starve to death. (Page does not mention this latter situation possibly because he does not believe the world is fully a hard tack economy.)<sup>57</sup>

Page continues the analysis by considering the objection that the present generation may have as one of its preferences the existence of future generations and therefore its discounted allocation of resource would provide for the future. Making the usual assumption of separable utility functions he shows that indeed the more (less) altruistic the present generation the better (worse) off are future generations. In fact, if the present generation is completely selfless the discount rate is zero and the future is very well-off indeed. At the other extreme, if the present generation decides that provision for future generations gives them no satisfaction then the future is entirely cut off.<sup>58</sup> In all these cases the common element is that the present generation determines the allocation according to its subjective valuations. The future is provided for only to the extent that the present is satisfied from contemplating such a future. This version of the present value criterion Page equates with the actual working of markets wherein future costs and

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<sup>57</sup>Ibid., p. 149-54.

<sup>58</sup>Ibid., p. 159-61.

benefits are discounted by the present generation's time preference (and also weighted by the distribution of dollar votes). In contrast to this version with its sovereignty of the present Page offers the concept of "disinterested fairness." In this version the welfares of future generations are aggregated and weighted (discounted) by the rate of marginal productivity of the economy. Thus, the higher the rate (assuming it is positive) the higher the level of consumption possible for the present and all future generations and vice versa.<sup>59</sup> These two versions of the present value criterion would, of course, become equivalent if the rates of time preference and marginal productivity were equal. This might happen by coincidence but, Page argues, it would not happen systematically.

Thus we have two interpretations for the present value criterion, with the important difference that for one the discount factor measures the time preference of the first generation and for the other the discount factor measures the economy's productivity. In the actual world these two interpretations do not boil down to the same thing, for a wedge may be driven between the rates of time preference and productivity. Moreover, there will be differences between the interpretations

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<sup>59</sup> An interesting possibility for investigation is that the marginal rate of productivity is negative. The work of Georgescu-Roegen would seem to suggest that if productivity is broadly defined in entropy terms then it is negative. Consider his statement quoted earlier: "Economists are fond of saying that we cannot get something for nothing. The Entropy Law teaches us that the rule of biological life and, in man's case, of its economic continuation is far harsher. In entropy terms, the cost of any biological or economic enterprise is always greater than the product. In entropy terms, any such activity necessarily results in a deficit." Nicholas Georgescu-Roegen, Energy and Economic Myths (New York: Pergamon Press, 1976), p. 55.

as the rates of time preference and productivity change over time.<sup>60</sup>

In the final stage of the analysis, Page attempts to reconcile these two conflicting criteria by arguing that each is appropriate but in different situations, for different social goals. If one of our social goals is permanent livability then the present value criterion needs to be restricted within the context of a sustainable yield allocation of essential resources. The conservation criterion thus needs to be used to establish (as best as possible) the context of permanent livability by limiting the rate of depletion and pollution of essential resources to a sustainable yield.<sup>61</sup>

Page's analysis of the present value and conservation criteria represents an analysis with conclusions similar to those presented in my analysis of subjective and objective valuation. Given the assumption of essential resources Page concludes that markets which mimic the present value criterion do not guarantee future livability. Future livability serves as a good example of an objective valuation of resources and one that is not guaranteed by the subjective valuations of resources in free markets. Future livability, in Page's work, is limited to the human specie but it need not be.<sup>62</sup>

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<sup>60</sup>Page, *ibid.*, p. 162.

<sup>61</sup>Page proposes severance taxes as the best mechanism to establish a sustainable yield allocation of essential resources. Whether or not this mechanism is the best or will even work is subject to debate, but is not important for the purposes of this dissertation.

<sup>62</sup>The general question of species extinction as a problem of subjective versus objective valuation is discussed in Chapter 5.



Nevertheless, it serves as one example of the implications for a neoclassical economic theory rooted in a subjective theory of value.

A theory of stewardship not only restricts the efficiency criterion, it also expands the concept of welfare economics from its singular focus on human beings to encompass all of creation. Stewardship is concerned with human and non-human welfare. The steward is called to be a caretaker of all of creation. This means, among other things, that the steward is not an allocator of a given "resource endowment," and a given "distribution of resource ownership" with its given system of property rights. One of the more subtle and pervasive assumptions of neoclassical natural resource economic theory is that it knows what natural resources are. For the neoclassical economist natural resources seem to be determined by eyesight; "everyone knows what a tree looks like." For the steward, however, labeling parts of creation as natural resources for human production and consumption, and other parts as "protected," and determining the appropriate property rights for their management requires much more than good eyesight.

#### PROPERTY RIGHTS

The relatively new economic theory of property rights is an attempt to use the neoclassical economic methodology to both explain and guide the development of the legal-economic institution of property rights. In general, property rights theorists have retained the perspective of subjective individualism with its assumption of

utility maximizing behavior motivated by self-interest, and thus ignore, for example, "satisficing" behavior and objective valuation. The basic goal of the property rights approach is to expand the neoclassical model into the legal arena and show that the development of property rights can be made endogenous to the economic model of individual subjective utility maximization. In the words of Eirik Furubotn and Svetozar Pejovich:

Can the logic of economics explain the development of property rights? Is the development of property rights determined endogenously within the economic system? Does the creation and specification of property rights take place in response to the desire of individual decision-makers for more utility?<sup>50</sup>

To a reader uninitiated to the ambiguous, all-inclusive concept of utility, this passage might suggest the necessity of a rather substantial empirical undertaking. Such an impression would be wrong. The property rights approach is purely deductive and given the encyclopedic understanding of utility it is fairly simple to deduce that the answer to the above question is "yes." Thus, with their all encompassing notion of utility and using deductive logic, Furubotn

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<sup>50</sup> Eirik G. Furubotn and Svetozar Pejovich, eds., The Economics of Property Rights (Cambridge, Mass.: Ballinger Publishing Co., 1974), pp. 7-8. Also see their article "Property Rights and Economic Theory: A Survey of Recent Literature," Journal of Economic Literature 10 (December 1972), p. 1157, where the authors identify one of the characteristic features of the property rights literature as, "confidence that the market logic can be applied fruitfully to a very great range of practical problems. Thus, the focus of discussion is on economic efficiency and the conditions under which markets should be, or should not be, extended into new areas."

and Pejovich summarize the economic theory of endogenous property rights:

Assuming that individuals or groups in society are motivated by self-interest and seek constantly to increase their utility levels, they will, presumably, try to exclude others from exploiting an existing good whenever it appears advantageous to do so. That is, whenever their own expected benefits appear to exceed the expected costs of defining, negotiating, policing, and enforcing the "claim." Of course, to exclude some people from the free access to a good means to specify property rights in that good . . . . Thus, new property rights are created, and existing ones are changed because certain individuals and groups believe it profitable to restructure the system and are willing to bear the costs of bringing about such change.<sup>51</sup>

In similar fashion, H. Demsetz says,

It is my thesis . . . that the emergence of new property rights takes place in response to the desires of the interacting persons for adjustment to new benefit-cost possibilities . . . . property rights develop to internalize externalities when the gains of internalization become larger than the costs of internalization.<sup>52</sup>

He goes on to add something of a disclaimer, however, when he says,

I do not mean to assert or deny that the adjustments in property rights which take place need to be the result of a conscious endeavor to cope with new externality problems.<sup>53</sup>

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<sup>51</sup>Furubotn and Pejovich, The Economics of Property Rights, p. 8.

