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*Foreign Econ Growth \*—\**

**AGRARIAN REFORM & ECONOMIC GROWTH**  
**IN DEVELOPING COUNTRIES**

*March 1962*

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PAPERS FROM A SEMINAR ON  
RESEARCH PERSPECTIVES  
AND PROBLEMS

Sponsored by the North  
Central Land Tenure Research  
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## PREFACE

In many developing countries, agrarian reform is the primary instrument of economic and social reorganization. For a long time in the developing nations and more recently in the United States, the political importance of agrarian reform abroad has been recognized. The roles of research and training to solve the problems of agrarian reform, however, are less well defined. Even so, land-grant colleges and universities and the U. S. Department of Agriculture are faced with growing obligations for training foreign and American students for research on problems abroad, increasing needs for research on which to base sound governmental and administrative decisions, and increasing demands for services as consultants abroad and on foreign matters in this country.

The North Central Land Tenure Research Committee has maintained a continuing interest in the problems of agrarian reform for many years, primarily through the World Tenure Subcommittee. In November 1960, the committee prepared and transmitted to the Federal Government a statement of recommended policy on agrarian improvements in developing countries. Its orientation anticipated some policy developments which now comprise important aspects of the U.S. approach to agrarian reform abroad. In addition to its policy orientation, the committee's statement set forth the following recommendations bearing on the relation of research and training to agrarian reform:

- (1) That staff resources in land-grant colleges and universities be used more fully and supplemented by Federal funds specifically for research and training in world agrarian reforms;
- (2) That a number of centers for studies and training in land reform and economic development be established in the United States and abroad;
- (3) That the Federal Government expand research on the impacts of agrarian reform on economic development in order to devise more effective means for enhancing agrarian improvement;
- (4) That the Federal Government, in cooperation with land-grant colleges and universities, develop a program of technical assistance to aid in the operation of land reform programs; and
- (5) That a federal interagency group with consultants from land-grant colleges and universities be established for informal coordination of the studies and programs concerned with land reform.

Following the committee's statement, plans were made to discuss more specifically the responsibilities of economists in the land-grant colleges and universities for research, training, and consultation. A seminar was suggested as a means for discussing some of the main problems. The seminar was designed, first, to focus attention on pertinent problems and issues in agrarian reform and economic development; second, to delineate some specific problem areas in need of research; and, third, to show how research and research training in agricultural economics are related to agrarian reform. The papers range from general discussion of agrarian reform and economic development to some of the specific research and research training tasks of Government and the universities. These seminar papers, hopefully, will provoke further thought on the policy issues underlying agrarian reform and provide suggestions on how those engaged in economic research can best appraise the role of agrarian reform in economic development.

Economic betterment is an objective of all policies and programs for agrarian reform. Few would assert that this objective is the sole reason for change, or always the most important reason. Nevertheless, economic problems are the bases for most reform measures. Economies caught in the circularity of low income and slow development may undertake agrarian reforms to spur the agricultural sector toward greater productivity and to buttress the economic base for the nonagricultural sector. As Professor Thorbecke points out, agrarian reform may be particularly important in the preconditions for, or initial stages of, economic growth because without agrarian reorganization, "...no endogenous forces appear to be at work in the direction of growth." In later stages of growth, other measures may be needed to reinforce the economic

development, and to encourage self-generation of the changes in the agrarian structure needed for sustained, economic improvement. Particularly in economically backward countries, research can suggest the agrarian structure and the reforms that will provide the basis for economic growth.

Inquiry into agrarian reform issues, as Professor Parsons emphasizes, must be made within a context of the powers of government. This requires that the researcher, and the policymaker as well, examine the problems of a country, devising the preconditions for development (1) in relation to the history of its agrarian institutions; (2) in terms of the citizen's relation to his government; and (3) in terms of broad economic principles explaining structural transformations. Because agrarian reform is a social process and a public endeavor, the identification of the individual cultivator with policies and programs of his government is important to the success of such measures. This identification need not take the naive form portrayed in posters of gay peasants skipping to their chores for the glory of the state. It does mean, however, that the cultivator can assume that his government will make every effort to provide an environment for him to secure the rewards of his effort.

Guides to policy decisions, particularly in countries where the need is greatest, cannot always await elaborate analyses. Furthermore, economic analyses oriented toward public policies and programs, although guided by general principles and supported by the available information, may need to be tempered by an appreciation of the feasible or an acceptance of the inevitable.

A major restructure of the agrarian economy inevitably, if not immediately, will require choices by policymakers. Professor Doving discusses, for example, an important set of such choices in his lucid exposition of flexibility and security. The role of the researcher may be, first, to clarify the range within which two or more objectives must compete for resources; and, second, to estimate the rate at which one objective may be obtained at the expense of others. The concept of substitutability, although a part of the intellectual machinery economists take for granted, is not always conceded by policymakers. On the other hand, a concession that objectives may substitute for each other is of little help to the policymaker in making choices if he does not know the rate at which objectives substitute. When done well, measurement is one of the economist's major contributions to decision makers, whether they are members of a parliament or tillers of the soil.

Having acknowledged the role of agrarian reform in economic development, the importance of citizen participation in government policies and programs, and the difficulties of attaining many objectives, only one of which may be economic development, how then does one devise means to attain these objectives? As a minimum, those doing research in support of agrarian reform should have an appreciation not only for economic principles but also for the institutional heritage from which change must proceed. Professor Harris goes much further. His argument for eclecticism in law and economics, for example, extends to complete integration of the disciplines, preferably within a single researcher. Such integration would pervade all the functions the land-grant universities are called upon to perform -- research, training, and consultation.

A challenge to our research and educational institutions emerges. Professors Raup and Kanel expose a wide array of critical issues beginning with the preconditions (chiefly attitudes) for effective research on agrarian problems and extending to specific recommendations on graduate training. To do adequate research and training, modifications of our approach and organization are probably required. Separate institutes treating the special problems of agrarian reform in certain areas may provide some necessary concentration of effort. However, through years of cooperation, the land-grant universities and the Department of Agriculture have developed a broad-based research system that can be mobilized to solve the complex problems associated with agrarian reform. The resources of the land-grant university system are substantial. Staff and students are increasingly aware of problems in other countries. Courses of study are beginning to reflect this awareness. Many carefully conceived proposals for special programs of research on the problems associated with agrarian reform have been developed. So the resources are available and the problems are better understood. There remains now the massive task of putting our knowledge to work.

The committee and subcommittee are grateful to the six authors for their outstanding contributions to the seminar. We hope that readers will find these papers stimulating and useful.

