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### *Objectives of Land Policy*

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**L**AND POLICIES ARE SOCIAL CONTROL MEASURES designed to improve the use of land resources and the conditions of property rights under which people work and live on the land. The main problems to which land policy is addressed, therefore, lie in the fields of (1) land use, conservation and development, and (2) land tenure.

The formulation of land policy takes place in the general framework of public action. It is a part of the "law of the land," and evolves within the socio-economic and political processes of society. The objectives of land policy are governed by what people desire, and what the functions of government are conceived to be in bringing about better land use and tenure.

But changes in land use and tenure are desired only when people do not like existing conditions or when people visualize better use and tenure of land. The need for public action arises whenever people feel that they, as individuals, cannot bring about the desired

adjustments. Hence, as policy is made, people have in mind some norm or goal which constitutes the image of an ideal situation toward which they strive. These "norms" represent the goals of policy toward which specific programs are directed.

In technical language, these goals, or notions commonly held as to how things ought to be, are called "value judgments." They are objectively observable facts and as important as are amount of money in circulation or bushels of wheat produced. Certain beliefs regarding economic and social situations must be introduced as essential facts into research methods and analytical procedures employed by social scientists. There can be no escape from this necessity.

The term "goal" as used here is not conceived as an individual value judgment that we may have dreamed up, but rather as a group consensus on a value judgment. As a belief held by a sufficiently large number of people to exert a "normative" influence upon attitudes, behavior and actions of people. The researcher's own value judgment should not enter into the formulation of goals. He may or may not share any of the beliefs introduced as facts into the analysis. The course as well as the findings of his analysis should in no way be affected by whether he does or does not accept these goals toward which policy is directed.

A task of social science is to spell out these goals of public policy in terms which render them amenable to analytical treatment. Just what is it that people want? Are the goals attainable? Are they compatible with other goals? Do they fit into the socio-economic and political framework within which society operates? In appraising specific objectives of certain land programs, we must project them against the background of the superior goals of general economic policy.

#### MASTER-GOALS OF ECONOMIC POLICY

Objectives of specific public policies and programs should be subservient to the broad goals toward which society as a whole is striving; all goals should converge toward one end—the improvement of general economic and social welfare. In formulating such ultimate economic ends, we can establish guiding principles of policy for evaluating any specific program.

Let us posit two master goals of economic policy: (1) the maximization of the social product over time, and (2) the optimization of income distribution among people. The first is concerned with problems of misuse of human and physical resources in the production process and has constituted the center of economic science since its inception. The second is concerned with problems of inequities in the distribution of real income among families; it has

until recently been neglected by economists, but has always been keenly recognized by people everywhere.

How can we spell out these master goals of economic policy in objective scientific terms? We have to establish norms with which concrete situations can be compared, and deviations from which can be measured, at least in proximate orders of magnitude.<sup>1</sup>

**MAXIMUM SOCIAL PRODUCT.** Marginal productivity analysis provides the main set of tools for determining the degree of efficiency in the pattern of resource allocation. The norm, that is, the conditions for maximum social product, can be briefly defined this way:

The factors should be allocated among all various lines of production so that their marginal social net product values are equal throughout the economy.

This ideal pattern of resource allocation we shall call the "productive norm." If in any concrete situation the marginal net product of a given resource is smaller in some and larger in other lines of production, the situation is considered "maladjusted" with reference to the productive norm, and the use of resources should be shifted from the low to the high marginal product fields.

In terms of static equilibrium analysis of a firm, or even of an industry, this concept of the productive norm is quite simple.<sup>2</sup> The real difficulties arise in empirical measurement and in introducing time preference and technological change. Furthermore, the analytical structure, the nature of constants and the functional relations between variables regarding the firm are quite different from those regarding aggregates of the economy as a whole. While the size of

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<sup>1</sup> The following cannot be more than a highly simplified outline of an intricate analytical procedure. Three important things should be kept in mind: (1) there are other than economic goals of public policy; (2) the optimum resource allocation (productive norm, see below) varies with the pattern of income distribution, due to differences in propensities to consume and demand elasticities of various goods with respect to income between different income groups; and (3) the goal of a given policy is usually achieved in terms of a higher or lower degree of accomplishment rather than in terms of all or nothing. Often, an actual public program pursues various ends simultaneously. If some of these ends are in conflict, they should be ranked in relative priority, pressing one toward a higher degree of attainment at the expense of a lower degree in the other. For instance, the Soil Conservation and Domestic Allotment Act of 1936 pursued the two purposes of conservation and farm income support (through production controls). In some areas, conservation practices increased yields and offset acreage reductions. Largely because of the partially conflicting nature of these goals and a confounding of various means-end relationships, the means employed did not achieve a high degree of effectiveness. (See John F. Timmons, "Land Tenure Policy Goals," *Journal of Land and Public Utility Economics*, Vol. 19, No. 2, p. 178, May, 1943.)

<sup>2</sup> For a succinct formulation of the productive conditions of welfare, see A. P. Lerner, *Economics of Control*, pp. 75-77, Macmillan, New York.

the labor force is a variable for the firm, it is a constant for the economy; the time preference for the individual is much higher than for society; and there are many items of social costs (e.g., soil erosion, oil and timber wastes, loss of products due to unemployment) and returns (e.g., roads, education, many public services) which do not appear in the ledgers of the individual firm.

Nevertheless, the body of marginal theory is sufficiently developed to be of real practical help in evaluating public policy.

The objectives of any specific land program should be tested for their compatability with the productive norm: do they tend to make for a more efficient allocation of resources and hence for a larger social net product? We shall see later that this test is particularly appropriate for land use, conservation and development policies.