<sup>52</sup>H. Demsetz, "Toward a Theory of Property Rights," in The Economics of Property Rights, ed. by E. Furubotn and S. Pejovich (Cambridge, Mass.: Ballinger Publishing Co., 1974), p. 34.

<sup>53</sup>Ibid.

This statement is clear enough, but he doesn't stop here. He adds the following comment which seems to question the subjective utility maximizing hypothesis, albeit rather weakly:

These adjustments have arisen in Western societies largely as a result of gradual changes in social mores and in common law precedents . . . . These legal and moral experiments may be hit-and-miss procedures to some extent but in a society that weights the achievement of efficiency heavily, their viability in the long run will depend on how well they modify behavior to accommodate to the externalities associated with important changes in technology or market values.<sup>54</sup>

Although Demsetz makes a slight recognition of values other than unhampered exchange, he ultimately declares that efficiency - that persuasive and deceptive word - to be the overriding concern of our society. Consequently, he feels justified in concluding that property rights are overwhelmingly determined by the desire for efficiency. This problematic conclusion, apparently perceived by property rights theorists as a logical deduction, becomes an unfended norm in such boldly normative statements as:

Economists have to offer a testable theory of the development of property rights. Ideally, such a theory will throw light on the linkages between the system of laws and economic decisions and, in this way, contribute to the establishment of an institutional environment favorable to efficiency and progress.<sup>55</sup>

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<sup>54</sup>Ibid.

<sup>55</sup>Furubotn and Pejovich, The Economics of Property Rights, p. 7.

With efficiency as its criterion, the new theory requires that well defined and exchangeable property rights be established. In those situations where property rights cannot be clearly defined, the normative goal is to mimic the efficiency of the market's subjective valuation and allocation by regulating to achieve maximum real income. Recall the passage by Coase, for example,

The aim of such regulation should not be to eliminate smoke pollution but rather to secure the optimum amount of smoke pollution; this being the amount which will maximize the value of production.<sup>56</sup>

The fundamental weakness of the new economic theory of property rights is its assumption that the institution of property rights arises and changes in response to individuals trying to maximize their subjective utility. Moreover, even if this assumption were found to be empirically true, it does not logically follow that that is what ought to determine a system of property rights. In other words, to advocate Pareto optimality or maximum value (subjective) of production as the criterion for establishing a system of property rights requires an explicit normative defense of individual subjective valuation. Although Furubotn, Pejovich and Demsetz do not provide such a defense, others have. Demsetz's reference to the "hit-and-miss" legal and moral procedures is hardly indicative of the vast body of literature and long standing debate over the justification of property rights.

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<sup>56</sup>Coase, *ibid.*, p. 42.

The subjective-individualist theory of property rights, as defended by Murray Rothbard, for example, depends on the truth of two premises:

(a) the absolute property right of each individual in his own person, his own body: this may be called the right of selfownership; and (b) the absolute right in material property of the person who finds an unused material resources and . . . occupies or transforms that resource by the use of his personal energy . . . called the homestead principle . . . .<sup>57</sup>

He defends the premise of right of self-ownership by arguing that no valid alternative exists.

There are only two alternatives: either (1) a certain class of people, A, have the right to own another class, B; or (2) everyone has the right to own his equal quotal share of everyone else. The first alternative implies that while Class A deserves the right of being human, Class B is in reality subhuman and therefore deserves no such rights. But since they are indeed human beings, the first alternative contradicts itself . . . . [concerning the second alternative] in practice, any attempt at communist society will automatically become class rule, and we would be back at our rejected first alternative.<sup>58</sup>

At first glance this defense appears sound, but there is a defect in Rothbard's argument. There is a missing third alternative. A stewardship theory of property rights would contend that only God has absolute property rights. Individuals have limited, conditional property rights, even including one's rights over self. Individuals

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<sup>57</sup>Murray N. Rothbard, "Justice and Property Rights," in Property in a Humane Economy, ed. by Samuel L. Blumenfeld (LaSalle, Ill.: Open Court Publishing Co., 1974), p. 106.

<sup>58</sup>*Ibid.*, pp. 107-8.

have the rights of a steward not an owner. Although Rothbard does not deal with this third alternative, F. A. Harper, another defender of a subjective-individualist theory does.

Harper acknowledges the biblical view of God's absolute ownership expressed by passages such as: "For all the earth is mine (Ex. 19:5);" and "The earth is the Lord's, and the fullness thereof; the world and they that dwell therein (Ps. 24:1)."<sup>59</sup> These notions, however, are quickly dismissed by Harper as not pertinent to the question of property rights in the "here and now."

Important as are these underlying religious questions about creation, it seems to me they are not necessarily involved in our consideration of property and ownership among persons on earth for the duration. The problem of those other matters are of another dimension. Whether one be a devout atheist or a devout patron of a faith that considers all to belong to the Creator and that therefore nothing in that sense belong to mortal man, he must face the same problem of how we shall deal with one another here and now while the show of earthly life is in process; how shall we resolve these problems as they arise? Neither the religious nor the secular view would seem to necessitate giving any property privilege to one person that is denied to another.<sup>60</sup>

Regardless of "how it seems" to Harper, the absolute ownership by God and conditional stewardship by humans are not matters of "another dimension." The problems of "how we shall deal with one another here and now," and how we shall manage and care for the rest of creation "for the duration," are radically dependent on religious and

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<sup>59</sup>F. A. Harper, "Property and Its Primary Form," in Property in a Humane Economy, ed. by Samuel L. Blumenfeld (LaSalle, Ill.: Open Court Publishing Co., 1974), p. 16.

<sup>60</sup>Ibid.

moral presuppositions. The subjectivist and objectivist, of course, "face the same problem of how we shall deal with one another here and now;" but, because of different presuppositions about value, creation, and the nature of the good, they come to different conclusions. Stewardship presuppositions and conclusions relate to the here and now, not some other dimension as Harper would have us believe.

Harper continues his "argument" against the relevancy of biblical principles by dragging in a familiar red herring: the question of dictating values.

If the view is held that all belongs to the Creator, for instance, and that it cannot belong exclusively to you as an individual, such a limitation of your powers of ownership of created property would hardly give you a license to dictate to other human beings what they may or may not use during their lives; or what they may or may not do with their claim on property at the time of their death.<sup>61</sup>

Whether or not this is true, it is irrelevant; the political-philosophical question of a justification for dictatorial pronouncements is not the issue. Harper, however, concludes, on the basis of one red herring and his confused idea of "another dimension," that biblical principles of stewardship are ruled out as a justification for limited property rights.