---

G. Wunderlich

Erik Thorbecke

The main purpose of this paper is to try to relate agrarian reforms to the process of economic development. The standpoint which is taken in this paper is that of the economist interested in determining the role which changes and reforms in the agricultural sector can perform as a means to the attainment of the end of economic growth.

The argument is developed in the following parts. First, the concepts of agrarian reforms and economic growth are examined and defined. The second part is devoted to the formulation of a conceptual framework borrowed from the theory of economic policy, which, it is hoped, clarifies the relationship between agrarian reforms as instrument variables and overall growth as a target variable. Third, the role and contribution of agriculture in economic growth is analyzed along theoretical lines with special emphasis on the interaction between the agricultural and the industrial sectors of a developing economy. It will be seen that at least three distinctive phases can be denoted in the adaptation of agriculture to the process of growth. The agricultural reforms most appropriate to each phase are discussed and analyzed and their contribution to economic growth assessed.

I. It is essential at the outset to define the main terms used in this paper. Following the suggestion of the NCLTRC seminar committee, agrarian reform is defined as: "Changes in rural institutions with the objective of improving rural levels of living. These institutions include those of holding and transmitting rights in land, allocating returns to land between owners and tenants, extending credit for land purchase, farm operation and improvements, taxing land values and land income, conserving and developing agricultural and other resources, marketing of farm and other products, broadening opportunities for educating and training rural people, and promoting rural health and welfare services."

In one sense, this definition is very broad, incorporating as it does a variety of means through which the goal of improving the rural levels of living can be furthered. In another sense, it is relatively narrow since agrarian reform in the above context is supposed to lead to the attainment of only one objective or end. In view of the various objectives for which agrarian reforms have been either proposed or implemented throughout history, it might appear that the postulation of only one objective--however broad--would tend to oversimplify the analysis.

The various means that are explicitly stated as constituting agrarian reforms are not all institutional in character, as the above quotation implies. Certain means such as public investment in fertilizer plants and irrigation schemes--which would presumably come under conservation and development of agricultural resources--are not structural or institutional changes in the same way as changes in land tenure. The term "reform" connotes changes in the foundations or institutions of an economy and is therefore exclusive of changes in quantitative means, or instrument variables, which are under the control of the policymaker and which do not necessitate changes in either the structure or the institutions of the economy.

In the conceptual framework presented in the second part of this essay, the distinction between agrarian changes within the structure of the economy and agrarian reforms implying an alteration in the structure will be elaborated upon. Similarly, the major ends of agrarian reforms will be examined and the consistency of the ends inter se analyzed. Given the subject of this paper--the influence of agrarian reform on growth--it proved essential to take some liberty with the definition recommended for the purpose of this seminar in order: 1) to distinguish clearly between the various types of agrarian means, 2) to determine the extent to which these means can lead to the attainment of predetermined ends, 3) to determine the extent to which the given objectives are mutually compatible, and 4) to relate more specifically, agrarian changes as means to economic growth as an end.



Economic growth is a very difficult concept to define if all its various dimensions are to be considered. It is possible, and it has become customary to agree, albeit arbitrarily, upon what constitutes an aggregate index of economic growth but clearly, the latter would only be a comparative static measure of the state of certain key variables in the economy at different points in time. What such an index does not reflect are the structural and institutional changes that interact to create a dynamic process.

Aggregate indices, such as aggregate real income or real per capita income or consumption, indicate at best whether growth has taken place; they do not in and of themselves tell us the changes in the structure of the economy (or the input-output matrix) that were both the cause and the effect of the growth process. A truly dynamic definition of economic growth as a process would necessitate the formulation of a theoretical framework which would permit the scientist to follow the paths of a large number of variables, reflecting the state of the economy over time. In the same sense as in the case of an ecological system, one might think of an ecosystem with a built-in tendency toward equilibrium once certain endogenous or exogenous forces have upset the natural balance. Economic growth would consist of the study of the impact of these exogenous and endogenous forces on the increased capacity of the economy to satisfy human wants. Some of the exogenous forces are under the control of the policymaker and can be used to set up a stimulus conducive to economic development.

At present, it is widely believed that at an early stage of development great reliance needs to be placed on the use of exogenous forces under the control of the government, such as public investment and agrarian reforms, to generate growth. It is only after a certain equilibrium position of the ecosystem has been achieved that growth becomes self-sustained and cumulative and that reliance on exogenous impetuses through central planning, for instance, can be reduced.

It would appear that the area of development planning is a first step in the integration of growth theory and the theory of economic policy. One of the purposes of this paper, as may be seen in what follows, is to push this integration further and make it explicit (at least methodologically), specifically with regard to agrarian reforms.

For the purpose of this inquiry, economic growth is defined very broadly as the changes in the economy that permit the creation of an increased capacity to satisfy the physical wants of individuals. As an index or measure of economic growth, aggregate output will be used, keeping in mind the following qualifications: (1) the rate of increase in aggregate output should be higher than the rate of population growth, so as to negate the possibility of a lower per capita output figure associated with a higher aggregate output 1/ and (2) the increase in aggregate output should not be accompanied by more than a specified worsening of the income distribution. 2/

II. The purpose of this section is to formulate a conceptual and operational framework within which agrarian reforms are viewed as means toward the attainment of certain given ends, and in particular, the objective of economic growth.

The rigorous analytical structure which Tinbergen designed in the area of the theory of economic policy will form the starting point of this attempt. The essence of Tinbergen's approach to the theory of economic policy can be summarized in terms of three basic elements:

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1/ Under this definition, a decline in aggregate output, compensated by a larger decline in the size of the population (and thus leading to an increase in per capita output) is not considered as evidence of economic growth. The validity of this assertion could be debated. In any case, it is clear that the same assertion would not hold with respect to a sector (agricultural, for instance) of an economy.

2/ This could be done quantitatively by specifying a certain Gini-ratio on the basis of the Lorenz curve.

a welfare function, a division of economic variables in four classes, and a structural model. <sup>3/</sup> The first element of his framework is the postulation of an objective welfare or preference function reflecting the general interest of the people. To circumvent the difficulties inherent in any attempt at making interpersonal and intertemporal utility comparisons, as well as the possible intransitivity of the community welfare function, <sup>4/</sup> Tinbergen replaces the actual aggregate social welfare function of the community by that of the policymaker's preference function which normally would tend to coincide with the welfare function of the citizens. If this were not the case, the government (of the party in power) would be replaced in the next general election by a more representative slate. The objective preference function of the policymaker contains the ends of society, which are taken as given by the government. The elements entering the welfare function can appear either in the form of flexible targets (i.e., maximum output) or fixed targets (i.e., at least 97% of labor force employed).

