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WHO OWNS AMERICA'S LAND: Problems in
Preserving the Rural Landscape */

OCT 7 1981

by

Gene Wunderlich **/

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"If property is a relative term, so is liberty, and in exactly the same way. For to the extent to which a man or social group controls the property by which its welfare is insured is the man or group possessed of liberty....There is a point at which effective ownership ceases, although the legal fictions sustaining "property" may hold that beyond that point ownership endures. Effective ownership ceases at the point where a certain kind of effective control ceases" --- Aqar and Tate, Who Owns America? 1936.

"My final apostasy from the American Creed was loss of faith in private property. I am now persuaded that there no longer is such a thing as truly private property, at least in land. That was a luxury we could afford only when the continent was sparsely settled. Today, the use a man makes of his land cannot be left to his private decision alone, since eventually it is bound to affect everybody else. This conclusion I reached in anguish, since I own a tiny patch of land and value its privacy above anything money can buy." - John Fisher, Harpers, 1970.

The efforts of the 92nd and 93rd Congresses to produce land use legislation heightened the national awareness of

*/ Reprint of address to the American Association for the Advancement of Science, Dec. 27, 1972. Revised March, 1974.

**/ Natural Resource Economics Division, Economic Research Service, U. S. Department of Agriculture. I am grateful to my colleagues William Anderson, Robert Boxley, Karl Gertel and W. L. Gibson, Jr. for a number of valuable suggestions on an earlier draft.

resource policy and problems. The bills, 1/ testimony 2/ and publicity 3/ changed our latent concerns about land use into a national issue. The esthetic appeal of a national design for our landscape, however, should not cloud the dis-comforting problems of pluralistic decision making.

The success of land policy will depend to a large extent on the combined decisions of many landowners. Although various instruments of Federal policy may influence decisions, and State and local governments may regulate land uses and tax returns, private motives will remain the ultimate arbiter. The impacts of land use programs, and natural resource policy generally, depend upon independent ownership.

Almost everyone realizes that no one in America holds "sole and despotic dominion" over land, yet the origins and the present status of land ownership are poorly understood. We know that of the 2.3 billion acres in the United States, 34 percent are held by the Federal Government, 6 percent by State and local governments, 2 percent by Indians and the remaining 58 percent by other private persons and corpo-

1/ See, for example, S. 268 "Land Use Policy and Planning Assistance Act of 1973 and its House counterpart HR 10294. Extensive background on national and state legislation is contained in: Senate Committee on Interior and Insular Affairs, National Land Use Policy Legislation 93rd Congress: An analysis of Legislative Proposals and State Laws (Prepared by Cong. Research Service) 93rd Cong 1 sess (April 1973). Over 120 land use bills had been introduced in the 91st Congress and over 200 measures introduced in the 92nd Congress. The Coastal Zone Management Act of 1972 (P.L. 92-583) was passed in the 92nd Congress anticipating some features of later land use proposals.

2/ See, e.g., summary of testimony supra at 79.

3/ See, e.g., J. Timmons, Public Land Use Policy: Needs, Objectives and Guidelines 27 Journal of Soil and Water Conservation 195 (Sept.-Oct. 1972):

Referring to B. H. Hibbard's comment a half century earlier that "Thus far there has been no genuine land policy in and for the United States," Timmons said the need for land use policy certainly has not diminished in the past half century. Elsewhere Wengert declares: "In the decade of the 70's the regulation and control of land use will be extended beyond anything we have experienced in this field to date" N. Wengert, Legal Aspects of Land Use Policies Plans, and Implementation, National Land Use Policy Conference, Des Moines, Iowa, November 27, 1972.

rations. ^{4/} Beyond these generalizations, however, we have very poor information on the structure of rights, the identity of owners, the motivations of owners and the implications for alternative systems of rights holding. Very little has been done, for example, to draw together the separate legal boxes of ownership and regulation under police power. Other deficiencies range from public access on private lands to the archaic and expensive procedures of title recording and searching. At the heart of many issues are the relations between citizen and State, and among citizens and units of government.

Before we devote too much attention to land use, then, we need to understand how ownership distributes benefits and burdens and influences decisions. Land ownership may affect the outcome not only of land policy but also of other policies for income and wealth taxation, welfare, and public investment. Let us, therefore, examine what we know and, more important, what we do not know, about land ownership in America.

The semantics of ownership

No set of issues as complex as those associated with ownership should proceed without definitions, yet one could easily submerge the discussion in conceptual

^{4/} H. Frey, Major Uses of Land in the United States, Summary for 1969, U.S. Dept. of Agr. Ag Econ Report 247 at 19 (Dec. 1973).

Even the manner in which ownership data are currently derived indicate the poor state of knowledge about privately owned land. "Private" land is essentially a residual after public and Indian land have been counted (See Table 1 for detail). Current data on federal lands is contained in the report by the General Services Administration, Inventory Report on Real Property Owned by the United States Throughout the World as of June 30, 1972. Detail on the status and uses of Federal land is contained in the several reports of the Public Land Law Review Commission, summarized in the general report One Third of the Nation's Land, U.S. Government Printing Office, June 1970.

abstractions. ^{5/} For purposes here, let us simply state a few working concepts.

Property and ownership are used here more or less interchangeably. ^{6/} Property is a generic term covering almost any right or interest. ^{7/} Ownership has a broader connotation

^{5/} However useful for some discussions the conceptual models of property may be, they are sufficient to warrant another paper. Paton in summarizing a number of theories of property said. "A realistic survey shows that we cannot explain the law of any country in terms of abstractions...what is apparent is that absolute rights are ceasing to exist, if they ever did exist, and are being replaced by qualified rights the exercise of which is limited by the philosophy and needs of the community in question." G. Paton, *A Textbook of Jurisprudence* at 489 (1964).

Two modern classics in the basic concepts of property are R. Noyes, *The Institution of Property* (1936) and Philbrick, Changing Conceptions of Property in Law 86 *University of Pennsylvania Law Rev.* 691 (May 1938). Noyes, at 306-11, treats the relation between "thing" and sticks in the bundle of rights, historically and diagrammatically in a way useful to non-lawyers. In Paton, op cit, chapter 21 examines the concept of property in a legal and more elementary manner from an English (and Austinian) perspective. The underlying precepts used here correspond closely to those of W. Hohfeld, *Fundamental Legal Conceptions* (1919) (Yale Paperbound, 1964). The Hohfeldian framework was used in the American Law Institute's *Restatement of Property* (1936). It should be noted however that Barton Leach, himself one of the reporters on the *Restatement* criticized the *Restatement of Property* as an obstacle to reform because of a ground rule "which prohibited us from criticizing a rule which the case law forced us to restate." W. Leach, *Property Law Indicated*, (1967) at 12. The *Restatement* is to be noted more for the Hohfeldian framework than for substantive restatement of the law of the time.