OPTIMUM INCOME DISTRIBUTION. Whatever the size of the social product, people have certain ideas as to how it ought to be distributed. Wide-spread poverty existing side by side with affluence is revolting to the sense of decency and justice in a democratic humanitarian society. Extreme poverty and economic insecurity reduce the individual's opportunities to the despondent choice between starving or begging for charity (including government hand-outs), and leaves liberty empty of meaning. Extreme wealth widens the opportunities of a few, often to the point of exercising power over many others, permitting liberty to degenerate into license and domination. People are keenly aware of the characteristic features of income distribution, as the extremes of poverty and wealth impinge upon their daily lives through direct observations and experiences.<sup>3</sup>

In a highly articulate democratic society, maldistribution of income is more strongly resented than malallocation of resources. In fact, in modern industrialized nations, public policy is much more often and directly concerned with improving income distribution than with increasing the social product. I need only mention progressive taxation, minimum wage and other labor legislation, education and health programs—all these policies have as their goals not product maximization, but income redistribution in a direction which more nearly satisfies some distributive norm, however vaguely conceived.

Let us attempt to spell out this goal of optimum income distribution in terms sufficiently concrete to be useful in appraising policy objectives.

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<sup>3</sup> An elaboration of the arguments in this section can be found in an article by the author, "Optimum Income Distribution as a Goal of Public Policy," *American Journal of Economics and Sociology*, pp. 453-78, April, 1944.

The dominant ideas with reference to which income distribution is to be optimized are equality of opportunity and individual liberty. The first of these concepts is equalitarian in character, the second differential. But their interrelation is conceived as complementary rather than antagonistic. That is: the best income distribution is one which equalizes opportunities among all individuals of society, and at the same time gives each individual the liberty to seize upon his opportunities according to his peculiar skills, talents and aspirations—which of necessity makes for unequal real incomes.

Translated into practical economic terms, this means that income should be so distributed that:

- (1) Everyone should grow up and live in an environment of at least minimum adequate standards of health, nutrition, clothing, shelter and education. There is ample evidence that children raised under conditions of below minimum standards in these essentials of life find their opportunities severely restricted. The quantitative contents of these minimum standards vary with cultural patterns, the state of the arts, and the size of the social product relative to population. This criterion of optimum income distribution we shall call the "subsistence norm."<sup>4</sup>
- (2) Everyone should have the opportunity of personality differentiation, of developing his individual talents and satisfying a great variety of wants according to his own selection. An individual with high wants is expected to spend commensurate efforts, thereby contributing to the social product correspondingly. The individual's urgency of wants of increasing scope and differentiation is the prime incentive for working hard and well, if by so doing he can satisfy these wants. Hence, one's income should be in proportion to his personal contributions in effort and skills to the social product. This criterion of optimum income distribution we shall call the "contributive norm."

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<sup>4</sup> If the marginal product value of a worker is lower than the value of his subsistence, three reasons may account for it: (1) His labor is inefficiently combined with other factors; if he is an employee, the employer is to blame; minimum wage laws tend to lead to more efficient labor use. (2) The worker is partially or totally disabled, by injury or old age; our moral code does not deprive him of a subsistence claim on that account. (3) The worker is lazy and negligent; the community can exert various kinds of pressures to utilize whatever productive capacity he might have (e.g., through eligibility rules for certain subsistence grants). Society would probably lose more by depriving him of his subsistence claim than by granting it, because below-subsistence levels of living create crime and social unrest, and cause undeserved hardships to his dependents. Society's interest in his children's future capacities and attitudes alone should justify his support at minimum adequate level.

Concretely, then, the maladjustment of a given pattern of income distribution can be measured in terms of the percentage of families falling below minimum adequate standards of subsistence, and the degree by which the individual's income falls short of (or exceeds) the marginal productivity of his labor (including management and all the skills which are the attributes of the individual and which he exercises in the production process).<sup>5</sup>

The objectives of any specific land program should be tested for their compatibility with the subsistence and contributive norms of optimum income distribution. This test is particularly relevant to tenure policies.

#### **FORMULATION OF POLICY GOALS IN THE USE, CONSERVATION AND DEVELOPMENT OF LAND**

In the field of land use, land policy objectives are directed primarily toward the goal of maximizing the social product—although any re-allocation of resources usually involves some shifts in income distribution. The focus, however, is upon the productive norm.

To simplify the exposition of the argument, let us skip the problem of improving the broad pattern of land use, i.e., of shifting land from one major use category such as arable farming to another, say forestry or extensive grazing. It is my impression that the degree of maladjustments in the land use pattern of the United States is relatively small and rather localized. The bulk of the land now in timber finds its highest use in timber production; the bulk of the land now in arable farming finds its highest use and should remain there. There are, of course, exceptions, but I believe that our major land use problems probably fall within each of these broad use categories of farming, grazing and forestry, and are concerned chiefly with conservation.

People have watched gullies eating deeper and deeper into once fertile fields until they had to be abandoned. Virgin forests have been cut over without orderly reforestation being provided for. Native ranges have been overstocked until only deserts were left. Along with soil erosion and the destruction of the protective cover of trees and range grasses came swelling floods and siltation of

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<sup>5</sup> "Property" in this context is not considered a personal "attribute of the individual," since it can be acquired in so many ways that are largely unrelated to "individual effort expended." Moreover, the growth of corporate and public property and of a highly differentiated labor-division economy should work in the direction of reducing the effect of property upon the pattern of personal income distribution. However, where a wide diffusion of property is feasible without disturbing the efficiency of the production process, such diffusion is desirable in the interest of distributive welfare.

navigable streams and reservoirs. Such misuses of land violate the productive norm and call for land conservation policies.

Obviously, the pursuit of competitive self-interest of individual producers is in conflict with society's interest in maximizing the social product over time. There is a fundamental difference in the time-preference for land income on the part of individuals and society. The short-run private profit motive to exploit resources must be confined by the long-run social welfare motive to conserve and develop them.<sup>6</sup> Individuals maximize their immediate profits by incurring social costs which are borne by someone else—by farmers and city people who get flooded out in the lower parts of the watershed, and by future generations who inherit impaired resources.

A basic goal of land conservation policy is to induce a degree of use intensity and a system of use practices which will maximize the long-run social product value derived from land resources.

But the nature of various land resources varies greatly. So general a formulation of a policy goal is useful only for designating guiding principles, from which more specific objectives of specific land programs can be derived. It is this step from the general to the specific that encounters innumerable difficulties. We can outline only a few of them.