So for the purpose of our present discussion, I would prefer to avoid completely this interesting theological question. And if someone should contend that all creation belongs to the Creator, and that we function only

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<sup>61</sup>Ibid., pp. 16-17.



as His tenants, perhaps we can at least speak of property and ownership as being at a lower - but real - level of dealings of persons with one another . . . . We could then go on with our discussion of the problem, using terms for a common problem that faces atheists and religious members of our earthly society alike.<sup>62</sup>

And what is the conclusion of "our present discussion" now that the "religious members" supposedly have been convinced that their "interesting theological question" is not relevant to the justification of individual property rights at a "lower-but-real-level?" Not surprisingly, Harper concludes with the secular position: the individual, rather than God, is the absolute owner.

The primary object of property and ownership which antedates all others and is superior to all others in its importance is self. It seems to me that all other items are secondary to this . . . .

The origin of all economic property and claims to ownership, then, is to be found in self-ownership of persons and thence on to derived and valid claims to all other forms of property. He acquires these other things, in part, by using his own labor to "create" something from the tools made available to us by Creation.<sup>63</sup>

Contrary to this secular, individualist theory which reasons that ownership determines and validates use of property, a stewardship theory reasons in the exact reverse direction. Proper use of property determines valid stewardship. This biblical direction of reasoning is also found to predominate in the thinking of the Church with few exceptions. A. J. Carlyle finds this line of reasoning in St. Augustine:

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<sup>62</sup>Ibid., p. 17.

<sup>63</sup>Ibid., pp. 19, 21.

. . . he maintains that the right of property is limited by the use to which it is put, a man who does not use his property rightly has no real or valid claim to it.<sup>64</sup>

Carlyle also notes the similar reasoning of St. Thomas on the relative rights of individuals:

private rights cannot override the common right of mankind to the necessities of life . . . . temporal possessions are indeed private as regards ownership, but not as regards their use: as regards use, so far as they are superfluities, they belong to others who have need of them.<sup>65</sup>

In addition, H. G. Wood finds a similar view in the non-Puritan groups of the Reformation and the Evangelical Revival of the 18th and 19th centuries:

only a good use of property confers a moral right to it, and . . . this moral right is deeper than any legal right, is indeed the standard by which any legal right may be questioned or revised.<sup>66</sup>

And finally, Carl F. H. Henry argues that property rights derive neither from the individual nor from the state.

Private property . . . is not an institution to be authorized by the state but an inalienable right divinely conferred upon mankind . . . . The Church has no mandate to impose spiritual imperatives . . . . But the Church is obliged to proclaim those revealed

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<sup>64</sup>A. J. Carlyle, "The Theory of Property in Mediaeval Theology," in Property: Its Duties and Rights, 3rd ed. (New York: Macmillan Co., 1922), p. 131.

<sup>65</sup>Ibid., p. 137.

<sup>66</sup>H. G. Wood, "The Influence of the Reformation on Ideas Concerning Wealth and Property," in Property: Its Duties and Rights, p. 175.

principles which government must promote and men must observe for the sake of a just society.<sup>67</sup>

The Church, and others, have indeed spoken out on proper principles and our legal institution of property rights does exhibit limitations on individual property rights for the sake of a just society. One such limitation which directly affects the so-called right of self-ownership is that individuals are not allowed to sell themselves or their children into slavery. Besides this single example, there is the broad area of limitations on individual property rights commonly called the "police powers" of the state which are exerted for the "health, safety, and well-being of the people."<sup>68</sup> The governing principle of the police power of the state (compensation not compelled) in contrast to a "taking" by the state (compensation compelled) is found in the following statement by the Supreme Court (1876):

Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large. When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good, to the extent of the interest he has thus created. He may withdraw his grant

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<sup>67</sup>Carl F. H. Henry, "Christian Perspective on Private Property," in Property in a Humane Economy, ed. by Samuel L. Blumenfeld (LaSalle, Ill.: Open Court Publishing Co., 1974), p. 28.

<sup>68</sup>Thomas James Norton, The Constitution of the United States (New York: Committee for Constitutional Government, 1943), p. 95.

by discontinuing the use; but, so long as he maintains the use he must submit to the control.<sup>69</sup>

These few examples of existing limitations on individual property rights are not meant to demonstrate that our legal institution of property rights is based on a theory of stewardship. They are, however, meant to show that individual property rights are not conceived as absolute but limited.

### CONCLUSION

The differences between subjective and objective theories of value are substantial. The subjective theory of neoclassical economics locates the source of value in the individual's tastes and preferences; that which is valuable is that which satisfies the individual's desires. In contrast, a stewardship theory presupposes an objective theory of value. A biblically based stewardship theory would locate the source of value in an objectively good creation as created and sustained by God.

It was argued that the objective value of creation is not an unknowable entity. Quite the contrary, the biblical theory of mankind as stewards presupposes our capability to discern good and proper functions, relations and uses of creation. The theory argues, moreover, that at least the basic principles for proper stewardship are revealed in the Hebrew-Christian Scriptures. It remains the theological and philosophical task of mankind to flesh out a more distinct

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<sup>69</sup>Ibid.

theory and ethic of stewardship; to identify the proper functions and uses of creation; to balance conflicting objective values. In short, to exercise creaturely dominion over creation.

How well have we done; how well has economic theory done? It is the contention of this dissertation that the subjective theory of value of neoclassical economics is neither compatible with nor conducive to the development of an objective theory of stewardship. In addition, it is contended that absolute, unattenuated property rights do not provide for stewardship, but rather as we learn to exercise proper dominion we will put limits on our property rights as we already have on our personal and social relationships.

Stewardship does not agree that values are only subjective; that they are reducible to personal preferences. Consequently, it rejects Pareto optimality as a sufficient or necessary criterion for the best allocation of natural resources. Nor does it accept the related conclusion that natural resources will be optimally allocated when individuals have well defined and exchangeable property rights. Stewardship thus rejects the fundamental, normative conclusions of neoclassical natural resource economic theory; a theory that is appealing, however, to those who only recognize the need to resolve conflicts in individuals' subjective valuations.<sup>69</sup> For conflicts

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<sup>69</sup>Gordon C. Bjork, Life, Liberty and Property (Lexington, Mass.: Lexington Books, D. C. Heath and Co., 1980), pp. 7-8, for example, recognizes social, ethical conflicts in land-use decisions, but concludes that exchangeable property rights will solve the problem. He says, "The most fundamental questions in land-use planning are about who should benefit . . . and who should lose. They are questions about equity . . . . [but] there is no social consensus about how

over innocuous tastes and preferences competitive markets function well (with a few well recognized exceptions). But for the more important conflicts between individuals over objective valuations, competitive markets and neoclassical theory are inadequate and misleading.<sup>70</sup> To resolve these conflicts, stewardship points to the requirement of a double criteria of proper ends and economically efficient means to achieve them. The criterion of proper ends will mean limits, duties and obligations, besides rights, on the part of mankind as stewards of property. Proper ends function to recognize and incorporate objective value into the process of managing all of creation and allocating parts of it as natural resources. They are part of the process of defining what in creation is and is not a natural resource; what will and will not enter the market place for allocation to human production and consumption.