^{6/} See, for example, the textbook on property by R. Aigler, Smith, Tefft, *Cases on Property* at 2 (1960) and also Noyes op cit at 358.

^{7/} See, e.g., Hohfeld supra at 36.

than fee simple tenure ^{8/} but implies a rather large portion of the bundle of rights and some symbolic designation or title holder to a property object or thing. ^{9/} The property objects referred to in this paper are mainly land or, more generally, natural resources. ^{10/}

Ownership or property embodies two principal ideas:

(1) access to control, power or decision making; and (2) claim to beneficial interest, benefit or income. ^{11/} Accompanying

^{8/} Because he developed American origins of ownership from English law, Harris, infra at 407-8, makes ownership and fee simple almost equivalent. We will need in this paper a broader notion of ownership to include, for example, some of the rights ideas of American Indians.

^{9/} See Noyes supra at 356-7, Paton, supra at 472 "A person has rights: ownership is the name given to one particular type of right, more accurately, bundle of rights."

^{10/} The rules that separate real from personal property are of ancient origin but still comprise distinctions important to the institution of property. Simpson, for example, remarks "To a very considerable degree the rules and concepts of English Property Law have been permanently influenced by the procedural forms of the old real actions-thus the very distinction between real and personal property." A. Simpson, An Introduction to the History of the Land Law at 42 (1961). For origins of ownership and tenure in Colonial America see M. Harris, Origin of the Land Tenure System in the United States (1953). For a general review of the role of property in America see Sabre Foundation, Expanded Ownership (abridgment of unpublished report for U.S. Dept. of Commerce-EDA, 1972).

^{11/} John R. Commons includes these ideas in a sweeping interpretation of power and economy where "Property Value, Capital, Assets, Liberty and the Will have come to mean the same thing from different points of view" J. Commons, Legal Foundations of Capitalism at 28 (Wisconsin Press ed. 1968); See generally Samuels, Welfare Economics, Power and Property, in Perspectives of Property (Wunderlich, Gibson, eds. 1972) and Moyer, Harris and Harmon, Land Tenure in the United States: Development and Status, U.S. Department of Agriculture AIB 338 at 3 (1969).

these ideas is the concept of an ownership or property system, i.e., the whole body of rules governing the relations among people about things. With these ideas we can state three fundamental issues of property in policy. These issues may be collected under the headings: (1) man and state, (2) liability and appropriability and (3) transactions. ^{12/}

Man and State

Preserving the American landscape would have been the last thought our founding fathers had in their minds as they negotiated the Articles of Confederation and the Constitution. Their concerns concentrated on the sovereignties of State and Federal Governments and the protection of individual liberty. ^{13/} Nevertheless, the steps taken in the name of sovereignty and liberty profoundly affected our land settlement, development and use patterns of today. ^{14/}

The Constitution represents an outer boundary of the rules on property. The general importance of property in the makeup of the Constitution was demonstrated in Beard's

^{12/} These issues are discussed in somewhat greater detail in Wunderlich, Perspectives of Property: An Introduction in Perspectives, supra at 3.

^{13/} The framers of the Constitution were constructing, in the words of Madison, "... a system without an example, ancient or modern, a system founded on popular rights, and so combining a federal form with the form of the individual republics, as may enable each to supply the defects of the other and obtain the advantages of both" J. Madison, Notes of Debates in the Federal Convention of 1787 at 3 (Ohio University Press ed. 1966).

^{14/} For example, one of the important problems discussed at the Convention of 1787 was state sovereignty over the Crown lands which had not been distributed to individuals: "The lands being of vast extent and of growing value were the occasion of much discussion and heart-burning" Id. at 7.

economic interpretation of the Constitution. ^{15/} Certain sections and phrases, through court interpretation, are the foundations of the American private property system. The fifth amendment is important because it is a first order restraint on State prerogative. ^{16/} The issue of power is closely tied to economic well-being, and the distribution of both is first of all a Constitutional question. When Allen Tate, in the opening quote, measured liberty in terms of the extent man held control of property, he was at the same time describing the breadth of eminent domain. One cannot undertake serious study of property in America without also considering the relations of individuals to the several governments.

Liability and appropriability

Property is a communication system. ^{17/} Through assignment of rights and duties, individuals and governments are able to communicate behavior expectations ^{18/} about property objects. Through property, one is able to capture the benefits flowing from ownership of an object. Through property, one assumes obligations such as payment of taxes or maintenance of conditions of the resource.

^{15/} Beard made the relation of property to the Constitution direct and personal, classifying viewpoints and positions according to three general groups: small farmers, manorial lords and slaveholding planters. C. Beard, *An Economic Interpretation of the Constitution of the United States* at 27-30 (Free press ed. 1965).

^{16/} Eminent domain need not be declared in a constitution; it is "an incident of sovereignty." The restraints of due process and compensation in the fifth amendment are procedural limitation to secure the position of the citizen. For complete discussion see, e.g., U.S. Senate, *The Constitution of the United States of America: Analysis and Interpretation* S. Doc. No. 39,, 88 Cong. 1st sess at 986-996 (1964).

^{17/} The definition of communication system here is metaphorical. A communication system is simply a network of transmitters and receivers which encode, send, and decode information subject to noise. For more rigorous definition see, e.g., C. Shannon and Weaver, *The Mathematical Theory of Communication* (1964). For anthology of economic interpretations see D. Lamberton, *Economics of Information and Knowledge* (1971), and the *Annals of the American Academy of Political and Social Science*, Symposium issue on the Information Explosion, passim (March 1974).

^{18/} Commons, *supra* at 22-25.

The distribution of wealth depends upon the assumption of liability for costs and appropriability of benefits. Liability and appropriability are, in a sense, a personification of property objects. Through all the rules of liability and appropriability one's expectations provide a guide to choice-making. ^{19/} It is through liability and appropriability that economists are able to address property issues.