**ARABLE FARM LAND.** Here, conservation policy deals with a complex land resource. The plant nutrients are a combination of renewable fund and flow resources; the topsoil is for practical purposes a non-renewable fund resource. Society's long-time interest is concerned primarily with the topsoil; as long as it is kept in place, the management of the restorable plant nutrients might well be left to a rather wide range of individual discretion.

A conservation program in arable farming, therefore, should recognize this distinction. Its major objective should be to control soil erosion—and never mind about fertility as such.<sup>7</sup> The rate of fertilizer application should be governed primarily by the short-run

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<sup>6</sup> There are cases where private profit interests coincide, at least in principle, with the welfare interests: monopolistic output restrictions in extractive industries. It would be unwise, however, to interpret such coincidence as a genuine identity of private and social interest. The objectives of monopolistic output restrictions are very different from those of conservation, and hence the quantitative application of output reduction as to timing and types of resources might not correspond with the requirements for conservation objectives. For example: general agricultural production control cannot be justified primarily on grounds of conservation, as is done so often.

<sup>7</sup> To the extent that fertility maintenance is necessary to hold the top-soil in place, it becomes an erosion control measure and falls within the provision of public conservation policy.

relations between fertilizer (and related) costs and crop prices, in the interest of the productive norm.

This may sound trite. But let us look at the consequences of this proposition. It means that not a cent of public money should be spent for conservation in all the areas where erosion, either from water or wind, is no problem. It means that a very substantial part of the public services and conservation payments made to Corn Belt, New England and Mississippi Delta farmers were misspent with respect to the basic objective of the conservation program. There is no justification, on grounds of public interest in conservation, for use of public funds on level land not subject to serious erosion, or on rolling land already under permanent grass or tree cover. Yet, millions of dollars have been spent under various conservation programs on just such lands. If all these funds had been concentrated on the land really subject to erosion, public welfare would have been served much more effectively.

In the mid-thirties, some land economists had proposed just such a conservation program, in which the establishment of conservation districts and disbursements of conservation payments were to be limited only to areas subject to erosion.<sup>8</sup> But the conservation program under the "Soil Conservation and Domestic Allotment Act of 1936" was rapidly developing into an income-support and production control program, in which many objectives were confounded into a conglomeration of purposes that made a clear-cut conservation policy difficult to apply.

Although we are not dealing here with methods for implementing land policy objectives, in formulating such objectives the cost of the program and the degree of achievement through economically and politically feasible means must be appraised.\*The basic objective is not to stop erosion at all cost and by any means, but rather to reduce erosion at public costs people at large are willing to stand, and by regulatory means farmers are willing to accept.

This means that policy objectives should be drawn up with the view of economizing public funds and regulatory devices. And this implies the establishment of critical limits which should determine the application of various conservation objectives and methods, according to specific land classes or type-situations.

For instance: critical limits for specific land classes or type-situations and their respective conservation objectives might be designated as follows:

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\*See Rainer Schickele, "Methodology in Soil Conservation . . .," Iowa Agricultural Experiment Station Res. Bull. 209, p. 373, March, 1937, and A. C. Bunce, *The Economics of Soil Conservation*, pp. 14-16, and 76-78. Iowa State College Press, Ames, 1942.



- (1) Land so dissected by gullies that its reclamation costs are prohibitive should be stabilized by the least expensive method of protective covering—the critical limit of restorability;
- (2) Land so susceptible to erosion that it should be shifted from cultivation to permanent pasture or timber—the critical limit of arability;
- (3) Land that should remain in cultivation, but requires current soil conserving practices, such as longer rotations, contour and strip cropping, etc.—the critical limit of current conservation practices;
- (4) Land that is so little subject to erosion that it does not warrant public concern—the critical limit of eligibility for conservation aid;
- (5) Public conservation aid (in kind or cash) should be allocated in such a way that farmers are compensated for conservation expenditures not recoverable within a reasonable time period—the critical limit of compensating individual sacrifice;
- (6) Mandatory regulation should be used where lack of conservation damages adjacent property (e.g., mandatory land use regulation under soil conservation districts), or where major blocks of land should be permanently withdrawn from farming (e.g., rural zoning ordinances and government purchase of submarginal land), or where conservation measures are urgently needed and can be applied individually without sacrifice in income—the critical limit of mandatory regulation.

In the context of a practical farm conservation program, the first four points lay out the direction and emphasis with which the conservation objective applies to particular classes of land, point five establishes principles of allocation of public aid to producers so as to achieve maximum conservation results for a given amount of public funds, and point six designates the limits within which the use of statutory land use regulation might be justified.

Our present soil conservation programs need overhauling, with respect to clarification of detailed objectives and principles for allocating public aid somewhat along the lines presented here. Income-support and production control objectives should be clearly segregated from those of conservation, even though they may, under certain circumstances and within narrow limits, be complementary to each other. The public is entitled to a clear-cut accounting of the costs and accomplishments of the various policies, and this cannot be done by jumbling up many heterogeneous objectives into a single mammoth program.

This is not to deny, however, that one program should be used,

wherever possible, to reinforce or supplement another. An income support or credit program might well require cooperators to meet certain minimum conservation standards. There are many obstacles to practicing conservation that individual farmers often find hard to overcome. Since all farm programs should converge toward the over-all goals of public policy, their complementariness should be enhanced, and their conflicts be minimized. This can be done without obscuring the accountability of each program for its direct costs and accomplishments.

**FOREST LAND.** Conservation objectives in forestry can be stated more simply—although the socio-political factors are offering formidable obstacles to their implementation.

On the whole, the present land in forests finds its highest economic use in timber production. The objective of a forest conservation program is primarily one of establishing management practices and regulations designed to maximize the long-run social net product derived from forest lands.