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land should be used . . . . The problem to be solved is the reconciliation of those inevitable conflicts of interest . . . . The establishment of clearly defined and transferable property rights to the use of resources is the important element in the reconciliation of conflicts of interest."

<sup>70</sup>The environmentalist who disagrees with the idea that competitive markets will optimally allocate natural resources is usually accused, by the economist, of being ignorant of economics. Indeed, it may be that the environmentalist understands better than the economist the subjective value premises supporting that persuasive word, "optimal."

## CHAPTER 5

### A COMPARISON OF NEOCLASSICAL AND STEWARDSHIP THEORIES ON THE QUESTION OF ENDANGERED SPECIES AND EXTINCTION

In the previous chapter we argued in fairly general terms that the subjective value premises of neoclassical economics were incompatible with the objective value premises of a stewardship theory. The typical result of this incompatibility is the inability of the neoclassical theory to resolve conflicts between economic efficiency and equity or ethics - other than subjective ethics. The neoclassical economist is equipped to determine the optimal outcome when the tradeoffs are between subjective values, but cannot incorporate objective values (usually and erroneously referred to as ethics) into the welfare analysis. In this chapter the fundamental differences between neoclassical and stewardship theory are examined in the context of a specific and currently relevant problem: the debate over endangered species and their extinction. First, the neoclassical theory of optimal allocation and extinction of renewable resources is explained. Second, the question of extinction is examined from a stewardship perspective. Third, the Federal Endangered Species Act is evaluated in light of both theories.

#### NEOCLASSICAL THEORY

The neoclassical concept of optimal allocation of natural resources is based on the familiar cost-benefit criterion of

maximizing present values of net economic revenues. The criterion can be applied to both private and public resource decisions, although the relevant costs, benefits and discount rates are not necessarily the same in both situations. Private resource owners are normally concerned only with internalized costs and benefits, whereas public resource managers are presumably concerned with social costs and benefits. In addition, there may be reasons for a social rate of discount that is different in value from a private rate.<sup>1</sup>

Regardless of ownership (public agency or private), a fundamental aspect of the theory is that the resource owner views the resource as an investment or capital asset. The resource is managed so that it earns at least the "normal" (opportunity cost) rate of return, otherwise the resource may be disposed of (e.g., sold, extinguished, or even abandoned). This conclusion is usually credited to Hotelling although others before him, such as Lewis C. Gray, had developed the theory but not the math.<sup>2</sup>

The question that we are interested in is whether or not it is ever optimal to deplete a renewable resource to extinction. The theory argues that, given certain conditions and functional relationships between the rate of depletion, initial stock of the resource,

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<sup>1</sup>The terms "interest rate" and "discount rate" always refer to real rates.

<sup>2</sup>H. Hotelling, "The Economics of Exhaustible Resources," Journal of Political Economy 39 (1931), pp. 137-75. Lewis Cecil Gray, "The Economic Possibilities of Conservation," Quarterly Journal of Economics 27 (1913), pp. 497-519.



price, cost, renewal rate and discount rate, it will be optimal to harvest a renewable resource to extinction. It is sometimes pointed out, however, that this may not be the ethical thing to do; nevertheless, no guidance or theory has been developed to reconcile this conflict of criteria or values. For example, Colin Clark says,

The technical sense in which the term 'optimal' is used here should be emphasized . . . extinction is the optimal harvest policy only because it leads to the largest present value of economic revenues. We are certainly not suggesting that the deliberate extinction of a species is socially or aesthetically desirable just because extinction appears to be the most profitable course of action.<sup>3</sup>

What are the conditions under which it is optimal to harvest a renewable resource (animal or plant specie) to extinction? In developing the answer to this question, the theory has grown from its early beginnings in Hotelling's 1931 article and a 1954 article by Gordon on a common property resource: the fishery.<sup>4</sup> Gordon, using a static equilibrium model rather than the present value maximization model, concluded that a common property renewable resource will tend to be harvested at the rate where total revenue equals total cost.<sup>5</sup> This rate may or may not lead to extinction depending on the relationship (or more precisely the ratio) of the cost of harvesting (extraction, catching) to the price of the resource. If costs were large enough

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<sup>3</sup>Colin W. Clark, Mathematical Bioeconomics: The Optimal Management of Renewable Resources (New York: John Wiley & Sons, 1976), p. 61.

<sup>4</sup>H. S. Gordon, "Economic Theory of a Common-Property Resource: The Fishery," Journal of Political Economy 62 (1954), pp. 124-42.

<sup>5</sup>Gordon's model, of course, points to the inefficient ( $MR \neq MC$ ) use of a common property resource.

relative to price, for a given resource renewal rate, the resource would not be exhausted and vice versa. At very high costs relative to price the resource would not be harvested at all. Thus, some renewable "resources" might not be profitable enough to promote commercial production: either because of relatively high extraction cost or because of no demand at positive prices (e.g., sparrows, starlings, and snail darters). These conclusions are, of course, well known; what may be somewhat less well known is that privately owned or publicly managed renewable resources may also call for extinction as the optimal allocation. The conclusions of "optimal extinction" applies to both private and public management, but may be less likely with the latter due to the possibility of including social costs and benefits.

Clark and Munro, together with Smith,<sup>6</sup> who expanded on the work of Gordon and Scott,<sup>7</sup> have shown that a sole owner (whether private or government agency) with the goal of maximizing the present value of net revenues may find it optimal to harvest a renewable resource to extinction. If the discount rate is large enough relative to the renewal rate then extinction will be optimal. On the other hand,

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<sup>6</sup>Colin W. Clark and G. R. Munro, "Economics of Fishing and Modern Capital Theory: A Simplified Approach," Journal of Environmental Economics and Management 2 (1975), pp. 92-106; V. L. Smith, "Control Theory Applied to Natural and Environmental Resources," Journal of Environmental Economics and Management 4 (1977), pp. 1-24.

<sup>7</sup>H. S. Gordon, *ibid.*; Anthony D. Scott, "The Fishery: The Objectives of Sole Ownership," Journal of Political Economy 63 (1955), pp. 116-24.

the renewal rate could be large enough such that the resource would be protected from extinction "even under free-access harvesting . . . . This . . . explains why squirrels and rabbits are not likely candidates for a list of endangered species."<sup>8</sup>

Cropper, Lee and Pannu further expand on the work of Clark and Munro by allowing the resource price to be inversely related to the rate of harvest.<sup>9</sup> Thus, as the resource approaches extinction and the rate of harvest decreases (presumably), the price rises. Their results indicate that extinction is optimal only for sufficiently small initial stocks of the resource. The economic sense of this is that with a low initial stock, and a slow reproduction rate, the time required for the stock to grow to a stable equilibrium is not worth the cost. The authors further note:

The fact that the optimal policy depends on the initial stock means that the rate of interest does not play as important a role in the non-linear case. Indeed for sufficiently large stocks, extinction need not be optimal even if the discount rate is infinite.<sup>10</sup>

Economically, this means that if it is not profitable to harvest the resource at rates greater than the renewal rate then extinction will

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<sup>8</sup>V. L. Smith, *ibid.*, p. 10.