Environmental problems have arisen in part because of difficulties in assigning liability--or, conversely, providing appropriability. Uglification of the landscape can be the result of having no one liable for the full psychological cost incurred by a large number of persons. Fines for littering, for example, could provide liability if they were enforceable. The services or satisfactions derived from the rural landscape, if they are to be enhanced (or even made available in some cases) must be appropriable by those capable of enhancement.

Appropriability and the enhancement of the rural landscape might be demonstrated by a specific example. Under current cost-sharing authorities, a government agency can provide grants in the form of technical assistance to design and develop reservoirs on private lands. A condition of some of these grants is that the reservoir be accessible to the public. There is an appropriation of benefits from the technical assistance by the landowner. However, there is little incentive for the owner to enhance the accessibility to the reservoir or provide public services unless he is able to appropriate some of the benefits accruing to the public. Indeed, he may incur some liabilities from public access and have an incentive to exclude the public.

A vast set of issues of externalities and unintended transfers of benefits and costs pertain to the preservation of the rural landscape. Land value increases from public investment in airports, highways, and water development result in unearned increments of wealth. The doctrine of unjust enrichment, intended to prevent one individual from benefiting at another's expense, does not apply where taxation of a public benefits a few individuals. On the

^{19/} Id. at 25. McKean puts it: "One's rights to do things and his effective rights to rewards (positive or negative) determine what he can capture" McKean, Property Rights, Appropriability, and Externalities in Government in Wunderlich and Gibson supra at 33.

other hand, compensation must be paid where a public benefits from the taking of property of an individual. In this respect the rules on "taking" are not symmetrical with those on giving.

Transactions

Property is a system ^{20/} of people, things and rules. ^{21/} But the rules do not occur automatically and function in a frictionless vacuum; resources must be used to make the system work. ^{22/} The exchange of information, negotiation and enforcement of transactions are all costs of a functioning system. Indeed, Demsetz built his economic theory of property rights around the idea of transaction costs. He says "...Property rights develop to internalize externalities when the gains of internalization become larger than the costs of internalization." This means that property rights are created when they are worthwhile.

^{20/} "System" is used here in Beer's direct, general, sense of the term: "...anything that consists of parts connected together will be called a system." S. Beer, *Cybernetics and Management*, at 7 (1959).

^{21/} See, e.g. Commons, *supra*, 65-142, on transactions. By his Principle of Working Rule he adds a volitional quality to laws. Laws are "limits of discretion." The addition by Commons of liberty, will, and volition to his models may have been helpful in his practical work in negotiation. These ideas appear to be analytical encumbrances which complicated his theoretical work. "Rules" can be treated as descriptions of behavior boundaries without recourse to volition.

^{22/} "...transactions do cost money, and since substitutes for transaction, be they taxation, liability rules, or structural rules, are also not costless, the optimal result [of resource allocation] is not necessarily the same as if transactions were costless. Whatever device is used, the question must be asked: Are the costs worth the benefits..." Calabresi, Transaction Costs, Resource Allocation and Liability Rules - A Comment, 11 *Jour of Law and Econ* 69 (April 1968) [brackets my own].

There are two separate but related issues concerning transaction costs in a property system: (1) The overall level of these costs and (2) the incidence and distributive effect of the transaction costs. These issues may be stated as questions: What is the cost of a property system? On whom do the burdens of this cost fall? The answer to both of these questions is that we do not know. Many of the exciting research opportunities lie in the restructuring of institutions to lower the cost of human interchange.^{23/} If such transaction cost can be lowered, then the correlative issue of benefit distribution becomes important.

Distribution

From the three basic issues we see the common thread of distributions of wealth, rights, power, control, benefits and burdens. Distribution of rights among persons appears to be at the heart of property concepts. The distributions affected by the property system may be classified into four types:

1. Distributions attending changes in whole sets of rights in a property object, i.e., ownership changes.
2. Distributions associated with a separation of rights, e.g., easements, regulations, covenants.
3. Distributions affected by changes in values of whole sets or separated rights.
4. Distributions associated with the incidence of transaction costs.

Redistributions can be restated in bundle of rights terms as: (1) Changes in the holding of whole bundles of rights, (2) changes in the holding of sticks in the bundle, (3) changes in the value of bundles or sticks and (4) burdens and benefits of making the system work.

^{23/} An interesting empirical study of negative externalities - atmospheric fluoride damage to citrus and livestock was reported by Crocker. One of his conclusions: "though there can be no denial that in the absence of ICP [transaction] costs property right assignments are neutral with respect to the economic efficiency of outcomes, the Polk County case is a concrete example of the nonneutrality of these assignments in the presence of ICP costs." Crocker, Externalities, Property Rights, and Transaction Costs: An Empirical Study, 14 Jour of Law and Econ 464 (October 1971).

Although conceptually distinct, wealth, rights, power and control are tied together in practice. Competition in the economic arena is not among equals. The distribution of control can affect the distribution of wealth and vice versa. ^{24/}

Ownership distribution

The issue of land ownership distribution may be approached most directly by relation of persons (natural and corporate) with title to territory. This least subtle concept of ownership provides a first cut at the problem--one susceptible to generalizations from secondary data sources.

Three-fifths of the land area of the United States--1.3 billion acres--is owned by private individuals or corporations. Two-fifths of the land area is owned by government. But the type of land owned differs by type of owner. It is a well-known fact of America's land settlement that virtually all agricultural land was in private hands by the end of the last century. Although a third of the grazing land is publicly owned, agricultural land in public ownership is, for the most part, leftovers. ^{25/}

For agricultural land, therefore, the distribution issue is the concentration either among the private holders or between owners and the rest of the citizenry. At one time, such a high proportion of persons were engaged in agriculture that an even distribution of agricultural land would have gone a long way toward equalizing wealth and spreading the use decisions widely among the citizens. This is no longer the case. Even though land may be fairly evenly distributed among owners of farm land, there is increased concentration simply because these owners represent a declining proportion of the population.

The quantity of land in farms has remained constant for the last 30 years; yet the number of operators who own some or all the land they farm has declined from a maximum of

^{24/} See, e.g. Samuels, supra at 67.

^{25/} Even much of the public grazing land is treated as an extension of privately held lands which control water, winter range and access. For an extreme case of limiting access to public lands see: J. Munger, Public Access to Public Domain Lands ERS-USDA Misc. Pub. 1122 (1968).