Following a similar procedure of analysis as was done with farm land, critical limits for various classes of forest lands should be established that would indicate the direction and emphasis of conservation objectives to be applied. In 1933, the U. S. Forest Service, in response to a Senate Resolution and under the leadership of Earle H. Clapp, prepared a well-conceived "National Plan For American Forestry," in which three levels of intensity of forest management were established.<sup>9</sup> Fire control, selective logging and reforestation practices should be geared to soil and climatic conditions so as to yield sustained or increased timber output depending upon various cost levels and locations to market.

It is quite likely that current and prospective relevant cost-price ratios are such that it is economically justified: (1) to reforest now denuded slopes in strategic positions—the critical limit of erosion and flood control; (2) to prevent any present forest land from deteriorating any further—the critical limit of sustained potential productivity; (3) substantially to expand and improve fire and pest control in accordance with systematic estimates of fire and pest hazards; (4) to adopt a long-time program for a systematic expansion of land under sustained yield management, beginning with the most productive and favorably located areas and gradually covering lower grades and more remote locations.

In drawing up specific objectives along these lines, we should keep in mind that public expenditures for forest conservation are

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<sup>9</sup> See U. S. Forest Service, *Major Problems and the Next Big Step in American Forestry*. Senate Document No. 12—separate No. 1, p. 43, Washington, D.C., 1933.

well adaptable to the needs of functional fiscal policy—stepping up expenditures during periods of general business recession, contracting them during peak periods of business activity.

**OTHER LAND RESOURCES.** We have treated in some detail the major issues involved in formulating land policy goals with respect to land use and conservation objectives for two major types of resources, farm and forest lands. A similar procedure might well apply to other land resources.

For range lands, the objectives can be stated in terms quite similar to those outlined for arable farm lands. Most of the conservation problems on range land arise in semi-arid or arid plains and mountain zones subject to wide weather fluctuations. Livestock enterprises have a much longer production period than most crop enterprises. Therefore, range conservation needs to give special emphasis to flexibility in stocking rates and provisions for adequate supplemental feed reserves. Conservation does not mean non-use, but optimum use of resources. It would be foolish indeed to use the carrying capacity of ranges during the drought years of the thirties as a standard for formulating specific range conservation objectives; yet the carrying capacity under conservation of a given range area is often cut to one-half or one-fourth in one year, and doubled or quadrupled in the next. There are limits beyond which the individual rancher cannot go in providing for feed reserves, or for a quick expansion of his herds. Public policy can go a long way in supplementing his efforts at equalizing the aggregate feed supply over seasons and over years, and by so doing a substantial part of over-stocking in dry years and under-stocking in wet years could very likely be avoided.

Perhaps the most urgent need for a new and forceful conservation program is in oil and natural gas resources. Here, we deal with a non-renewable fund resource of extremely strategic economic importance. There is excessive waste in the exploitation of our oil and gas resources, and even in their consumption. Time is rapidly ripening for a comprehensive federal oil conservation program. The major objectives should be reduction of waste, encouraging a shift to engines using heavier oils or having lower consumption rates, and increasing control over rates of output in the long-time interest of the economy.<sup>10</sup>

**QUANTITATIVE ASPECTS OF CONSERVATION OBJECTIVES.** The problem of determining the rate of exploitation of non-renewable fund resources in the best long-time interest of society is vexing. Quite apart from

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<sup>10</sup> The price effects of possible future output restrictions should not be allowed to produce windfall profits to private companies.

the question of society's time preference—which can only be answered a priori and must fall somewhere between the current interest rate on individual savings and zero—the crucial unknowns about which “reasonable” assumptions must be made are (1) the physical quantity of the resource worth exploiting under the most advanced techniques, and (2) the character and rate of potential substitution of that resource by one or more others in more ample potential supply. We should realize that whatever the quantitative aspects of our conservation objectives may be, whatever the degree of conservation or the rate of exploitation we may aim to establish, an assumption as to these two crucial unknowns is implied.

An illustration may help explain. Some alarmists want to drastically curtail current output and consumption of oil so that we have more of it left 100 years from now.<sup>11</sup> Their antagonist is the consuming public who wants increasing supplies of gasoline at the cheapest possible price now. The economist should tell the alarmist that almost every week new oil deposits are being discovered, here and abroad, and a brand new source of energy, the fissionable atom, is just around the corner. He should tell the consuming public that oil resources are exhaustible, that the unit cost of production is increasing as lower-grade and more remote resources are being tapped, and that there is no certainty as to the time when it will be economically feasible to substitute atomic energy for oil.

The same basic issue arises with the use and exploitation of other land resources which have exhaustible components, such as agricultural land, forest and range lands, fisheries, etc. It requires statesmanship and intimate knowledge of economics and technology to determine the most desirable conservation objectives in quantitative terms. This field of inquiry should rank very high in usefulness to policy formulation.

Related to this issue is the clamor of conservationists for substituting flow resources such as hydro-electric, solar and wind energy for fund resources. The limits of such substitutions should be determined primarily by competent economic analysis rather than by visionary fears or the recklessness of competitive enterprise.

A corollary to the determination of the optimum degree of conservation is, of course, the appraisal of the costs, both private and social, involved in bringing it about. The fiscal cost, i.e., the public funds required effectively to administer a conservation program, is only a part of the cost picture. Often, the same objective can be achieved by various methods, some of which may require large public expenditures (like incentive payments to producers or construction

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<sup>11</sup> See William Vogt, *Road to Survival*, p. 68, William Sloane Assoc., New York, 1948.

at public cost), others may require no funds at all (like mandatory regulations), still others may produce government revenues (like severance taxes or other tax devices). Theoretically, the ultimate quantitative test of the appropriateness of a given conservation objective must proceed within the macro-economic framework of marginal analysis and the productive welfare norm.<sup>12</sup>

**LAND DEVELOPMENT AND RECLAMATION.** The goal of land policy with respect to the development of land resources also should be directed toward implementing the productive norm of economic welfare. Conservation objectives deal primarily with the problem of keeping unimpaired the production capacity of resources now in use; land development objectives deal with the problem of bringing hitherto unused resources into production.

In a settled and fairly mature economy like ours, new land development projects require amounts of capital so large and time periods of amortization so long that small-scale enterprisers cannot shoulder the financial burden. Any major land developments must come from corporations or from government agencies; in either case, society is vitally concerned with the character, cost and use-disposition of such land development projects.