The second element of this Tinbergen framework is the division of variables into four general classes. The exogenous variables, which are the data, are considered to influence the endogenous variables, which are the economic phenomena per se. There are two classes of data: (1) those over which the policymaker cannot exert any influence (other data); and (2) those under the control of the latter (policy means). The policy means under the control of the government can be further subdivided into (a) instrument variables, which are of a quantitative character and are used to adapt the economy to small and frequent changes in some of the other data. Examples of policy instruments would be tax rates, discount rates, and the foreign exchange rate, (b) structural changes, which are means altering the underlying structure of the economy, such as quantitative restrictions, built-in stabilizers, antitrust legislation, and allocation of public investment as between projects in a developing economy, and (c) reforms, which are changes in the foundations of the community in terms of spiritual values and the essential relations between individuals. Examples of these are voting rights, property rights, opportunity for education, and existence of some form of social security.

The next two classes of variables consisting of the endogenous variables in the theory of economic policy are: (1) the target variables, which incorporate the immediate goals of the policymaker. These target variables reflect the policymaker's welfare function. They can be either fixed or flexible. As was pointed out previously, the goal of full employment, for instance, could be stated in terms of a minimum level of employment, say 97 percent of the labor force, or in terms of maximizing the level of employment; and (2) the so-called irrelevant variables, which are the economic phenomena in which the policymaker is not primarily interested at the time of decision-making. In a sense, these variables are the side effects caused by changes in the means of economic policy.

The third major element of the Tinbergen approach consists of the specification of a system of structural relationships, reflecting the technical (i.e., production functions), behavioral and institutional relationships in the economy. The set of causal relations constitutes the "model".

If the period under consideration is relatively short (say 6 months), the structure of the economy can be assumed to remain constant and can be approximated quantitatively. The parameters (structural coefficients) of the behavioral demand, supply, and other relationships can be determined statistically (through least-square and multiple-regression analysis for instance), or on a priori grounds.

Given the model and assuming that the policymaker is operating in the short run, the problem of economic policy becomes quantitative in the sense that instrument variables are used to achieve the specified economic goals (usually given in terms of predetermined fixed targets) despite the disturbances arising from the noncontrollable factors. More specifically, once forecasts have been made for the noncontrollable data (i.e., prices of imports) and the values of the targets set, the problem of economic policy is to solve the system for the values of the instrument variables (and irrelevant variables) that satisfy it. The logic of the theory of economic policy is illustrated in schematic form in figure 1. <sup>5/</sup>

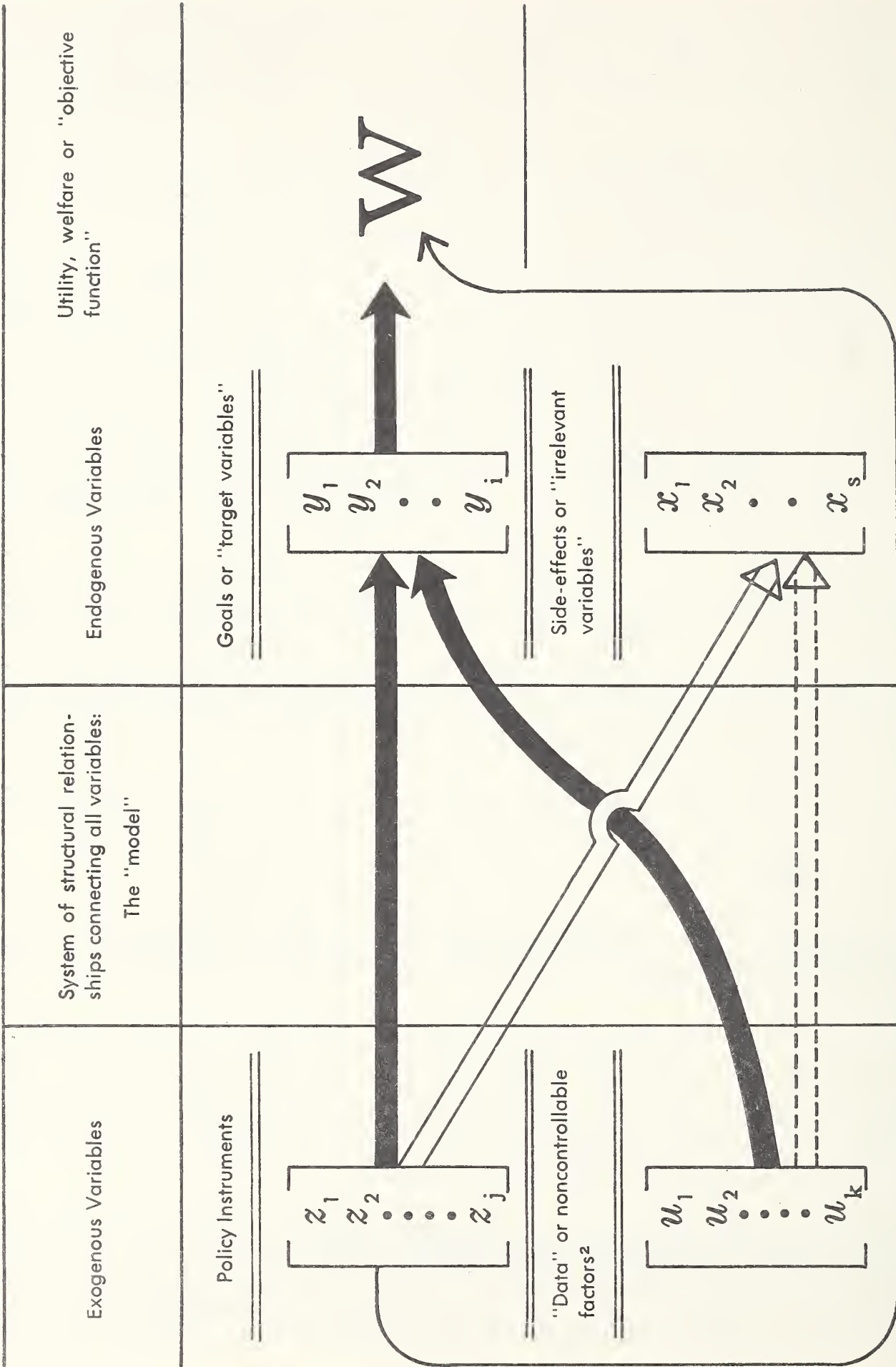
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<sup>3/</sup> See: Jan Tinbergen, Economic Policy, Principles and Design (Amsterdam, 1956) and by the same author: On the Theory of Economic Policy (Amsterdam, 1952).

<sup>4/</sup> This point is sometimes referred to as the voting paradox first established by Arrow.