3.9 million in 1945-50 to 2.4 million in 1969. ^{26/} We do not know precisely how many owners of farm land do not operate farms, i.e., nonoperating landlords, but the number probably is less than 1.9 million. ^{27/} Thus, the total number of owners (or owner units) of agricultural land is less than 4.3 million, that is, less than 2 percent of the population or, alternatively, less than 8 percent of the households. ^{28/} Although the precise number is not known, we can be reasonably sure that the owners of half of the land area of the United States comprises a relatively small proportion of the population.

Although farm operation and farm land ownership are not equivalent, there are sufficient parallels ^{29/} to make an examination of farm concentration useful. One way to measure concentration is the conventional Gini ratio. An

^{26/} From 1900 until 1959 the number of owner operators did not fall below 3.5 million. Land in farms in 1945 was slightly above 1.1 billion acres and 1969 slightly below. U.S. Dept. of Commerce, Bureau of Census, 1969 Census of Agriculture, vol. 2, chpt. 3, table 8 (August 1973).

^{27/} The total number of owners of agricultural land is estimated as follows: Farm operators who own land are given by the 1969 Census of Agriculture as 1.7 million full owners, 672,000 part owners, and 13,000 tenants. 341 million acres are owned by non operators and leased to operators and 63 million acres are owned by operators and rented to other operators. Assuming non-operators rent out units of the same average size as the 361,000 operators who rent out their land, the number of non-operator owners would be 1.9 million. This estimate more likely overstates than understates the number of non-operator owners.

^{28/} Statistical abstract, supra, at 7, 38.

^{29/} Some regional estimates of land ownership are shown in R. Strohbehn and Wunderlich, Land Ownership in the Great Plains States USDA Stat. Bull 261 (1960); R. Strohbehn, Ownership of Rural Land in the Southeast, USDA Agri. Econ. Report 46 (1963), Early U.S. ownership, regional data, and trends in farm concentration are shown in G. Wunderlich, Satisfying the Economic Demands for Natural Resources in Land Use Policy and Problems in the United States at 424-427 (Ottoson, ed. 1964).

Table 1.--Classes of owners by major land use, 1969

Ownership	Major land use				Total
	Cropland	Grazing land	Forest ^{1/}	Other	
	Percent	Percent	Percent	Percent	Percent
Federal.....	.2	27.3	36.9	73.9	33.7
State and other ^{2/}...	.5	6.8	5.0	12.2	5.9
Indian ^{3/}.....	.5	5.3	1.7	.7	2.5
Private ^{4/}	98.8	60.6	56.4	13.2	58.2
Total ^{4/}	100.0	100.0	100.0	100.0	100.0
	Million acres	Million acres	Million acres	Million acres	Million acres
Total.....	475.2	603.6	753.5	431.3	2.263.6

^{1/} Includes reserved forest in parks and other special uses.

^{2/} Excludes State-grant land in process of transfer from the Federal public domain to the State of Alaska.

^{3/} Trust land held by tribes and individual Indians. About 4.7 million acres of federally owned land, located mainly in Alaska, are also used by Indians.

^{4/} Federal, State, local government, and Indian land acreages were obtained from public records and reports. Private land is the rest of the land in each major use.

Source: Frey, op cit p 19.

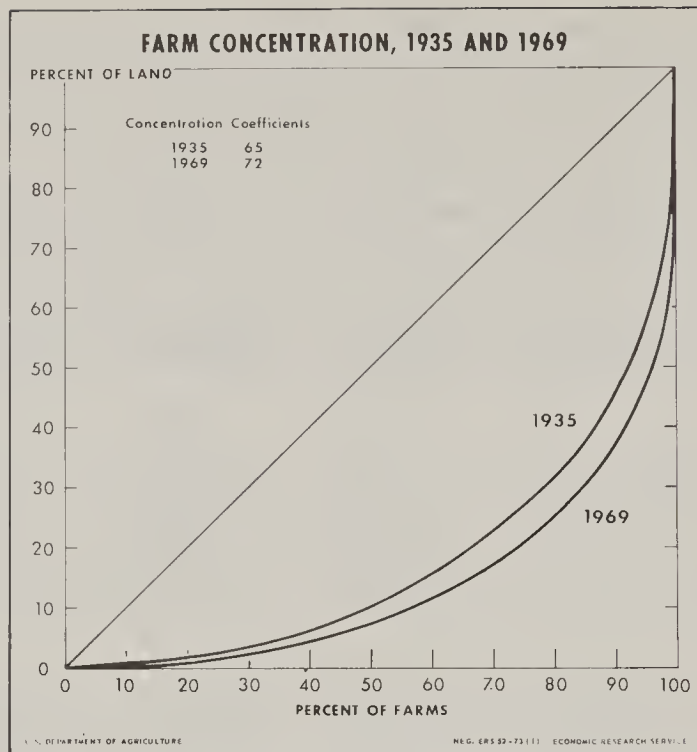


Figure 1.