The most far-reaching modern land developments in this country are the river basin projects such as those of the Tennessee, Columbia, and Missouri rivers and the Central Valley of California. All of these are multiple-purpose projects, in which the various widely divergent purposes are combined in widely varying proportions, but are all closely linked together through the nature of the land itself. This basic fact alone points to the necessity for integrated planning of the various development phases which can be accomplished effectively only under government auspices.

The objectives in qualitative terms are obvious enough: irrigation, flood control, hydro-electric power, navigation, recreation. But the economic problem in quantifying these objectives is: how much of each and at what cost?

Let us be practical about this and introduce formal economic analysis first where it will help people most in improving decisions: on the local or area level, and on working up to regional and national levels.

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<sup>12</sup> If a given objective has been so tested and found inappropriate, but people democratically elect to go ahead with it anyway, the economist has no ground for objecting. As often as not, the future might exonerate the people's judgment. Try to visualize the state of this country now, had the conservationists controlled the settlement and industrial development during the 19th century. Yet, many serious mistakes could have been avoided had their influence been stronger.

These developments require large public appropriations. How should they be determined? Here is roughly the process (disregarding the time sequence of these stages):

- (1) Congress, somehow, arrives at a decision as to what funds shall be appropriated for such land developments in relation to other purposes such as national defense, foreign aid, farm price supports, social security, education, public health, etc. At this stage, it is doubtful whether formal economic analysis will carry much weight in congressional deliberations.
- (2) At whatever general order of magnitude public investment in these land developments has been determined, the appropriations must be broken down by the regions of various river basins. At this stage, economic analysis could make a significant contribution, especially concerning the ranking of the various regions as to prospective aggregate benefits for each 100 million dollars of public funds invested. However, a cursory glance at the Congressional Record does not reveal such comparative economic analysis as a decisive factor in the regional allocation of funds.
- (3) Accepting whatever total appropriations are forthcoming for a given area, the requirements for the various construction units submitted by the engineers should be appraised, usually scaled down a bit here and there, and ranked according to priorities. It is at this stage where economic analysis could be most immediately useful and practical in allocating funds among the various phases within the region or basin. This, however, presupposes a central planning authority, with sufficient jurisdiction to effectuate such allocations within an integrated general plan of development. So far, the Tennessee Valley Authority has been the only example where this was done in some systematic fashion. In all the other regions, this economic appraisal and integration of the various development phases is extremely weak, and the allocation decisions tend to reflect the relative strength and persuasiveness of public operating agencies, private pressure groups and individual congressmen rather than the result of economic analysis of alternative development plans. We have traditionally been short on research and long on log-rolling in determining the quantitative objectives in such land development programs.

In a tentative way we might sum up the basic issues thus:

- (1) From a national viewpoint, our capital stock and current and potential rate of capital formation justifies substantial public investments in land development programs along the TVA lines. From a world viewpoint, such investments would yield much larger marginal returns in undeveloped areas abroad than in the United States, but institutional conditions greatly limit the choice of public investments in land resources.

- (2) The criticism that land development programs in face of threatening farm surpluses are not justified is spurious. Farm surpluses, except for a few special commodities during certain periods, are the result of demand rather than supply maladjustments and hence should be tackled primarily from the demand side. Moreover, erosion continues to sap the productive capacity of agricultural land while the population increases.
- (3) Land development in major river basins taps hitherto unused resources yielding products of which we are short, such as electric power, and reduces losses such as erosion, flood damages and silting of streams, the aggregate private and social costs of which we tend to greatly underestimate. The spurt of human activities which is engendered within the region by such development programs releases energies and opportunities which would otherwise remain dormant.
- (4) The rate of repayment of irrigation development costs by farmers should be geared to what they are able to pay, under average management and prevailing prices, after operating expenses and family living requirements have been met. Any residual cost not covered by such repayment schedules should be borne by society as a whole. Any other repayment policy is self-defeating and economically unsound. Similar principles should be established for determining repayment rates for other development costs like those for electric power and navigation.
- (5) There lies a great challenge to people and their statesmen in bringing to bear upon the allocation of funds more economic analysis and rational judgment, especially in the clarification of quantitative aspects of the various objectives, and in the determination of amortization charges.

#### **FORMULATION OF LAND TENURE POLICY GOALS**

Tenure problems are concerned primarily with the distributive welfare norms. Although the effects of certain tenure conditions upon land use and conservation, and upon the productive process in general, are unmistakable, it is property rights and responsibilities that characterize tenure relationships. The second major field of land policy, therefore, deals with the conditions under which people should own, work and live on the land. Whatever a given pattern and intensity of land use may be, the tenure arrangements govern the way in which land income is distributed among the people.

**THE GOAL OF FAMILY FARM POLICY.** The most outspoken basic goal of American land tenure policy has been the family-type farm. From the days of Jefferson to the present, the ideal of our farm lands

being owned and operated by independent prosperous farm families has dominated people's thinking and found expression in a rather consistent series of land settlement and tenure programs. This ideal has persisted without losing its vigor, despite the criticism it has received from industrialists, bankers, landlords and economists.

It seems to be a rather sturdy plant, this system of family farms, and its performance has been quite impressive. Its doom has been announced ever since the beginning of the century, and when Mr. Thomas Campbell organized his wheat factory in the mid-twenties, Mr. Brookings was sure the factory system would sweep the family farms off the Great Plains. So far, a quarter century later, Mr. Campbell is still the lonely wheat king, surrounded by a handful of minor vassals. The Plains wheat economy has remained in the hands of family farmers as firmly as ever. Since neither the great depression nor the war bonanza defeated the family farm as a producer of the most readily mechanizable enterprise of all, one finds it hard to think of any foreseeable event that would.