<sup>5/</sup> The diagram in figure 1 is reproduced from a monograph by Karl A. Fox, "The Concept of Community Development" (given at a Community Development Seminar, April 18, 1961).

# The Theory of Economic Policy<sup>1</sup>



<sup>1</sup>Classification of variables based on J. Tinbergen.

<sup>2</sup>Not subject to control by the policy-maker or level of government that sets the goals and uses the policy instruments in question.

Figure 1

The use of quantitative economic policy has been pushed relatively far, particularly in the Netherlands and in Norway. In the former country, the Central Planning Bureau makes use of a system of 27 simultaneous equations relating the various variables. The structural parameters are revised at regular intervals and at least once a year.

When the means of economic policy alter the prevailing structure or foundations of the economy, the nature of the problem becomes much more complex since the model itself will be affected. 6/ Economic policy becomes a much more arduous and tenuous task, taking the form of qualitative economic policy and reforms. It will be argued in the third section of this paper that the goal of economic growth at a relatively early stage of development will require the use of policy means that will alter both the foundations and the structure of the economy. It is only after an economy has reached a fairly advanced stage of economic development that economic policy can become quantitative in the above-described sense.

A further characteristic of the Tinbergen approach that should be mentioned here is that the basic methodology can be applied, first, to any level of government--from regional to international--second, to the study of any sector or industry, and third, to any time period from short-run to long-run. The extent of the spatial, sectoral, or temporal partitioning would depend exclusively upon the nature of the economic policy problem under consideration. Similarly, selection of the targets and of the means (instruments, structural changes, and reforms) is done on an ad hoc basis consistent with the problem at hand.

The framework summarized above appears to be quite relevant and applicable to the study of agrarian reforms. It has the great merit--as was pointed out previously--of providing a conceptual frame of reference within which: (1) various types of agrarian means can be distinguished; (2) the mutual compatibility and consistency of the ends of agrarian reforms can be explicitly analyzed; and (3) the causal relationships between agrarian reforms, as means, and predetermined targets, and more specifically economic growth, can be established via the model. In the present context, the model should be conceived as a set of relationships linking the various economic variables. Even though these relationships could be quite sophisticated (which might be the case in a mature economy), in the case of most underdeveloped nations, the "model" would take the form of rough empirical input-output, cost-benefit types of relationships between agrarian means and policy objectives.

The first two steps are essentially of a methodological and taxonomic nature and will be discussed in the remainder of this section. Step 3, on the other hand, requires both a theoretical knowledge of the impact of agrarian changes on economic development, efficiency, distributive justice or whatever the aims of the agrarian reforms are; and some knowledge of the empirical relationships which prevail in a developing economy. Section III of this paper deals with the theory of economic development and the role which agrarian means can play in this process. 7/

Agrarian reform as a concept is open to a large number of interpretations and no widely accepted definition of it exists. The reason for this may be that this term is essentially an institutional and not an analytical one and that historically, it was defined on the basis of its components. As one author pointed out "Every reform must be suited to the culture that it is intended to serve. The success of an agrarian reform is to a large measure dependent upon the degree it can be made to harmonize with the cultural matrix and to adapt existing social and economic institutions to promote progress toward fulfilling the necessary conditions of economic development." 8/

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6/ This might take the form of new structural coefficients or a different mathematical shape for the equations entering the model, or, additional variables and equations.

7/ It was the intent of the author, at first, to have an additional part devoted to an examination of a few empirical attempts at establishing quantitative input-output relations, using India as an example, to substantiate contentions made in Section III. Time being the scarce factor it is, prevented elaborate treatment of empirical relationships. Instead, a brief summary of sources and results is given at the end of the third section.

8/ J. P. Gittinger, *Economic Development Through Agrarian Reform*, (Unpublished Ph. D. Dissertation, Iowa State University, 1955) p. 238.

In any case, it appears that a breakdown of agrarian reforms into types of policy means might have some operational value, as will be shown subsequently, and would not be simply an exercise in idle taxonomy. Any classificatory scheme is to a certain extent arbitrary and the present is no exception to the rule (for instance, a few means can be classified under more than one heading). The following breakdown does not claim to be exhaustive, but it does include most agrarian policy means:

- A. Instruments (essentially quantitative policy parameters requiring no change in the structure of the economy).
  1. Changes in tax rates and in tax incidence, e.g., for and as between tenants and landlords, the agricultural and the industrial sector.
  2. Direct or indirect subsidies, such as those on fertilizers, tillage equipment, and pesticides.
- B. Changes in Structure
  1. The introduction of price support and credit programs (it should be noted that a change in parities or support levels within an existing program would be considered an instrument).
  2. The allocation of funds and facilities for research on improved seeds, farm management, fertilizer, etc.
  3. Public investment in irrigation and fertilizer plants.
  4. Public investment in social overhead capital (infra-structure), e.g., the building of intra- and inter-village roads.
  5. Reclamation and settlement.
  6. Improvements in credit and marketing facilities (the actual institution of these facilities where none existed before should be considered as truly a reform). These changes could take the form of publicly supported rural credit banks, state cooperatives, etc.
  7. Education; larger public support of education, for example, higher salaries for teachers, subsidization of teacher training, school construction. (A change in the opportunities for education resulting from a change in the compulsory school age would be more in the nature of a reform.)
  8. Extension service, which would include the dissemination of new information concerning farm management, farm technology, crop diversification, and adult education.
  9. Training of rural population in the acquirement of new industrial skills.
  10. Promoting rural health and welfare. 9/
- C. Reforms (changes in the foundations of the economy)
  1. Changes in the tenancy arrangements, relating to distribution of the product, (as between owners and tenants) terms of the lease, security of the tenants, water rights, etc.
  2. Land redistribution; change in the property rights of various groups and individuals.
  3. Land consolidation; reduction in fragmented and noncontiguous tracts.
  4. Nationalization of agriculture; collective farming.

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9/ Here again it should be noted that the actual institution of such programs--as opposed to changes within--alters the institutional setting of a country and is therefore a reform.