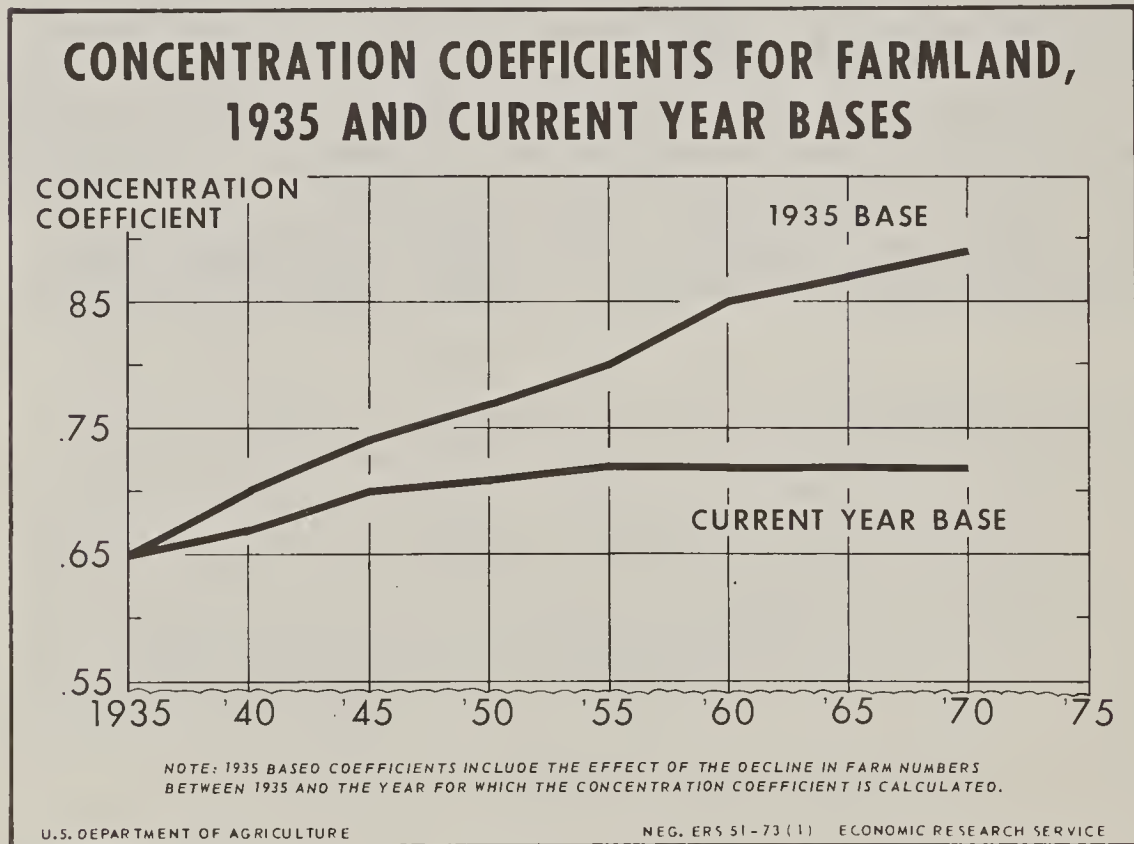


Figure 2.

advantage ^{30/} of this ratio is that it permits some comparison of concentration over time. Figure 1 shows an increase in concentration from .65 in 1935 to .72 in 1969. Figure 2, however, shows that the concentration ratio has been changed very little since 1950. The distribution of land among those who farm is about the same today as it was two decades ago even though farm numbers have dropped from 5 1/2 million to less than 2 1/2 million. The issue in concentration in agriculture, therefore, may not be the distribution of holdings within agriculture but between agriculture and the rest of the economy and society.

As a way of showing the effect of a decrease in farm numbers, a second concentration trend line was entered on Figure 2. The second series of concentration ratios is calculated by entering nil land for the reduction of farm numbers between the base year of 1935 (the maximum number of farms) and the year for which the ratio is calculated. In Figure 1 the curve would follow the horizontal axis for the appropriate percent of "missing" operators. By these calculations concentration continued to rise to .89 in 1969. The difference between the 1935 and 1969 base ratios (.89 - .72 = .17) is a measure of concentration due to loss of farm numbers. If the trend continues land used for food and fiber will be controlled, and probably owned, by a small portion of the population. Agricultural policies incorporating assumptions of widely held resources will need reexamination. How many people should hold the power to feed and clothe us?

But is agriculture just food and fiber? No, agriculture can produce more. As Rene' Dubos points out, the interaction of man and his environment can have beneficial effects on nature. Says Dubos:

^{30/} The use of the Gini ratio, and its limitations, may be found for example, in Wunderlich, Concentration of Land Ownership, 40 Jour of Farm Econ. 1887 (Dec. 1958) and later in Benson, Gini Ratios: Some Considerations Affecting their Interpretation, 52 Am. Jour. of Agr'l Econ. 444 (Aug. 1970). On other measures of farm size distribution see F. Doving, Farm Size Data: Frequency Distribution, Interpolation, and Projection, AERR-50 (May 1962); and Boxley, Farm Size and the Distribution of Farm Numbers, 23 Agr'l Econ. Research 87 (Oct. 1971).

"Our civilization will become increasingly spiritless and dreary if we do not learn to recognize and cultivate positive environmental values, to remember that man has frequently improved on nature by transforming it either for profit or for love." 31/

If we individually or collectively find some value in the landscape by-products of agricultural production, how do we translate the values into economic demands. Should rural landscape remain a free good? Will new products of landscape call for a new kind of producer, and a new kind of owner? Unless there is some major change in our ownership patterns, the future of our rural landscape in many areas will depend on the widely varied motivations of a shrinking number of land owners. And our economic system would still have no effective way of incorporating the values of persons with interest in, but no ownership of, land.

Forests, too, are mainly privately owned. Nearly three-fourths of the commercial forest is privately owned. 32/ Over half of all forest land, including parks and special uses, is in private ownership. Issues relating to forest land use will certainly involve private owners. Furthermore, in some areas these private owners hold small tracts; in the South, for example, 60 percent of the commercial forest is held by non-industrial small tract owners. 33/ On the other hand, these small owners account for less than 20 percent

31/ R. Dubos, Replenish the Earth, and Subdue it: Human touch often improves the land, 3 Smithsonian at 18-20 (Dec. 1972).

32/ According to the 1970 Timber Review: "Nationwide, 18 percent of the commercial forest land is within National Forests, 9 percent in other Federal, State, and county holdings, 14 percent operated by industrial forest companies and 59 percent in farm and miscellaneous holdings. Most of this commercial forest land is located in the East, primarily in small private form and miscellaneous ownerships." U.S. Dept. of Agriculture, Forest Service, Outlook for Meeting Future Timber Demands, C.I. No. 8 at 3 (Dec. 1972). See also U.S. Dept. of Agriculture, Forest Service, Forest Statistics For the United States by State and Region, table 2 at 3-7 (1972)

33/ From a statement by Dudley Mattson for a land use policy guide in preparation by Economic Research Service, U.S. Dept. of Agriculture, December 1972.

of commercial forest ownership in the Pacific region. In Maine, paper and timber interests are reported to own more than half the land of the State but through leasing from small holders these timber interests control much more land. ^{34/} In most regions, decisions on private land will influence use on public land and vice versa. Land use policies must take into account a full range of decision makers, private and governmental.

At least one-fifth of the land area of the United States is not sufficiently agricultural or forest to be covered by policies directly related to farming, grazing or timber. Areas of swamps, roads, homesteads, mountains and deserts have not been intensively exploited. Three-fourths of the total area in these miscellaneous uses is publicly owned. Many of these areas may be influenced by adjacent private lands. ^{35/} The non-agricultural, non-forest lands represent some of the outstanding challenges in land policy.