The explanation of the persistence of the family farm throughout the major agricultural regions of this country is simple: Farmers have succeeded in adopting modern technology within the framework of their family farms. True, they have grown larger; and cooperative marketing, customwork with large-scale machinery and managerial skills supplied by the Extension Service, farm organizations and co-ops have yielded economies of scale which only the industrial form of organization was thought capable of yielding. Still, the fact remains that outside the Plantation South and the fruit and vegetable West, over 95 per cent of the American farms are of the nonindustrial family type.

Many claims have been made for the family farm. Some of them are severely criticized by A. Whitney Griswold in his recent book *Farming and Democracy*. The upshot of Mr. Griswold's analysis, it seems, is that democracy can thrive without a preponderance of family farms in the economy as a whole; but that whatever the size of the agrarian sector may be, the social and economic structure of family farms is more conducive to democratic processes than that of large estates. This latter point is sufficient to justify a family farm policy on socio-political grounds; the first has long ceased to be relevant to the problem in the United States, since the working population engaged in agriculture has steadily declined to less than one-fifth of the total, obviously without impairing the vigor of our democratic processes.<sup>13</sup>

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<sup>13</sup> If in any modern industrial nation a single group could claim to form the bulwark of democracy, it probably would be industrial workers, as Mr. Griswold's study suggests. I believe, however, that such exclusive claims by any single group



We might put it this way: Democracy requires that centralization of power be minimized, and that the exercise of power be held accountable to the people over whom it is wielded. Under a system of family farms, property in land and income from land are widely diffused and power derived therefrom is decentralized. Under a system of industrial large-scale farming, land property and income, and hence power, become concentrated in few hands, and the issue of effective accountability of such power to the people affected must be faced and successfully resolved. This means that the hired farm laborers would have to be unionized and granted all the rights of collective bargaining and social security now available to industrial workers. Also, both farm labor unions and agricultural employers would have to be held responsible to the government for the conduct of their affairs to the extent that public welfare is involved—a considerable extent indeed. These conditions, essential for democracy, could not be brought about without a long period of bitter conflict and even violence, as our own experience in the industrial farming areas in the Pacific states have shown.

Another aspect: the industrial form of organization makes labor a variable cost. When a business recession depresses the demand for farm products, agricultural employers would do what their manufacturing peers do: dismiss some workers and contract the total output. No vivid imagination is needed to see the implication of such perfectly normal business behavior to the nation's welfare. If during the 1930's agriculture had reduced output by 30 or 40 per cent as industry did, no appeal for faith in the American system of free enterprise could have staved off a full-fledged revolution. Government would have had to subsidize agricultural employers into maintaining a normal level of output—at a public cost which of necessity would have run much higher than the subsidies paid to induce farm families not to produce in excess of a "normal" supply.

These considerations are crucial to the issue of whether a family farm policy is justifiable on social and political grounds. Yet they rarely enter the discussion. Could it be that most people still are not aware of them?

The over-all goal for our family farm policy can be defined in terms of the following norm:

American agriculture should be mostly characterized by family farms, each large enough to support a farm family at a decent

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for being the "bulwark" of a democratic order should not be taken too seriously. There is too much setting up a straw man and taking delight in knocking him down in this otherwise highly informative book. (Harcourt, Brace and Co., New York, 1948.)

standard of living, and small enough to be managed and operated by the farmer as an independent business enterpriser relying primarily upon the labor of himself and his family.

**WELFARE NORMS.** Is this goal compatible with the distributive welfare norms? Three basic objectives must be formulated and tested to supply the answer.

*Adequate Subsistence.* Is a family farm capable of providing sufficient income to meet adequate minimum subsistence requirements for the family? Potentially the answer must be yes, since many family farms actually meet such requirements. But a cursory glance at statistics reveals that many family farms actually do not meet them. Ellickson and Brewster estimated that nearly 60 per cent of all bona fide farms in 1945 had incomes well below adequate subsistence needs.<sup>14</sup> Excluding the South with its share croppers, that proportion of inadequate family farms was around 45 per cent for the rest of the country.

One of the basic objectives of family farm policy, therefore, should be to reduce the proportion of farms too small to provide an adequate family living, by helping some of these farmers to obtain more resources and greater skills, and others to move into non-farm occupations where their opportunities would be better.

*Managerial Scope and Reward.* The second test: Is a family farm capable of providing sufficient opportunities and incentives for an individual to develop and employ his skills and energies and reap appropriate rewards for his efforts? Again, potentially the answer is yes, since there are wide variations in the incomes of family farmers which can be attributed to personal differences in skill and effort. But there are also many farms where these opportunities for personal development, self-expression and higher rewards for increased effort are severely restricted. Share-croppers often carry on no gardening or livestock raising. Many tenants engage in little long-time planning and investment. On the land they rent from others they have only indirect influence upon the shaping of the permanent improvements on the land, which may sometimes turn out to be an important infringement on managerial freedom. Furthermore, lack of access to credit or sporadic price declines and crop failures have severely restricted the scope of operations for many a competent and energetic farmer.

<sup>14</sup> See J. C. Ellickson and J. M. Brewster, "Technological Advances and the Structure of American Agriculture," *Journal of Farm Economics*, p. 837, November, 1947.

Hence, a second basic objective of family farm policy should be to increase the managerial scope and responsibility of farmers, help them to obtain commensurate returns and protect their legitimate claims for the full reward of their efforts. This objective requires far-reaching changes in the share-cropper system, in customary landlord-tenant relations and in farm credit arrangements.

*Size Limitation.* In the thought of some people a third basic objective derives from the over-all goal of a family farm policy: to discourage the accumulation of land much beyond the work capacity of the family's labor force. This means that when a farm family expands its operating unit to a certain size beyond which it depends more and more upon outside hired labor, provisions should be made to render it more difficult to expand the acreage further. Instead, such a farmer should be encouraged to invest his savings into more intensive land uses, into loans to other farmers or into non-land assets. Such an objective would conform to the socio-political goal of keeping ownership of land and land income diffused and the power over farm land and farm people decentralized.

This objective, at first glance, appears to conflict with the productive welfare norm. In quantifying such an objective, this danger should be recognized and avoided as effectively as possible. Many economists have overestimated that danger, while they have underestimated the extent to which peculiar institutional arrangements of the corporate system and of the capital market have led to poor resource allocations.