<sup>9</sup>M. L. Cropper, D. R. Lee, and S. S. Pannu, "The Optimal Extinction of a Renewable Natural Resource," Journal of Environmental Economics and Management 6 (1979), pp. 341-49. Clark and Munro assumed net revenues to be a linear function of the rate of harvest.

<sup>10</sup>*Ibid.*, p. 342.

not take place even with an infinite discount rate or, it might be added, with open access to the resources.<sup>11</sup>

The theory is developed a bit further in an article by Sinn, wherein he reintroduces Ciriacy-Wantrup's idea of a minimum viable population.<sup>12</sup> (This is defined as the population size below which extinction is likely to occur given current technological knowledge and economic capabilities of species management.)<sup>13</sup> Sinn shows that if it is profitable to harvest a resource below the minimum viable population then extinction is optimal even if the marginal cost of extraction approaches infinity as the resource approaches extinction. Since this conclusion is approaching the limits of economic usefulness; let me summarize these findings of neoclassical theory.

The optimal allocation of renewable resources may lead to extinction whether the resource is common property or privately owned or governmentally managed. Extinction is the optimal policy if it leads to the maximization of discounted net revenues. Whether or not extinction is the optimal policy for a particular resource depends on its renewal rate the discount rate, the profitability (a function of net revenues) as the resource is depleted, and the initial stock.

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<sup>11</sup>Ibid., p. 346.

<sup>12</sup>Hans-Werner Sinn, "The Economic Theory of Species Extinction: Comment on Smith," Journal of Environmental Economics and Management 9 (1982), pp. 194-98. S. V. Ciriacy-Wantrup, Resource Conservation, 3rd ed. (Berkeley: University of California Press, 1968), pp. 38-40.

<sup>13</sup>As Ciriacy-Wantrup notes, this concept is open to a great deal of uncertainty as regards our knowledge and the economics of reversing the process of extinction.

Other things remaining equal, and assuming profitability, if the renewal rate is low relative to the discount rate then extinction will be optimal. Extinction will also be optimal if it remains profitable to harvest below the minimum viable population or if the initial stock is low relative to the stable equilibrium size.

These conclusions apply equally well to both market determined prices and costs and nonmarket valuations which might include aesthetic, amenity and option values as part of the opportunity cost of extinction.<sup>14</sup> Other things equal, the inclusion of these additional social costs could change the optimal policy for particular resources from extinction to non-extinction; but they do not change the general conclusions: extinction is optimal if it maximizes discounted net revenues. The inclusion of these nonmarket valuations is, of course, important if we are to correctly calculate the net revenues of a natural resource, but they do not necessarily preclude extinction.<sup>15</sup>

It is also important to recall that these nonmarket values are based on subjective valuations (individual preferences) not on the notion of intrinsic or objective value. Aesthetic, amenity and option values are values that accrue to individuals - to our self-interest,

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<sup>14</sup>For a summary discussion of amenity services and option value see John V. Krutilla and Anthony C. Fisher, The Economics of Natural Environments (Baltimore: The Johns Hopkins University Press, 1975).

<sup>15</sup>This is an important point in relation to the Endangered Species Act discussed below.

satisfaction or subjective preferences. Subjective, human values are the only values that the neoclassical paradigm incorporates. Objective values are not denied by neoclassical theory, they are simply outside of its definition (assumption) of value. But there is the rub. Neoclassical economics is incapable of resolving or even addressing problems of human choice that involve both subjective preferences and objective values. We have seen numerous examples of this, e.g., Clark's comment on extinction in terms of profitable versus desirable. In response to this problem economists are fond of pointing out that moral philosophers have yet to agree on the best moral theory of value.<sup>16</sup> This is undoubtedly the case (and likely always will be), but this provides no reason for the acceptance of a subjective theory of value. Furthermore it provides economics no rationale for accepting any particular theory of value as its own. If economics is to be a science of human choice with the goal of adding to human knowledge about choices in terms of better and worse, then it has no legitimate business presupposing one particular theory of better and worse.<sup>17</sup> Neoclassical economics has neither remained value-free nor

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<sup>16</sup> One economist, Sidney Alexander, however, humorously calls into question the individualistic-utilitarian ethic of neoclassical economics. "Economists, and those who seek to honor economics, are fond of quoting Keynes' dictum that practical men are only the slaves of some defunct economist. It may afford philosophers in turn some mischievous amusement to see the power of defunct philosophies in economics and other social studies." Sidney S. Alexander, "Human Values and Economists' Values," in Human Values and Economic Policy, ed. by Sidney Hook (New York: New York University Press, 1967), p. 102.

<sup>17</sup> Recall, for example, Lionel Robbin's comments; see pp. 9-10.

made it possible to analyze economic problems of human choice involving subjective and objective values. When confronted with an economic problem involving both values, the economist - as we have seen - has no solution. He defines an optimal solution and then says it may not be optimal if "other values" are included. If people make choices on the basis of both subjective preferences and "other values" then we can't expect neoclassical economics to determine optimal, efficient choices as long as it refuses to include these "other values" in its analysis. It is the contention of this dissertation that the resolution to this deficiency lies in the direction of neoclassical theory giving up its sole commitment to a subjective theory of value. (Philosophers may not agree on the best theory of value, but it seems reasonable that subjective relativism will not be their rallying point). This new direction requires economics to be able to analyze human choice in relation to or in the context of any theory of value. It means that economics would be able to incorporate knowledge (however tentative) from all related disciplines.<sup>18</sup> One result will be the ability to analyze and suggest policy when human choices confront subjective and objective values. Let us see how this result is possible in the specific case of extinction and endangered species.

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<sup>18</sup>This incorporation is currently happening in the relationship between economics and physics (and ecology). See, for example, Nicholas Georgescu-Roegen, The Entropy Law and the Economic Process, (Cambridge: Harvard University Press, 1971).

### STEWARDSHIP THEORY

The essence of an objective theory of value is that all value is not lodged in the satisfaction of human subjects. This is true whether the theory is based on religious or non-religious premises. Both bases reject subjective relativism as an acceptable general theory of value. Both postulate instead an objective moral universe wherein the satisfaction, or better yet, the true happiness of humans is one source of objective value (but also that some human "satisfactions" are of no objective value). They postulate a universe full of objective value and full of "valuers": things that are not only instrumentally valuable, but also experience value or value their experiences.<sup>19</sup> Apparently not all things in creation are "valuers" and perhaps not all things possess intrinsic value; this is certainly problematic. Regardless of the resolution of these problems, an objective theory of value is essentially different from the subjective theory adopted by neoclassical economics. It should not be surprising, therefore, that the two theories would at least on occasion disagree on what is best or worse in an economic analysis of human choice - resource allocation.