Parcellation of rural areas for consumptive uses and investment will take place with less regard to major land use. ^{36/}

^{34/} See, e.g., G. Faux, Absentee Owners of America I - Colonial New England the New Republic, Nov. 25, 1972, at 16.

^{35/} In an economic context, many of the amenity values including landscape can be treated either as joint products or as by-products of some other process. Such products may be either positive or negative. A by-product of trails is access to attractive scenery but the by-product of logging may be a reduction of quality of scenery (negative). The white board fences of northern Virginia may be a by-product of horse breeding but the fences may also be a product in their own right.

^{36/} The Wall Street Journal, for example, reports: "A Land Rush is on in Eastern states as more people seek vacation homes."

Twelve years ago, 1,000 vacation home sites were being sold annually in Pennsylvania's Pocono Mountains. In 1972, the total will be almost 7,000. Vermont and New Hampshire are combed over by eager buyers. Fears of legislation restricting new development trigger a scramble for land and homes on the Massachusetts's islands of Martha's Vineyard and Nantucket.

As Northeasterners buy second homes at a faster rate than anywhere in the U.S., prices jump. The average cost of a Pocono vacation lot goes up to \$4,700 from \$3,000 three years ago. A shore-front house on Maryland's eastern shore has risen in price "at least 50% in the last three or four years," says one local realtor. Land-Vest, Inc., which sells property in New England, says its average price for a 25 to 50 acre parcel this year was \$18,000, up from \$12,000 to \$13,000 three years ago." Wall Street Journal, Oct. 26, 1972, at 1 col. 5.

Agricultural, forest or waste land all are subject to purchase and small lot development for second-homes, vacation places and commuter residences. Many of such developments are in areas whose scenic, historic, or recreational amenities are of greater value than their agricultural or forest value. Very often, development will change the very character of physical amenities and communities which small lot purchasers sought to acquire. Many of the amenities of rural landscape have the quality of common property. These features are not appropriable and, like overgrazing on common pasture, parcellation of rural properties can lower the amenity carrying capacity of a rural area.

Will parcellation for vacation and second home development by absentee owners result in a deterioration of the landscape? Excessive development, traffic, overloaded sanitation systems, power lines and rights of way all can contribute to an unpleasant landscape. But absentee, second home owners may well demand more of the esthetic services than residents who are compelled to extract economic services from the land regardless of the landscape consequences. Outsiders or absentee owners of vacation homes bring with them income and a capacity to upgrade the landscape. 37/

How then is the ownership of agricultural, forest and other rural land to be distributed? As yet we have only limited knowledge about what is taking place, and substantial research is needed simply to ascertain the dimensions of the issue. Beyond the facts of rural land ownership, we have need for analyses of the relations between land ownership and the assorted policies affecting land use.

The distribution of interests

A second dimension of ownership is the separate rights, privileges, duties and liabilities associated with a property object. The full range of these interests may be exceedingly

37/ Relations of income and land based recreation are suggested by Freeman. He notes, for example, that both probability and duration of participation in picnicking and sightseeing are positively related to income. Freeman, Distribution of Environmental Quality in Environmental Quality Analysis, at 271 (Kneese and Bower eds 1972).

complex. Decisions about the use of a parcel of land, for example, may be affected by the combined influences of a utility easement, a lease, a zoning ordinance, a building code, a property tax, a mineral reservation, a covenant and a government subsidy. Title to a parcel of land could be the furthest thing from sole and despotic dominion; it could, in fact, be an empty shell.

The distribution of claims to wealth and income and the control of land, therefore, is the result not just of ownership titles but a system of interests divided among governments and individuals. Changes in rights, duties, privileges and liabilities can alter the distribution of both wealth and control or of wealth and control independently. For example, if a unit of government prevents an owner from his most profitable best use of a unit of land and limits him, say, to the next best use, a transfer of wealth is made from the owner to the unit government. If full compensation is made, however, the owner's wealth position is, by definition, unchanged although he has foregone some measure of control. On the other hand, by ad valorem taxation, for example, it is possible to leave the owner in a lower wealth position but leave his decision prerogatives essentially unchanged.

Generally, the changes in control of land brought about by zoning, building regulation and cost-sharing are not classified as issues in property. Only when a regulation reaches some high but indefinite threshold of severity is it regarded as a taking of property. Thus, only in the extreme is a police power issue transmuted into a property issue. And even then, it is regarded in a technical legal sense as an infringement of rights, not a substantive property issue.

When private property is confronted with regulation or control of land use, the modifications in private property rights are made in the name of balance between public and private interests. ^{38/} It is possible, however, that the

^{38/} The issue of private property and the regulation of land use is discussed thoroughly and cogently by Deloqu and Gregory in: Private Property and Public Regulation in Maine [Part 1 of Planning and Law in Maine]. Maine Agr. Exp. Sta. Bull. No. 653 (November 1969).

Another extensive treatment of legal issues, including the historic relation of private property and state control may be found in: Reis, Legal Framework for Open Space Preservation in Expanding Urban Areas in Preserving Open Space in Expanding Urban Areas, Mass. Exp. Sta. Bull. 567 (1968).

"public" with an actual, immediate and direct interest is rather small. For example, permission to cross private land to use a lake ^{39/} which is held by the state "in trust for all the people" may in fact be used by only a few fishermen. Exercise of this public right by a small number of persons is tantamount to the grant of a private right. Alternatively in such a case, right of access might be negotiated between the parties involved. The access result would be the same but, of course, the distribution of wealth and well-being would be quite different.

When land use is regulated "in the public interest" what actually takes place? An uncompensated transfer ^{40/} of land use options is made from the owner to a government. The use options are held in trust by government, and benefits therefrom are granted to persons in the public. Some persons of this public will be more favorably treated, by virtue of their more frequent use, than other persons.

Although taxing, regulating, spending and taking powers can be combined toward common land use objectives, in practice they represent separate compartments of law. ^{41/} The traditional compartments of law have separate sets of rules and there is a lack of a common denominator suitable for

^{39/} Deloqu and Gregory, supra at 10.