The more wealth one has, the easier it is to get more, and the less urgent it becomes for the owner to put it to its most productive use. The marginal returns from an increment of capital added to an enterprise already amply equipped are bound to be smaller than if the increment were added to an enterprise undersupplied with capital. This "self-generating power of wealth" is demonstrated both within and outside of agriculture. Beyond a certain point, depending upon the nature of the production process, this cumulative principle tends to conflict with the marginal productivity principle of resource allocation.

For instance, compare two farmers of equal managerial ability. One owns a well-improved, fully-equipped farm of a size that utilizes his labor force near the point of optimum efficiency; the other rents a small, run-down farm on which his labor force is greatly underemployed. The first farmer gets all the credit he wants thrown at him at bargain terms, and he finds no difficulty in buying additional land and equipment whose marginal productivity must of necessity be very much lower than that of the same amount of capital if it were added to the enterprise of the second farmer. The second

farmer, however, usually cannot get sufficient credit at reasonable terms and must struggle along without it—to the detriment of his productive effectiveness. Here is a typical illustration of how present institutional credit arrangements can lead to resource misallocation. This “self-generating power of wealth” tends to impede the equalization of marginal productivity of capital throughout the economy, perhaps even more so in industry than in agriculture, due to the greater concentration of wealth and the peculiarities of the corporate structure.<sup>15</sup>

The land policy objective of discouraging the expansion of farm size beyond certain limits has some points to support it. If the quantitative aspects of this objective are properly formulated, it would not depress the productive efficiency of resource use, but might actually improve it. This “if,” of course, represents a delicate problem of policy determination. The 160-acre limitation under the first Homestead Act worked reasonably well east of the Missouri, but was found painfully inappropriate in the Great Plains. We should guard against making similar mistakes of too severe restrictions on farm size in the settlement policies of new irrigation areas, in the application of a graduated land tax, in the tenant-purchase program of the Farmers’ Home Administration and in various other areas of land policy.

Let us face the problems in determining the upper limits beyond which family farm policy might discourage expansion of scale of the individual farm unit.

The over-all policy goal points to a family farm “small enough to be managed and operated” primarily by the family’s labor force. Although this upper size limit may be adequate to meet the productive as well as the distributive welfare norms in the major types of farming, there are production conditions in certain areas and enterprises where this limit is too low.<sup>16</sup> A well designed family farm

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<sup>15</sup> This issue is, of course, very complex; it involves various quantitative rules of credit allocation which are often called “capital rationing,” and of which the requirement of unencumbered assets as collateral for loans is probably the most important in farming. It involves differences in liquidity preference at various levels of wealth and size of operation, and in ability to bear risk. It involves the use of undistributed profits instead of equity or credit financing of corporate ventures, and many other things. All of these point in the direction of the hypothesis that mere size, beyond the requirement for technical efficiency, can lead to misallocation of resources with relative impunity. See also A. G. Hart, “Assets, Liquidity and Investments,” *American Economic Review*, Vol. 39, No. 3, p. 172, May, 1949.

<sup>16</sup> For instance, if the term “primarily” is defined as 50 per cent or more of the farm’s total labor requirements to come from family members, there are types of farming where seasonal labor requirements are very high, and where a farm size meeting the conditions of the productive norm may need such a large complement of seasonal workers that they contribute well above 50 per cent of the annual labor-months. This might be the case in certain specialized fruits and vegetable

program should have sufficient flexibility to avoid serious conflicts with over-all economic welfare goals.

**GUIDING PRINCIPLES FOR TENURE POLICY OBJECTIVES.** These three basic objectives of subsistence, managerial scope and size limitation, should serve as guiding principles in formulating specific objectives of land tenure programs. They challenge policy-makers and their economic advisers to courageous thinking and acting. Really significant improvements in land tenure require major operations on some of our deeply entrenched institutions.

Increasing the size of inadequate family farms involves helping present competent farmers on such units to acquire more land, capital, equipment and supplies. Existing private credit facilities are not adapted to that purpose. The scope of the Farmers' Home Administration is much too small to accomplish a significant improvement in the farm size pattern. In principle, credit must be made available according to productive need rather than collateral security; this means credit arrangements based upon borrower-lender cooperation in determining credit needs and in budgeting debt payments ahead over appropriate time periods depending upon farm income and family requirements. At present only public credit agencies can furnish such credit facilities; but there is no reason why private lenders could not furnish them if they were sufficiently interested in making the necessary changes in their lending practices and regulations.

Increasing the size of inadequate farms does not in all cases involve the displacement of another farm family, but it often will do just that. Such a program, therefore, should provide for assisting farm families to shift out of agriculture whenever the family is so inclined and has a reasonable chance of improving its scale of living by doing so. This means vocational training, consultation and employment service facilities, and often some credit to make the shift financially possible for the family. The need for such a program is greatest in the Old Cotton South—which, of course, involves dismantling the plantation-share-cropper system.

New farming units established in irrigation projects should be adequate in size. They might often be used to resettle some of the competent families who are being displaced by the consolidation process.

Expanding the scope of managerial freedom and responsibility and the commensurate reward in income for the farm family involves

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areas, in extensive grazing areas of the western plains and mountains, and perhaps even on the arid fringe of the wheat belt.

again the dissolution of share-cropper arrangements. It also involves a decisive change in landlord-tenant relations in the direction of shifting all managerial functions, including those concerning permanent improvements, to the tenant. Whether such a shift should come about through a tenant's rights program of compensation for unexhausted improvements and for "disturbance," or through a tenant purchase program, should be decided according to which of these means appears more appropriate at a particular time and place. Both approaches should be used simultaneously with different emphasis and speed depending upon local circumstances.