Neoclassical theory, under certain conditions, concludes that the optimal use of a renewable resource means its extinction. Would stewardship theory lead to a different conclusion? The answer to

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<sup>19</sup> See, for example, Peter Singer, Animal Liberation: A New Ethic for Our Treatment of Animals (New York: New York Review/Random House, 1975); and Richard A. Watson, "Self-Consciousness and the Rights of Nonhuman Animals and Nature," Environmental Ethics 1 (Summer 1979), pp. 99-129.



this question lies in the differences between the methods of analysis of neoclassical and stewardship theory. As we saw above neoclassical analysis is based on maximizing the present value of net revenues (value being determined subjectively). Stewardship analysis, although it does not ignore individual preferences, is concerned with the objective worth of those preferences.<sup>20</sup> Satisfying individual preferences is objectively valuable if the preferences are objectively worthy of satisfaction.

It is, presumably, still a commonplace that not all of our preferences are worthwhile either for ourselves or for the rest of society. Some of our preferences are so unworthy that we (family, or society) inflict punishment on each other when we try to satisfy them. The punishment may be as mild as a sumptuary tax on liquor or a ban on pornography or as strong as incarceration for cruelty to animals and draft evasion or even capital punishment for rape and treason. On the other hand, some preferences are considered meritorious and have led at least one economist, Richard Musgrave, to introduce the idea of "merit goods."

. . . observation of budget policy suggests many instances where the very intent of the decision maker appears to be to interfere with or override individual preferences. Thus, sumptuary taxes are imposed on liquor because the consumption thereof is held undesirable, or low-cost housing is subsidized because decent housing for the poor is held

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<sup>20</sup>The worth or value of things, such as our preferences, can be a question of either moral or nonmoral values (or perhaps both). For example, truth telling is morally valuable and lying is morally disvaluable, whereas a moderate diet is nonmorally valuable and gluttony is nonmorally disvaluable.

desirable . . . . The issue now under consideration, therefore, must not be confused with the distinction between private and social goods itself. Certain goods are held meritorious (they are considered 'merit goods') while others are held undesirable . . . . when interpreted as imposition of preferences of the ruling group or decision makers, allocation on a merit-good basis stands outside what has been dealt with here as the theory of social goods. In all these cases it is evident, however, that interference may apply with regard to private goods (e.g., pornography) no less than to what we have defined as social goods. The social- and merit-good problems must therefore be distinguished.<sup>21</sup>

Musgrave's idea of merit (and "demerit") goods has not caught on with neoclassical economists. This is not surprising since the idea is that some "goods" are truly good and other "goods" are actually bad. This idea of merit goods, as Musgrave is careful to explain, is not to be confused with public or social goods which neoclassical theory recognizes.<sup>22</sup> Therefore, neoclassical theory has made no room for

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<sup>21</sup>Richard A. Musgrave and Peggy B. Musgrave, Public Finance in Theory and Practice, 2nd ed. (New York: McGraw-Hill Book Co., 1973), pp. 65-66.

<sup>22</sup>Merit goods, when they are even mentioned in public finance texts, are often explained (away?) as a type of public good in spite of Musgrave's careful explanation that he thought otherwise. See, for example, Werner Z. Hirsch, The Economics of State and Local Government (New York: McGraw-Hill, 1970), p. 12: "Merit goods involve interdependencies in utility functions . . . ." or see Ansel M. Sharp and Bernard F. Sliger, Public Finance (Austin: Business Publications, 1970), p. 18, where merit goods are merely a way of redistributing income: "Another category of public goods and services is merit goods . . . . These public goods are provided for the expressed purpose of enhancing the economic well-being of specific individuals or groups . . . . Public merit goods and services must be defended on another ground-equity in the distribution of goods and services . . . . an admitted interference with the distribution of income which otherwise would exist."

goods or preferences which purport to be objectively good or bad. It cannot compare a subjective value with an objective one. Nor can Pareto optimality, based as it is on the assumption that the individual is better off in a chosen position, incorporate objective positions. And yet, it is not necessary for economics to assume that all preferences are equally worthy of being satisfied and thus "taken as given." Furthermore, although this assumption may be praised for its tolerance, it does not (as Little has clearly shown) mean that economics is value-free, tolerant; "yes;" value-free, "no."

Stewardship, on the other hand, need not be intolerant or authoritarian. The notion of objective value in creation does not logically lead to a "stewardship elite" who will tell the rest of us what has objective value and what doesn't. But stewardship theory does force us to evaluate economic decisions, such as the extinction of another specie in a broader value context. As we will see, extinction may indeed be the optimal allocation according to stewardship, but the analysis hardly resembles that of neoclassical theory.

For extinction of a specie to be optimal, the objective value of the specie would have to be less than the objective value sacrificed to preserve it. How do we determine the objective value of a specie and of the goods and services that would be sacrificed if the specie were preserved? The problem is how should we allow for trade offs when the things being traded (sacrificed) are both objectively valuable? We are faced with the difficult question of ends and how a society ought to determine them. We are, so to speak, at the

interface of economics, ethics, religion and political theory, to name only a few. The function of a stewardship theory is not to resolve the fundamental questions of these disciplines. Its function is to help us integrate; to show us the need to integrate knowledge from various disciplines in order to make better decisions and policy. Its function is to help us discern between ends and means. When neo-classical theory, for example, analyzes extinction it places it in the category of means, the accepted end is maximizing discounted net revenues. Stewardship theory, however, argues that extinction of a specie is a good candidate for objective valuation: is it a worthy end? The question: "How should society determine whether or not extinction is a worthy end?" is a fundamental question for religion, ethics and political theory. That does not mean the question is irrelevant to economics and stewardship, far from it. It simply identifies where we must look for knowledge on the subject. For the purposes of this dissertation I will accept the fact that in the United States democratic solutions are preferred to authoritarian ones. Furthermore, the more important the end in question, the more we tend to call for full democratic participation, whereas ends of lesser importance are more likely to be determined by representative democracy. Where the question of specie extinction lies on this continuum of ends is neither clear, nor my major concern. Rather, I want to show how we might proceed with an objective valuation of a specie in a democratic process.

The crucial point is to construct an evaluation process wherein objective-intrinsic values are appraised, rather than subjective tastes and preferences. We want to determine and compare the objective value of the specie with the objective value of the alternatives (e.g., goods and services). The obvious way not to do this is to ask people how much they would be willing to pay to preserve the specie. Why is this obviously wrong? We certainly have a problem of tradeoffs, and economic theory of scarcity and opportunity costs helps us to see that. But "willingness to pay" solutions ask people to think and compare in terms of subjective not objective values. Although no mechanism will guarantee that we rationally try to determine the objective value of a specie with whatever would have to be sacrificed for its preservation, trying to put a monetary value on these things seems likely to promote subjective valuations. A better procedure might be to compare the alternatives in real terms. That is, compare the specie with the actual goods and services that would be sacrificed for specie preservation. For example, preserving a specie, such as the snail darter, might mean a smaller dam or a more expensive location, or some other alternative that would raise electricity rates. Rather than comparing those increased rates with "willingness to pay" estimates, compare the specie with real sacrifices due to those higher rates. Perhaps the higher rates would mean sacrificing television for one hour per day; or not using electric appliances such as can openers, knives and toothbrushes. The point is to design the analysis so that we try to evaluate the intrinsic goodness of two competing

ends. We are not interested in the subjective value that we place upon the specie, but rather in the intrinsic value that the specie has as a part of creation. If we decide to sacrifice a specie it should be as clear as possible to us what objective values we have lost and gained.