^{40/} In an extensive, unpublished, treatment of compensative regulation for the maintenance of open space, Anderson concludes that this "middle ground approach between the extremes of the police power no compensation and eminent domain-ful compensation" regulation "seems to be a practical solution that is both equitable to the landowner and the government." W. Anderson, Compensable Regulation of Undeveloped Land (unpublished note, 1969).

^{41/} There is an extensive literature on law and land use control, e.g., D. Mandelker, Managing Our Urban Environment (1966); F. Bosselman, Alternatives to Urban Sprawl: Legal Guidelines For Governmental Action, National Commission on Urban Problems Report No. 15 (1968); F. Bosselman and Callies, The Quiet Revolution in Land Use Control (1971); O. Deloqu and Gregory, Powers and Devices for Controlling Land Use [Part 2 of Planning and Law in Maine]. Maine Exp. Sta. Bull. No. 654 (November 1969).

negotiation or resolution of conflict of interest. When interests in land use conflict, the resolution of the controversy often consists of legalistic maneuvering to use the set of rules beneficial to the interested party.

A common denominator for regulation, taxation and subsidy in form of an irreducibly small property interest is conceivable. However, such a theoretical, universally marketable, property right conceived by economics ^{42/} does not exist, not just because transaction costs are high, ^{43/} but because law did not grow that way.

Nevertheless, there is a compelling attraction to a property system, with well-defined sticks in the bundle of rights that could be easily separated and combined. The market could then be relied upon to resolve problems that now occupy the attention of government. The atomization of property interests would facilitate negotiation for precisely the rights of concern to the parties. Of course, atomization of property interests still would not settle the issue of how the rights should be distributed.

Values

The distribution of wealth in property depends also on the values attached to the rights and duties associated with a parcel of land (or other unit of natural resource). These values represent a third dimension of property and its distribution. Values of land, of course, are most frequently attached to the fee interest in land. The \$228.6 billion value of farm real estate, ^{44/} for example, is the aggregate estimate of land based on selected purchases of fee interests; ^{45/} it is a market estimate of typical bundles of rights exchanged by buyers and sellers of land for farm production. It does not include, for example the value of

^{42/} Demsetz, Toward a Theory of Property Rights, 57 Amer. Econ. Rev. 347 (May 1967).

^{43/} Id at 356.

^{44/} U.S. Dept. of Agriculture, Economic Research Service, Farm Real Estate Developments, CD 77 at 2 (July 1972).

^{45/} U.S. Dept. of Agriculture, Major Statistical Series of the U.S. Department of Agriculture, Agr. Handbook No. 356 Vol. 6 (April 1971).

interests "held" in private land by county government and represented by taxes collected. 46/

Although separate valuations of easements are made when they are granted, the values are not summarized as a class of properties so that they appear as state or national statistics. Land use regulations are sometimes justified in terms of favorable effect on the protection or enhancement of land values; yet there is little concrete evidence on the effects of regulations on land values, either in terms of levels or distributions. Even more subtle are the values associated with propinquity. Although some research has revealed the effects on land values of adjacent land use, we have less than an adequate understanding of the value of view rights, scenic easements, and other rights and benefits in land we do not own. Scenic and many other consumptive uses of land have features of public goods 47/ and, however valuable these uses may be, the rights and privileges associated with them are difficult to isolate.

One of the more interesting value issues of real property derives from subsidies or grants 48/ for which land ownership is a qualification. Agricultural and conservation subsidies are designed for many objectives and

46/ Estimated property taxes collected on farm land equal \$2.5 billion. U.S. Dept. of Agriculture, Economic Research Service, Farm Real Estate Taxes RET-11 at 7 (January 1972). These property taxes capitalized at, say, 6 percent would be equivalent to the value of the "property" held by taxing governments of \$41.6 billion. The total value of farm land under these assumed rates would be \$270.2 billion instead of \$228.6 billion. To extend the logic of the aggregate value of land one could raise taxes to 100 percent of land rent. This would drive the market value of farm land to zero, but the use value of the real estate would still exist, i.e., the capitalized value of the tax.

Gaffney suggests the equivalence of fiscal and property interests by referring to the sovereign as "a super-landlord administering the royal estate. He asserts his right in the land by collecting taxes." M. Gaffney, Adequacy of Land As a Tax Base in The Assessment of Land Value (Holland, ed., 1970).

47/ "By the orthodox definition, a pure public good or service is equally available to all members of the relevant community...Once produced, it will not be efficient to exclude any person from the enjoyment of its availability...In real-world fiscal systems, those goods and services that are publicly financed always exhibit less than such pure publicness." J. Buchanan, The Demand and Supply of Public Goods at 49 (1968).

48/ To be a true grant, a transfer must be made without expected reciprocity, i.e., "one-way transfers." E.g., K. Boulding, Economics as a Science, at 11 (1970).

take many forms. ^{49/} Through values attached to rights in land, both wealth and control may be redistributed. Highway subsidies may enhance the values of some locations and depress values in other locations. Subsidies for some crops and not for others will affect decisions on land use. Favorable income tax treatment for conservation investments may benefit some owners more than others.

The value issues of property extend considerably beyond the pricing, either of marketable titles or the separate and distinct rights and duties. Research might do much to uncover the human drives to own, possess, hold and control territory or the right to make some decisions about its use. We are far from a complete understanding about the reasons for land ownership.

Transaction costs

The level of transaction costs in the property system is known only partially and the incidence is known scarcely at all. Our lack of knowledge stems in part from our inability to perceive whole systems and then sort out a particular class of costs. How much of our police and court system, for example, should be attributed to the enforcement of property rules? If the rules were changed, would the costs change? In addition to conceptual problems there are problems of measurement.

We know, for example, that nearly \$7 billion of national income is attributable to a sector of the economy involved with exchange of real property. ^{50/} That \$7 billion is almost entirely

^{49/} Some examples of subsidies in agriculture and conservation may be found in F. Maier, Hedrick and Gibson, *The Sale Value of Flue-Cured Tobacco Allotments*, V. Polytechnic Bull. No. 148 (1960); D. Westfall, *Agricultural Allotments As Property* 79 *Harvard Law Rev* 1180 (April 1966); R. Boxley and Anderson, *An Evaluation of Subsidy Forms for Soil and Water Conservation*, in U.S. Congress Joint Economic Committee, *The Economics of Federal Subsidy Programs*, 93rd Cong 1 sess, 953 (April 1973).