Again, adjustments in credit arrangements are required in the direction of safeguarding the borrower's equity and possession in case he defaults on debt payments due to external causes beyond his control, such as price depressions and crop failures. Forced sale of collaterals in satisfaction of delinquent debts should be restricted to cases where delinquency is due to the borrower's ill-will, negligence or incompetence. The present system makes no such distinction, and thereby greatly limits the farmer-borrower's scope of managerial effort and frequently deprives him of his just rewards. Such a change in credit arrangements would involve amendments in existing bankruptcy and foreclosure laws and other statutory regulations. Perhaps minor adjustments in interest rates and service charges and a more general or even universal mortgage insurance program for farm real estate loans might be found helpful.

Another important policy objective for expanding the family farmer's scope of management is to promote cooperative and public service methods for bringing into his reach various economies of scale in production, farm organization and marketing. For instance, custom and cooperative use of large-scale equipment and of sires, specialized technical advice in farm management and marketing through cooperatives and extension services would greatly strengthen the family farms, especially those on the lower end of the size scale. Such cooperative and public services should be expanded hundredfold and as quickly as possible as a major phase of a family farm policy.

Discouraging concentration of land into larger than family farm units would very likely be the indirect result of a vigorous application of the policy objectives outlined so far. Many of these program phases would tend to counteract the "self-generating power" of wealth, the strongest force leading to concentration of ownership and control beyond the needs of production efficiency. But certain specific limitations might well be necessary. For instance, public-sponsored credit facilities should be available only to bona fide family farmers; in certain areas, a carefully gauged, graduated land tax might be a good thing; making all agricultural employers of more than 4 or 5

workers subject to all social security and labor legislation is already long overdue; limitation of price and income supports to a reasonable volume of output might also help to discourage large-scale farming without sacrifice to the welfare goals; and the settlement policies in new irrigation areas certainly should be so devised as to effectively restrict land speculation, concentration and reversion to tenancy.

There are, in broad outlines, the guiding principles and objectives of a long-range comprehensive land tenure program for a national family farm policy.

### **LAND POLICY IN WORLD PERSPECTIVE**

In closing, we should orient our land policy with respect to the land and population problems of the world. The more conscious we grow of the world's indivisibility, the broader the scope of our land policy will become.

Our government's promotion of oil resource development in the Near East is as truly a part of our land policy as is the British land development program in East Africa. But these are both examples of a colonial type of national land policy. These quasi-imperialist policies of individual nations bear the grave danger of tearing the world apart rather than welding it into a peaceful society of nations. They are out-of-date and should be redirected or replaced by a genuine system of world land policies under United Nations auspices. We, as a member nation, should contribute to the making of world land policies, just as the congressmen from our home state contribute to the making of our national land policy.

As long as there is no world government, the purpose of formulating world land policies can be no more than helping individual nations to think their land problems through in a more systematic and world-wide framework. Through moral suasion and conditional development loans and grants-in-aid it might even be possible to induce a nation here and there to enact land policies more nearly in line with global needs than would be the case otherwise. There, as in many other fields, the United States has come into position for the exercise of constructive or destructive leadership. We may well pray for enlightenment to make this leadership constructive. The possible consequences of failure are horrible to contemplate.

Perhaps the basic principles and objectives just outlined are amenable, with some modifications, to world-wide application; the specific objectives, and the various methods of their implementation, of course, are not. They must be closely adapted to the institutions and economic conditions of each country.

Let us briefly survey some of the pressing land problems.

Point Four of the Atlantic Charter proclaims that all states, great or small, should enjoy "access, on equal terms, to the trade and to the raw materials of the world which are needed for their economic prosperity."<sup>17</sup> The emphasis is on need rather than ability to pay. The development of land resources for the production of such needed raw materials requires much capital not now available in the countries where these resources are located. It makes good economic sense for the industrialized nations with a high rate of capital formation to furnish it, on loan, to the undeveloped countries—but under the conditions outlined in the Atlantic Charter. To guarantee adherence to these conditions, it should be logical to place the surveillance of such land development projects in one of the United Nations agencies. Let the United States furnish the capital and Standard Oil do the drilling for oil in the Near East, but the UN Trusteeship Council and International Bank should supervise the projects and see to it that access be assured on equal terms to all states, great and small, according to their needs.

The charter of the FAO directs it to function in the fields, among others, of agricultural conservation, credit, population and farm labor, development of agricultural resources, and land tenure. All these fall within the purview of land policy. We should push the formulation of policy objectives and programs in these fields, within the framework of the FAO. We should urge the member nations to adapt them to their respective conditions and submit a specified list of capital and skill requirements needed from outside to implement these policies.

In allocating, through the FAO and the International Bank, capital and technicians to various countries for land conservation and development, the same basic criteria of economic welfare norms can be applied that have been discussed with respect to the United States. No doubt, some profound changes in the institutional arrangements, particularly concerning land tenure, will be involved in many of the industrially undeveloped countries before such policies can bear fruit. We should, through the FAO and in cooperation with other members, develop criteria of eligibility for assistance which will encourage desirable reforms.

Finally, a comment on the Malthusian nightmare that is recently being revived: The thesis that any help to India and China in developing her resources and increasing her food production is a waste of effort as long as people there insist on propagating is fallacious. Worse, it is dangerous as it succors the reactionary instincts of nationalist isolation. This theseis puts the cart before the horse. It

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<sup>17</sup> The Atlantic Charter was signed by 31 nations on Jan. 1, 1942, Russia being one of them.



would be more correct to say that any efforts to reduce the birthrate in those countries are wasted as long as their people live under constant threat of starvation. The "luxury check" of population growth seems to have amazingly universal application. As long as parents see half of their children die before they come of age, they instinctively will produce as many as possible to assure the preservation of their race.

This statement is, of course, almost as lopsided as the Malthusian thesis. But after all, western civilization during the last two centuries has proven Malthus wrong; it might just be that eastern civilization, if it succeeds in adapting science and technology to its culture, will prove the Neo-Malthusians equally wrong.

Humility of the scientist should make us confess that we cannot possibly predict how an industrial revolution will affect population growth in India and China. Compassion of the humanitarian should make us determined to render these peoples any possible assistance in developing their land resources and raising their living standards. Wisdom of the statesman should convince us that our nation cannot flourish unless we help build a society of nations in which people will share the fruits of the land in peace and prosperity.

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