Stewardship is not a theory concocted to preserve nonhuman species, wilderness, etc. Nor is it designed with a logic or mechanism (criterion) that defines and guarantees that we make right choices - it does not promise optimality (Pareto or otherwise). It does however make the choice process aware that subjective preferences and objective value are different and may conflict. When they do conflict, the institutional mechanisms (the market, property rights, etc.) for making choices may need changing if the ends (objective values) involved are important enough.<sup>23</sup> To recognize conflicts and make institutional changes requires knowledge of what is good and valuable (morally and nonmorally) in creation and in our lives. This is not the task of any single discipline; nor is it unrelated to economics (and especially so since neoclassical economists enter the debate armed with their subjective criterion of efficiency).

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<sup>23</sup>We allow the market exchange process to be our institutional mechanism for making many choices that are clearly a matter of subjective valuations (from chocolate ice cream to Chevrolets), but we put limits on this institution when the "goods" partake of objective value. It is curious that economic theory has done so little work in differentiating subjective and objective goods, i.e., determining the proper domain of market exchange.

Economics as a science of human choice has a long history of affiliation with moral philosophy, religion and political theory. Classical, medieval and ancient political economy are the sources for an economic perspective on stewardship. Indeed, stewardship theory is quite vulnerable to the charge that it is merely ancient political economy in disguise. A "political economy awakening," however, does not require abandoning the analytical progress of neoclassical theory. The problems of stewarding creation in the 20th century are not going to be answered by giving up useful analytical techniques, but rather by learning when and when not to use them. It remains to be seen whether or not neoclassical theory will see the reasons for giving up its superficial positivistic approach and its underlying normative theory of subjective moral relativism.

#### THE FEDERAL ENDANGERED SPECIES ACT

The differences and the benefits of a stewardship versus neoclassical approach to the question of species extinction can be further exposed by examining the Endangered Species Act (ESA).<sup>24</sup> The ESA and related literature show some rather confused, ambiguous thinking about values. Consequently, the purpose, implementation and amendments to the act are unclear. Much of this confusion can be traced to the failure to understand and distinguish between the

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<sup>24</sup>16 U.S.C. §§ 1531-1543 (1976 and Supp. III 1979); Pub. L. 93-205, 87 Stat. 884 (1973).

subjective valuation of neoclassical economic theory and the objective valuation of a stewardship theory. Due to this failure, the act is unclear on how endangered species are to be valued and compared to the proposed projects which threaten their existence.

In December 1973 the ESA became law apparently with the major premise,

. . . echoed by increasing public outcry in recent years . . . that wildlife are valuable national resources and that the extinction of an increasing number of species in the name of progress must be stopped. Presumably, while most congressional supporters of the act must have felt that the needs of wildlife were valid considerations, it is doubtful that many meant for wildlife to be the only consideration. Yet §7 of the Act seems to do just that in that it precludes all federal agencies from 'authorizing, funding or carrying out' anything that may 'jeopardize' an endangered or threatened species, irrespective of any and all other considerations.<sup>25</sup>

Lachenmeier has thus identified part of the confusion: did the Congress actually intend preservation of a specie to preclude any and all conflicting goals; that there should be no weighing and balancing of the value of preservation with the opportunities sacrificed? This particular question was supposedly resolved with the 1978 amendments to the ESA which established a procedure and a committee<sup>26</sup> to weight

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<sup>25</sup>Rudy R. Lachenmeier, "The Endangered Species Act of 1973: Preservation or Pandemonium?" Environmental Law 5 (1974), p. 29.

<sup>26</sup>The committee is composed of at least seven members: Secretaries of Agriculture, Army, and Interior; Chairman of the Council of Economic Advisors; Administrators of the Environmental Protection Agency, and National Oceanic and Atmospheric Administration; and one individual from each affected State.



the benefits of preservation with the benefits of the proposed project.<sup>27</sup> The amendments indicate that a weighing of benefits is to take place, but confusion remains because of the ambiguity of "benefits." Does this mean benefits as determined by individual preferences or does it mean objective benefits (i.e., the intrinsic value of the specie existing and the intrinsic worth of the project's goods and services)? The amendments resolve the question of whether or not balancing ought to take place (it should), but the more fundamental vagueness remains. Indeed, the differences between subjective and objective values are confused by Lachenmeier when he says that the major premise of the act is that "wildlife are valuable national resources," (subjective or objective?) and that the congressional supporters of the act took as valid considerations "the needs of wildlife" (presumably objective). In fairness to Lachenmeier, and to others who easily speak of "economic values" and "ecological values" the ESA itself falls victim to this prevalent ambiguity. For example, the act reads:

The Congress finds and declares that . . . these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational and scientific value to the Nation and its people . . . .<sup>28</sup>

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<sup>27</sup>The committee will grant an exemption to a project ("agency action") if five of the seven members determine that - "(i) there are no reasonable and prudent alternatives to the agency action; (ii) the benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest; and (iii) the action is of regional or national significance . . . ." 16 U.S.C. § 1536 (h) (Supp. III 1979).

<sup>28</sup>16 U.S. C. § 1531 (1976).

What are these values; are they subjective or objective? Does "value to the Nation and its people" mean objective-intrinsic value of the specie or simply "social value," which is recognized by neoclassical economics? Even "ecological value" can easily be understood to mean the subjective value of a specie as it performs a life support function in man's environment.<sup>29</sup> If these values refer to human benefits then the ESA is far less radical than some feared and others hoped. If the benefits that the committee is to weigh are purely subjective then neoclassical resource economics will prove of good service. For the ESA would simply be forcing the inclusion of all social values into a cost-benefit analysis. This neoclassical economists know how to do. But is this the actual intent of the act? Even though the language can be interpreted to mean only subjective values, section 1536 of the 1973 unamended act suggests otherwise. This part of the act directs all Federal departments and agencies to:

utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed . . . and by taking such action necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species . . . .<sup>30</sup>

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<sup>29</sup>For a discussion of terms such as "ecological values" in relation to subjective and objective values see, for example, John N. Martin, "The Concept of the Irreplaceable," Environmental Ethics 1 (Spring 1979), pp. 31-48; and Holmes Rolston, III, "Values in Nature," Environmental Ethics 3 (Summer 1981), pp. 113-28.

<sup>30</sup>16 U.S.C. § 1536 (1976).

This section of the act, with its apparent absolute proscription against jeopardizing the existence of endangered species, went through various litigations with mixed results. The final decision by the United States Supreme Court in *TVA vs. Hill* established the intent of the ESA to be the absolute proscription of interferences with endangered species that would result in their extinction.<sup>31</sup> Since the original act had no procedure for weighing benefits, absolute proscription meant just that - there was no appeal to overriding benefits of a project. This fact was, of course, the undoing of the original act and it was subsequently amended.

The amended ESA is more reasonable than the original because it recognizes that endangered species are not of infinite value (either subjectively or objectively). Preserving species means some alternative opportunities will not be preserved. Preserving a particular specie may actually require the sacrifice of another specie. The amended ESA thus recognizes the economic problems of scarcity and opportunity cost. But has it recognized the nature of "objective opportunity cost?" Has it worded the amendments carefully enough to do what seems to have been its original intent?