^{50/} In 1971, over \$66.4 billion of national income originated in the real estate sector of the economy. See, e.g., U.S. Department of Commerce, *Statistical Abstract of the United States 1973* at 325 (1973). Approximately \$7 billion of this amount was proprietary income, corporation profit and wages to employees in the real estate industry. This \$7 billion is a crude measure of costs just to exchange and supervise real property for the nation as a whole.

private cost; we have very little information on the public costs 51/ of operating the real property system. We have some evidence that our archaic title assurance process is grossly wasteful but we do not have an accurate idea of how much less costly the alternative systems might be. 52/ Recent studies have suggested room for substantial improvement but, as yet, even this relatively precise area of transactions costs in real property is uncertain.

The information on transaction costs in standard real estate sales is by no means adequate but it is certainly in better order than transaction costs for many environmental transfers. For example, the scenic values of a farming countryside are not marketed because farmers are unable to exclude viewers and thereby create a market to sell the scenery. As a result, farm land is used in ways that maximize return to commodities which are marketed. View is a public good and scenic features do not enter into farmers' market decisions. Devices by which farms or rural landowners can market the scenic qualities of their land do not exist at least to any important extent. Another way of saying the same thing is that transaction costs exceed expected benefits of negotiation. The rural landscape remains to the viewers a free good. They may expect to get what they pay for-- nothing, except what comes as a by-product of commodity production.

51/ Public costs would include costs of tax assessment, revenue collection, deed recording, public attorneys, law enforcement and judicial officers, surveyors, planners and others who exchange, manage, alter or enforce property rules. Data on expenses of government functions is usually provided in classes directly related to particular offices. Thus public costs of the property institution would have to be synthesized or obtained by special study. In 1970, for example, the Bureau of Census, Governments Division, The Economic Research Service of U.S. Department of Agriculture and the National Association of Clerks and Recorders cooperated in a national study of land records and recording. Total operating expenses of the recording offices was estimated to be \$137 million. We may assume that well over half of this expense is **attributable** to land records.

52/ Payne, for example, explains how the Torrens system of title registration was abandoned largely as a result of a publication by Powell in 1938 which had "... the almost entire lack of accurate factual information upon which to base comparisons between competing systems...", Payne, In Search of Title, 14 Alabama Law Rev. 54 (Fall 1961); See also Cook, Land Law Reform: A Modern Computerized System of Land Records, 38 University of Cincinnati Law Rev. 385 (1969).

Transaction costs ^{53/} consist of classifying and assembling information, negotiating, contracting and enforcing. It is by no means clear that such costs fall evenly on all persons affected. ^{54/}

If an individual viewer wished to buy a scenic improvement along a highway, he would find that the burden of specifying the improvement, finding the landowner, initiating the negotiation, contracting with the landowner and enforcing the agreement falls on the viewer. In such a case, transaction costs in relation to benefit to the individual might be overwhelming. The citizen might prefer to turn to political power to effect changes and thus share transaction costs widely with others.

The use of the market or the use of regulation may not differ with regard to total costs but may differ substantially with regard to who pays them and how. ^{55/}

The need for research in property

Unlike topography, ground cover and soil, land ownership lies outside the visible spectrum of land features. Yet the rights, duties, privileges and liabilities associated with a tract of land determine how land will be used and who will benefit therefrom. Ownership is important in land policy, yet we have inadequate information either about the facts of ownership or about the relationship between ownership and wealth, income, land use and development. In his appeal for a better understanding of poverty issues in rural America, for example, Geoffrey Faux pointed to the shortage of fact:

^{53/} Crocker descriptively initials transaction costs ICP for "informational contractual and policing" Crocker, supra at 462.

^{54/} Calabresi, supra.

^{55/} Dales, for example, discusses incidence of three pollution measures; regulation, subsidization and uses charge. J. Dales, Pollution Property and Prices (1968). Similarly Freeman and Haveman discuss the impact of residuals charges. Freeman and Haveman, Residuals Charges for Pollution Control: A Policy Evaluation 28 Science 322 (July 28, 1972).

What information there is concerning ownership of rural America is scattered and incomplete. The Federal Government...has done nothing on the basic question of who owns the land and the resources in rural America. What is needed is a detailed and thorough study of the concentration of ownership in rural America and its relationship to rural poverty. 56/

The facts of ownership go much beyond the enumeration of classes of title holders, concentration measures and absentee ownership, important as these features may be. The complex system of rights by which the prerogatives of decision making are exercised and the distribution of wealth and income are determined require a complete restatement of some of our property concepts. Included in the research agenda for property are a reassessment of the historic assumptions on which property rules are based; a theoretical examination of separate sets of rules affecting land use; analysis of the relationship between land ownership, wealth and income; analysis of vectors of concentration and dispersion of rights and values; examination of the impact of parcellation on communities, local government, land use planning and finance; analysis of the efficiency and distribution of property transfers; examination of the underlying values for landholding and analyses of the special problems of Blacks, Spanish Americans, American Indians and other groups functioning within or out of the dominant property institutions.

Whatever studies of property are undertaken in the name of policy will almost automatically incorporate perceptions of constitutional relationships between man and state. These

56/ Faux, On Rural Poverty, Center for Community Economic Development Bulletin (unnumbered), May 1972). Several recent studies have provided insights not only into current ownership structure but into the difficulties in obtaining reliable information on ownership. See, e.g., Fellmeth, et al Land and Power in California, esp at I-1 I-32 (1971); and Hearings on Farm workers in Rural America 1971-72 before Subcommittee on Migratory Labor Committee on Labor and Public Welfare, 92 Cong., 1st and 2nd., Pt. 2 esp. at 584 (1971).

perceptions are just as much in need of modernization as the rules that follow from them. In the words of Rex Tugwell in the Introduction to a Model for a New Constitution:

A Constitution must be the expression of the principles a democracy relies on. It must define citizens relations with each other and with their collective associations...But a Constitution should go further. It should establish the devices for living together...The rules for getting along with one another are difficult enough to work out in primitive conditions; the difficult becomes infinitely worse as population grows and spaces contract. 57/

There is an organized effort to bring about land reform in the United States. 58/ Such an effort is probably long overdue. It would be a pity, however, if policy instruments were forged, political muscle exercised and legislation initiated without making best use of all the information we can obtain.

57/ R. Tugwell, Model For a New Constitution, (1972).

58/ National Coalition for Land Reform, Cambridge, Massachusetts.



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