It is self-evident--but bears repeating--that the selection of agrarian means 10/ depends upon the objectives to be achieved. Therefore, an examination of the most important objectives (ends) which a society or a government may have in mind is relevant at this stage. An answer to this question involves specifying the elements entering the social welfare function of the community or the objective preference function of the policymaker. Tinbergen gives the following list of the major aims of economic policy in modern times:

- (a) Maintenance of international peace.
- (b) Maximum real expenditure per capita with "full" employment and monetary equilibrium.
- (c) Improvement of distribution of real income or expenditure over social groups and countries.
- (d) Emancipation of certain underprivileged groups.
- (e) As much personal freedom as is compatible with the other aims. 11/

These, of course, are the broadest aims. For purposes of this discussion, it seems desirable to specify the principal objectives of agrarian reforms per se. A review of a number of reform acts indicates four major objectives: (a) productive efficiency, (b) economic growth, (c) greater equality in the opportunity to have access to and ownership of resources, in income distribution, and in status and security, and (d) justice, the rule of law, the elimination of exploitation. 12/ It is clear that the simultaneous attainment of all four objectives is only possible in a very limited way. Means designed to enhance the achievement of one objective may affect other objectives negatively. For instance, if some form of progressive taxation is used to equalize the income distribution, beyond a certain point the use of this instrument will affect growth negatively by reducing total private savings and ultimately capital formation in the economy. Another example may suffice to indicate the kind of conflict that may exist in the goals. The choice of investment programs in a densely populated, underdeveloped economy is a difficult one. The highest rate of growth will be achieved if the available resources are allocated to the investment program which leads to the largest increase in national income. Now the choice of the process will depend on the prices of the factors. If the actual market prices are taken as the relevant parameters, the choice of project will tend to be more capital-intensive than is warranted on the basis of the opportunity costs of factors. The reason for this is that the institutional wage rate (often akin to the subsistence wage rate) is higher than the equilibrium wage rate--which in a number of underdeveloped countries would approximate zero. On the other hand, the scarcity of capital and entrepreneurial ability is such that the prevailing profit and interest rates are often below their equilibrium levels (marginal value product). Consequently, the use of accounting or shadow prices reflecting the opportunity costs (equilibrium prices) of these factors provides a better criterion for the choice of investment projects and programs for economic growth than if market prices were used. At the same time, it might violate the static conditions of productive efficiency, which are determined on the basis of the market prices.

Therefore, whenever the ends are not mutually consistent or compatible, it is essential that relative weights be attached to the ends and that all substitution rates as between ends be stated (i.e., indifference for the policymaker as between an increase of one percent in the annual rate of growth and a 2-percent change in the Gini income-distribution ratio). 13/

In the absence of such quantitative (or even ordinal) weighting of the ends, it is difficult to formulate policies when at least some of the ends are competitive. 14/ Admittedly,

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10/ This term refers to the above list and is used instead of agrarian reforms to indicate that according to the taxonomic scheme used here, not all agrarian means are reforms.

11/ Tinbergen, Economic Policy, op. cit., p. 15-17.

12/ For an interesting discussion and interpretation of the objectives of agrarian reforms applied to a specific act (The Bombay Tenancy and Agricultural Lands Act) see Gene L. Wunderlich, The Bombay Tenancy and Agricultural Lands Act as a Means of Agrarian Reform (Ph. D. dissertation, Iowa State University, 1955) p. 83-96.

13/ Attempts that have been made to specify explicitly and quantitatively the elements, as well as the so-called barter terms as between elements, of the objective welfare function are few in number. For an interesting example applied to the Netherlands, see C. T. Van Eijk and J. Sandee, "Quantitative Determination of an Optimum Economic Policy," Econometrica, January 1959.

14/ If all the targets were complementary and the barter terms constant (thus independent of the level of goal achievement), the maximization of one of the ends would be equivalent to maximizing the objective welfare function.

some of the ends are essentially of a qualitative nature (i.e., justice) and thus not subject to quantification. Nevertheless, it is almost always possible to state whether a competing or complementary relationship exists between targets and to offer estimates--sometimes very rough--of the degree of substitutability between them. The least that a policymaker should be expected to state is a priority as between the aims, which in turn can be translated into the welfare function. Besides making possible a more rational choice of the means of economic policy, the specification of the welfare function in the above sense has the added advantage of forcing the policymaker to state his ends in such terms that the electorate can compare campaign promises (contained in the party platforms) to the actual goals pursued once he is in office.

It should be mentioned in passim that governments in power are not necessarily motivated by their own image of the welfare function of the community. Their main purpose may be to maximize the chance of being reelected and they will therefore behave according to some sort of "vote-fare" function. This vote-maximization function would entail a strategy by which policy means would be used as long as the total votes gained from this action were larger than the total votes lost. 15/ It would seem that this behavior pattern fits a number of land reform acts undertaken by newly independent countries, and it may help to explain the heavy emphasis which these reforms placed on distributive justice and equality as opposed to economic growth. At the same time, it does not appear that the welfare function and the "vote-fare" function would need to be too different. It is true that the latter would need to take into consideration the strategies of the opposition party, which could lead to short-run, essentially transitory, factors entering this function.

After this examination and classification of the policy means and major objectives of agrarian reforms, the remainder of this paper is devoted to analysis of the contributions that agrarian means can make to the end of economic growth. It is thus assumed that the other ends are of a subsidiary nature, unless otherwise stated.

III. The postwar period saw a resurgence of interest in the theory of economic growth that had been almost entirely ignored during the interwar period. With the advent of Keynesian economics, the change in the world conjuncture from that of stagnation and depression to growth and inflation, as well as the emergence of many newly independent nations, a number of theories of economic development appeared in the 1950's. The "big-push," "takeoff into sustained growth," "critical minimum effort," "balanced and unbalanced growth" were among many of the theoretical attempts at explaining the process of development and at constructing frameworks within which developmental policies could be prescribed. A complete synthesis of these attempts in the form of a general theory of economic development has not yet been produced. Nevertheless, there is a tendency in that direction, as comes out clearly from a study of the more recent literature. It is being shown increasingly that theories and theses which, at first glance, appear irreconcilable are in fact special cases (sometimes partial equilibrium) which can be fitted into a more general theoretical mold.

In analyzing the growth process of underdeveloped areas, it is customary to use a 2-sector model (agriculture and industry). It can be said--very succinctly--that the path of development consists of a general transformation from an economy characterized by abundance of labor and extreme scarcity of capital, and a very small modern industrial sector superimposed upon, and not integrated to, a large native agricultural sector (economic dualism), to an economy in which the proportion of the labor force employed in agriculture has become small (say one-fourth or less) and the two sectors have become integrated.

The Lewis treatment of development in terms of two sectors 16/ opened up a meaningful new theoretical framework that is most useful in assessing the role of agriculture in growth. Two recent attempts built upon Lewis's model performed the type of synthesis described above. 17/

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15/ See A. Downs, An Economic Theory of Democracy, New York, 1957.

16/ See W. A. Lewis, "Development with Unlimited Supplies of Labour," The Manchester School, May 1954.

17/ See: 1) G. Ranis and J.C.H. Fei, "A Theory of Economic Development," American Economic Review, Sept. 1961 and 2) B. F. Johnston and J. W. Mellor, "The Role of Agriculture in Economic Development," American Economic Review, Sept. 1961. It is interesting and curious to note that both of these articles (appearing in the same issue of the AER) arrived at similar general conclusions after following quite different approaches.