If the original intent was to protect otherwise uneconomical<sup>32</sup> species from extirpation, then the ambiguities of the terms

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<sup>31</sup>David B. Stromberg, "The Endangered Species Act of 1973: Is the Statute Itself Endangered?" Environmental Affairs 6 (1978), p. 533.

<sup>32</sup>This is Stromberg's conclusion and he notes that had the Supreme Court not decided in favor of "absolute proscription" and had allowed a benefit-cost approach, " . . . a 3-inch fish could

"benefits," used in the amendments,<sup>33</sup> and "values," used in the original act, will make it difficult to preserve that intent. The common sense interpretation of the "benefits" referred to in the amendments is the standard benefit-cost notion. If "benefits" is supposed to mean something else, for instance, something like intrinsic value then we should expect to see a clear explanation of this fact since intrinsic value is not the common sense meaning of "benefits." But no such explanation appears. Regardless of the intent of the amendments the results are very confusing and future litigation over the function of the committee is virtually certain.

It seems reasonable to speculate that the original act was designed to protect endangered species by placing them above economic consideration via a benefit-cost study. Indeed, this was the final conclusion of subsequent litigation over the ESA's alleged economic hardship which found in favor of absolute proscription and led to the amendments in 1978. The amendments appear to call for a typical benefit-cost approach, albeit a very thorough one, which would be a radical departure from an intent of absolute proscription. Do these amendments actually represent such a fundamental change in Congress' intent to

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never compete with a \$90 million dam project, an 'unattractive and useless' Furbish lousewart plant could not hope to survive against a \$600 million project." Stromberg, *ibid.*, pp. 532-33.

<sup>33</sup> See footnote 27 above.

provide a program for the conservation of such endangered species and threatened species . . . . [because some] have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation . . . .<sup>34</sup>

It is more likely that this legislation is stumbling over the idea that things have value other than their value for satisfying human preferences. It is stumbling because we lack something like a theory of stewardship which differentiates between subjective and objective values in creation. The legislation has moved from one extreme to another; from giving endangered species infinite objective value to giving them no objective value and thus only subjective value. If the real intent of the ESA is to force us to recognize that we are stewards of a creation full of objective value and not merely managers of natural resources for human consumption, then it has failed and requires further amendments. The necessary amendments will have to clarify the belief that preserving species is one objective good (end) that has to be balanced with other objective goods. Choosing between conflicting objective goods is not accomplished with the standard economic benefit-cost analysis based on subjective preferences. Objective goods are balanced on objective grounds: which of the two conflicting good ends is the best, most desirable. This

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<sup>34</sup>16 U.S.C. § 1531 (1976). For a discussion of the content of an environmental ethic that would represent an attitude of "adequate concern and conservation," see, for example, J. Baird Callicott, "Elements of an Environmental Ethic: Moral Considerability and the Biotic Community," Environmental Ethics 1 (Spring 1979), pp. 71-81; Charles Hartshorne, "The Rights of the Subhuman World," Environmental Ethics 1 (Spring 1979), pp. 49-60; and Don E. Marietta, Jr., "The Inter-relationship of Ecological Science and Environmental Ethics," Environmental Ethics 1 (Fall 1979), pp. 195-207).

difficult question is not decided by asking people about their willingness to pay for subjective desires. It should be decided by human beings rationally comparing the intrinsic worth of each proposed end. The comparison of ends is clearly a normative problem and it should not be mistaken or disguised as a positivistic economic one. Which human beings should participate in this determination of ends should depend on the importance of the ends. Some projects may have such a profound impact on creation that a referendum would be best. Others of lesser importance would probably be better suited to a congressional vote or perhaps simply a special committee. The committee as defined in the ESA, however, does not seem at all appropriate for weighing the religious and moral considerations of a specie's existence and human needs or wants. Why would any of the various Secretaries or Administrators on the committee be expected to have this kind of expertise or to speak for the stewardship ethic of the American people? If we are committed to a democratic process in the determination of stewardship ends (even though this does not guarantee the correct moral choice - no system does) then a small committee of administrative experts with no special knowledge of stewardship ethics seems to be ruled out. A congressional decision would probably be more representative, although not necessarily any better informed by a stewardship ethic.

Indeed, a stewardship ethic which recognizes the objective value of God's creation does not seem to describe the prevailing ethic of 20th century mankind. And yet, the ESA offers a small amount of

hope that such an ethic is emerging, albeit rather confused. To alleviate the confusion and ambiguity surrounding this particular act, future acts, and other institutional changes requires, among other things, an economic theory which recognizes and incorporates into its analysis of human choice and "optimal" resource allocation both subjective and objective values.

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#### VITA

John Harlan McDonald was born in Cambridge, Ohio on September 15, 1944. He graduated from Redford Union High School, Detroit, Michigan in June, 1962. He attended Highland Park Junior College, Highland Park, Michigan and the University of Michigan from which he received the Bachelor of Science degree in Civil Engineering in August, 1968. He received the Master of Science degree in Water Resources Administration from the University of Arizona in May, 1973. He attended Regent College, Vancouver, British Columbia, Canada from which he received the Diploma in Christian Studies in May, 1977. He received the Doctor of Philosophy in Economics, with a minor in Geography from Louisiana State University in May, 1984.

The author has been employed as a Civil Engineer with the Bureau of Reclamation, U.S. Army Corp of Engineers, and the Environmental Conservation Agency of the State of Vermont. Mr. McDonald is currently an Assistant Professor of Economics at Luther College in Decorah, Iowa.



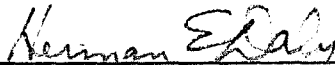
# EXAMINATION AND THESIS REPORT

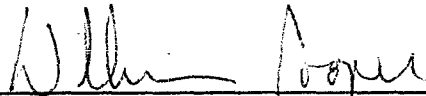
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**Major Field:** Economics


**Title of Thesis:** Stewardship of Creation: Some Implications For Economic Theory and Policy

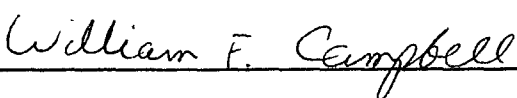
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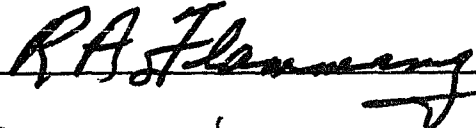
  
Major Professor and Chairman

  
Dean of the Graduate School

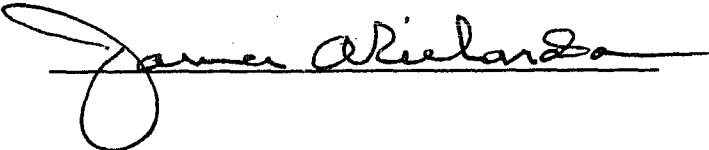
## EXAMINING COMMITTEE:











**Date of Examination:**

March 19, 1984