Of particular interest in the present context is the fact that the general transformation from a rural underdeveloped economy to a developed industrial economy is analyzed by both sets of authors in terms of three distinctive phases which--although not coincidental--appear to overlap greatly. The characteristics inherent in each phase--corresponding to a certain stage of development--will be discussed briefly first. Next, the agrarian policy means most appropriate to each phase and most conducive to the general transformation will be analyzed.

If each phase is looked at from the standpoint of agriculture, the first phase would be called the stationary or stagnation stage, the second phase would be the takeoff stage, and the third phase that of commercial agriculture. Phase I is characterized by labor redundancy; it will exist as long as part of the labor force has a marginal physical productivity of zero. The institutional wage rate can be thought to be determined by the average product of the total labor force (including the redundant part) and can thus be assumed to be equal to the total agricultural output per capita. <sup>18/</sup> (At the beginning of phase I, the total population is assumed to be employed in agriculture.) Throughout phase I, the supply curve for labor in the industrial sector is infinitely elastic at the institutional wage rate since the opportunity cost of labor is zero. As agricultural workers are withdrawn and added to the industrial sector, a surplus of agricultural goods begins to appear. The reason for this is that since some labor is redundant, throughout phase I at least, total agricultural output remains unchanged as the redundant workers move to the industrial sector. At the same time, the total consumption of the remaining workers (the institutional wage rate x number of remaining workers) declines, since by definition their wage rate (= consumption) is assumed to be constant. The difference between the total agricultural output and the total agricultural consumption is the total agricultural surplus. This surplus can be viewed as agricultural resources released to the market through the reallocation of agricultural workers. Conceptually, the agricultural worker moving to the industrial sector during this first stage can be thought of as carrying over his own bundle of food (and consumption needs). Thus the transfer of workers from the rural to the industrial sector during this first phase, provides a potentially important source of domestic capital formation. In order for capital formation, as such, to be realized, the released (free) resources making up the agricultural surplus need to be embodied in the creation of capital or social-overhead capital goods in the industrial sector. This question is subsequently examined in some detail.

Phase II begins as soon as all of the redundant agricultural labor force has been absorbed in industry. The marginal physical product of labor in agriculture is positive and increases as additional workers leave the land. Throughout this phase, however, the MPP is less than the institutional wage rate. Thus, both phase I and phase II show evidence of disguised unemployment ( $MPP < \text{wage rate}$ ). The supply curve of labor in the industrial sector turns upward at the outset of this second period since the marginal agricultural surplus is declining, whereas it was constant before. The farmworker can now be imagined as carrying over to the industrial sector his own wage rate from which is deducted his foregone contribution to total agricultural output (his MPP). It is this increasing opportunity cost that turns the industrial labor supply curve upward. This phase continues until the MPP has reached the level of the institutional wage rate.

Phase III is truly the commercialization stage. The MPP of labor in agriculture is equal to or above the institutional wage rate, and the supply curve of labor in agriculture, which during the earlier phases had been infinitely elastic at the going institutional wage rate, slopes upward, indicating for each level of real wage rate the amount of labor that may be released from the agricultural sector. Since disguised unemployment has disappeared, the two sectors are fully integrated (economic dualism no longer exists), and market forces are allowed to operate. More specifically, market prices reflect opportunity costs and the allocation process can be made on the basis of these prices. The agricultural surplus--in the sense defined above--has vanished, and the wage rate in the industrial sector is determined on the supply side by the MPP of labor (the opportunity cost) in the agricultural sector.

The first phase is one in which the preconditions for takeoff--to use Rostow's terminology--have not been met. The concept of progress and the acceptance of the desirability of change are often foreign to the majority of the peasants at the outset of this period. Even when the goal of progress is desired, the great reluctance of changing traditional farming methods, indicating a high-risk aversion, provides an effective obstacle to the implementation

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<sup>18/</sup> The maintenance of this wage level is possible only under institutional or nonmarket forces since under competitive condition, the wage rate would be zero and starvation would result.



of change. In many respects, this high-risk aversion to new farm management methods is perfectly rational from the standpoint of the individual farmer, given the environment within which he operates. He must weigh the cost of a new method against the future net benefits resulting from it. In evaluating and estimating those future benefits, the farmer is greatly handicapped by his lack of knowledge and even when he is convinced that the expected value of the net benefits is substantially larger than their immediate costs, the distribution of outcomes around the mean is of great importance. It is sufficient to discourage him from the application of chemical fertilizer, for instance, to know that in, say, one percent of the cases the application of this fertilizer results in losses. The fact that this farmer is living on a subsistence wage prevents him from taking any risk (in terms of a new technology) that could lead to starvation (the marginal utility of a rupee lost is substantially higher than that of a rupee gained at the subsistence level). The position of the farmer during this phase can be compared to that of the gambler who knows that the odds are heavily in his favor but who is prevented from betting because of lack of funds.

It is probably during this stage that the most important changes in the foundations and the structure of the economy will need to take place since no endogenous forces appear to be at work in the direction of growth. In this sense, economic backwardness can be considered a quasi-stable equilibrium system and growth a disequilibrium system, as Leibenstein has pointed out. What is needed is to introduce exogenous stimuli that will provide a framework which will be conducive to growth.

During phase I, agrarian policy means can play an important role as a conditioning influence to growth. More particularly, a number of land reforms seem desirable. First, under most circumstances, a land-redistribution scheme from tenants to owners ( C.2. in the list of policy means above ) <sup>19/</sup> would improve the accretionary process, besides improving the efficiency of resources. <sup>20/</sup> It would give the actual cultivators the full exercise of managerial and operational powers. As Raup argued convincingly: "Agricultural policy for maximum growth in this phase of development would seem to call for the creation of patterns of production, consumption, and investment that will maximize the accretionary (capital formation) process." <sup>21/</sup> At the same time, a conversion from tenant-occupiership to owner-occupiership would improve the tax-collection problem since the link between the payments of taxes and public services received would become more direct under the latter system. (Raup points out that the landlords might be reluctant to pay taxes in order to contribute to the education of their tenants' children.)

It is clear that a number of complementary means should be provided in order to facilitate the accretionary capital formation of the individual owners and make use of the existing agricultural surplus during this phase. These means will be discussed subsequently.

An alternative reform to a redistribution of land consists of changes in the tenancy arrangements themselves (C.1.). Changes that would be conducive to growth would be a shift from share rents to cash rents for the tenants and a considerable lengthening of the terms of the leases, which would increase the security of the tenants and make the planning period longer.

This alternative would not in general be as effective an inducement to growth and efficiency of production as would the promotion of owner-occupiership, although it might have a greater positive impact on some ends of the welfare function. This would be true, for instance, if, under the end of justice the inalienable right of private property was deemed important. It is interesting to note that, as long as agricultural production takes place under conditions of constant returns to scale, a change in the size of the farm unit will not improve productive efficiency. Somewhat differently expressed, this means that a process of land consolidation and subdivision, i.e., through the breaking up of absentee landlords' estates, would not affect total agricultural output. Thus, here is an example of one agrarian mean (land subdivision) that would enhance the end of equality and leave the goal of productive efficiency unaffected. In the case of decreasing returns to scale, the reorganization of agriculture to include more

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<sup>19/</sup> Letters and numbers next to agrarian means refer to the list given previously.

<sup>20/</sup> For a theoretical discussion of the impact of different types of land reforms on the production function (and the efficiency of resources), see E. O. Heady, "Techniques of Production, Size of Productive Units and Factor Supply Conditions" (SSRC Conference, Stanford, Nov. 1960).

<sup>21/</sup> P. M. Raup, "The Contribution of Land Reforms to Agricultural Development: An Analytical Framework" (SSRC Conference, Stanford, Nov. 1960), p. 16. This paper makes a strong case for land reforms at an early stage of development without specifying exactly at what stage. It seems that phase I in the present analysis would correspond to that stage.

and smaller farms would over a range permit the simultaneous attainment of the goals of equality, productive efficiency, and, indirectly, growth. It is only under conditions of increasing returns to scale that the strictly economic objectives of agrarian reforms are clearly competitive with the distributive ends. 22/

The evidence suggests that it is only in highly developed countries where agriculture is commercialized (U.S., Canada) that increasing returns to scale exist. The present meager empirical evidence in underdeveloped areas would suggest that production is taking place pretty much under conditions of constant returns to scale. 23/

To come back to the two land reforms suggested earlier as appropriate to phase I, it should be clear that the efficiency of each would be a function of its impact on the welfare function and specifically on growth, and its cost in monetary and nonmonetary terms. A program of land redistribution, to encourage cultivation by owners, would be more conducive to economic growth than a change in land tenancy. On the other hand, the cost of the former in terms of material and nonmaterial resources would appear to be larger. 24/ In view of the relatively scarce administrative resources available to governments of most underdeveloped areas, it would seem that a reform altering the tenancy arrangements would be more feasible. At the same time, the administrative costs of enforcing these tenancy arrangements would prevail over time, whereas in the case of land redistribution from tenants to owners, the costs of administering and implementing the reform (abstracting from the payments of compensation which can be considered to be direct costs) would not be spread over the long run. Thus, besides the total costs of these alternative programs, another element entering into the decision-making process is the distribution of costs over time.

It was mentioned earlier that the success of a land redistribution scheme was dependent on the implementation of complementary measures. This is equally true for a change in land tenancy arrangements. The most important of these measures in this first phase would seem to be the institution of an agricultural extension service (B.8.), which could take the form of a community development program. The aims of this extension service during this first period could be relatively modest, and consist essentially of the dissemination of simple information with the view of improving farm management on the assumption of only very slight increases in the resources available. The additional inputs could be fertilizer, tillage tools and equipment, seeds and pesticides made available to the cultivators at subsidized prices (A.2.). 25/ There is a strong presumption--supported by firsthand investigations--that improvements in productivity are possible with only slight changes in the input mix.

It was pointed out that as the redundant labor force moves to the capitalist sector during this phase an agricultural surplus is released. Potentially, this agricultural surplus is an important source of capital. In order to realize this surplus, the government should proceed on two fronts; first, it needs to provide or induce alternative employment opportunities in the nonagricultural sector to make the actual transfer possible, and second, it needs to siphon off the actual surplus (or part of it) by means of taxation to prevent increased per capita consumption (and thus a higher wage rate in agriculture). These measures--like the blades of a pair of scissors--can be successful only if they are undertaken jointly and in the sequential order stated above. The undertaking of public projects in social-overhead-capital areas (B.4.) mainly in irrigation schemes, rural roads, and schools would provide the necessary employment opportunities for the redundant workers, and direct taxation (A.1.) could be used to finance at least a part of the capital cost of these projects and more specifically the food needs of the transferred workers. The remaining capital needs could, to some extent, be met through foreign investment grants and aid (including U.S. surplus-disposal programs) from international agencies and public sources in the developed countries. The magnitude of these social-overhead capital

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22/ See Heady, *op. cit.*, p. 16-21, for an interesting analysis of the relationship between "food production" and "other goals of reform" under various returns conditions.

23/ See 1) Heady, *op. cit.*, and 2) E.O. Heady and J.L. Dillon, Agricultural Production Functions (Ames, 1961), Chapter 17.

24/ An index of the efficiency of a policy mean might be the ratio of the change in the objective welfare function caused by it to the cost of the policy mean in terms of material and nonmaterial resources. One of the costs of a land-redistribution scheme is the inflationary pressures that could be released by a land-bond compensation scheme. It is relatively difficult to devise a compensation scheme that would be both equitable and noninflationary.

25/ Extension services would become a much more important policy mean in phase II, as is shown subsequently.

(infrastructure) projects would depend upon the size of the redundant labor force. On the assumption that the truly redundant labor force (MPP = 0) forms only a small proportion of the population in most underdeveloped areas, the overall scope of these projects could be relatively limited. 26/

A number of agrarian policy means appropriate to phase I have been discussed and analyzed above and a final comment concerning their mutual compatibility seems in order. It was argued that a land-redistribution scheme would increase the link between benefits received and taxes paid and thereby improve the task of collecting taxes. Thus, some "external economies" exist in the use of certain policy means, the use of one improving the effectiveness and the efficiency of others.

Therefore, in conclusion, the best package of means during phase I appears to be a combination of land redistribution (with changes in land tenure as a less desirable alternative), direct taxation, investment in social-overhead capital, subsidies for simple agricultural inputs, and a modest extension service [ $\bar{C}_2$  (alternatively  $C_1$ ),  $A_1$ ,  $B_4$ ,  $A_2$ , and  $B_8$ ]. (See Table 1 for a schematic representation of agrarian policy means and the process of economic development.)

The transition from the stagnation stage to the takeoff stage (phase II) is difficult--if not impossible--to discern in practice. Whereas in theory, phase II begins as soon as the MPP of agricultural workers becomes positive, turning the supply curve of labor in the industrial sector upward, "this shortage point" cannot in practice be established with any degree of precision. The implication of this is that in the formulation, execution, and timing of public policy, no absolute distinction can be made as between these phases. Certain measures might be undertaken at the end of phase I, instead of at the outset of phase II or vice versa. In general, an earlier institutional change might have some advantages since many policy means appropriate to phase I are also appropriate--usually with a greater intensity of use--to the takeoff phase.

Phase II is the crucial phase in the development process. Johnston and Mellor list what they consider the most important nonconventional inputs for increasing agricultural productivity. They are " (1) research to develop improved production possibilities; (2) extension-education programs; (3) facilities for supplying inputs of new and improved forms, particularly improved seed and fertilizers; and (4) institutional facilities for servicing agricultural production, such as credit and marketing agencies, and rural governmental bodies for fostering collective action such as building feeder roads." 27/

During this phase, the efficiency of resources in agriculture needs to be increased, with heavy reliance on new techniques (often imported from abroad) of a labor-intensive, capital-saving nature.

Historically, the impact of agricultural research (B.2.) during this period has been very great in some countries. 28/ The effect of this type of research is to move the production-possibility surfaces upward without a large change in the actual quantities of conventional inputs. Through the addition of small doses of nonconventional inputs and relatively minor changes in factor-proportion, agricultural output can be raised substantially. One major problem in agricultural research is that it cannot be imported in toto. It is true that innovations occurring in industrialized countries in terms of chemical fertilizers, improved seeds, etc., can often be used in less well-developed regions. Nevertheless, most of these innovations are made on the basis of the institutional and physical environment existing in these developed countries, where commercial agriculture prevails. There is truly no substitute for local agricultural research, starting with the existing physical-agronomic structure and developing innovations that are specifically applicable to this structure. It would appear that decreasing costs characterize research, so that the returns to research per unit of funds spent on research might increase considerably throughout this period and phase III. In any case, the absolute cost of research is small. The scarcity of trained agricultural researchers is--in the short run--an important bottleneck, but it can be overcome by an educational program.

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26/ It will be subsequently argued that the scope of SOC projects will be much larger in phase II.

27/ Johnston and Mellor, op. cit., p. 584.

28/ This has been substantiated by Johnston for Japan, Taiwan, and Denmark. See B. Johnston, "Agricultural Development and Economic Transformation: Japan, Taiwan and Denmark" (SSRC Conference, Stanford, Nov. 1960).

Table 1.- Agrarian policy means and the process of economic development

Economic development phase	Characteristic features	Major objectives	Principal agrarian policy means appropriate to period and conducive to -
Phase I:			
Stagnation	<p>MPP labor = 0 (Labor redundancy)</p> <p>Supply of labor in agriculture infinitely elastic at institutional wage rate</p> <p>Supply of labor in industrial sector infinitely elastic at institutional wage rate</p> <p>Economic dualism</p> <p>Preconditions to takeoff not met</p> <p>Existence of agricultural surplus</p>	<p>Distributive justice</p> <p>Equality of opportunity</p> <p>Economic development</p>	<p>Land redistribution (C2)</p> <p>Changes in land tenancy (C1)</p> <p>Taxation (A1)</p> <p>Social-overhead capital (B4)</p> <p>Subsidies (A2)</p> <p>Extension (B8)</p> <p><u>Reforms most important policy means</u></p>
Phase II:			
Takeoff	<p><math>0 &lt; \text{MPP labor} &lt; \text{institutional wage rate}</math></p> <p>Supply of labor in agriculture infinitely elastic at institutional wage rate</p> <p>Supply of labor in industrial sector upward sloping</p>	<p>Economic development</p> <p>Productive efficiency</p> <p>Equality</p> <p>Justice</p>	<p>Research (B2)</p> <p>Public investment in social-overhead capital and farm implements (B4, B3)</p> <p>Education (B7)</p> <p>Extension (B8)</p> <p>Credit and marketing facilities (B6)</p> <p>Taxation (A1)</p> <p><u>Structural changes most important policy means</u></p>
Phase III:			
Commercialized agriculture	<p><math>\text{MPP labor} \geq \text{institutional wage rate}</math></p> <p>Agricultural and industrial sectors fully integrated</p>	<p>Productive efficiency</p> <p>Economic growth</p>	<p>A number of <u>instrument</u> variables</p>

The importance of education (B.7.) and investment in the human agent has been greatly emphasized in the literature recently, and it is not necessary to dwell on it further here. <sup>29/</sup> Extension services (B.8.) can be considered as a form of adult education. In a few presently underdeveloped countries, agricultural extension has taken the form of community-development programs. The attempts at setting up experimental farms, using farm management methods that differ from traditional methods might after some time trigger "demonstration effects" on the production side. It is still too early to evaluate the effectiveness of community-development programs of this kind in India <sup>30/</sup> and other countries, but the likelihood is that extension services can perform a major rôle in disseminating information and increasing the overall knowledge of the rural population. In this phase, the amounts of public funds allocated to extension services could be substantially higher than in the preceding stage. Two additional tasks under the supervision of the extension service might consist of training rural population to acquire new skills (B.9.), thus facilitating the transfer problem and promoting rural health and welfare (B.10.).

It was indicated earlier that the characteristic feature of phase II is that the MPP of agricultural labor is positive but below the prevailing institutional wage rate. Now, on the assumption of constant technology and population size (which were the implicit assumptions made in the model presented above) the transfer of farm labor from the agricultural to the industrial sector would entail the release of a declining agricultural surplus per worker. At the outset of phase II, the agricultural surplus of the first workers to move would be almost equal to their wage rate, but as more workers transferred their positive foregone MPP in agriculture has to be subtracted from their wage rate. At the end of the takeoff phase, the MPP of agricultural labor is equal to the institutional wage rate and the marginal agricultural surplus disappears entirely. Thus, under static conditions, the potential capital formation per worker is lower in phase II as compared with phase I and furthermore, declines reaching zero at the end of this second stage.

The assumption of static conditions--constant technology and population size--is relatively valid in phase I, but certainly they cannot be maintained in the takeoff phase. More specifically, it would seem that at least two counteracting forces are likely to influence considerably the 2-sector model and more specifically the size of the marginal agricultural surplus (the potential capital formation per transferred worker).

The first force would result from the improvements in sanitation, medical knowledge, and availability of drugs which would tend to reduce the death rate, thus leading to a substantial increase not only in the size of the population but also in the rate of population growth. It is obvious that this force would tend to reduce the agricultural surplus, since it can be assumed that the institutional wage rate prevailing in phase I is very rigid downward, being presumably close to the subsistence level. In a sense, part or all of the potential capital formation (the total agricultural surplus) is used up to feed the additional population.

The second force that is likely to take place during phase II is an increase in total agricultural output resulting from the measures undertaken during this period. Increased agricultural output will also mean a larger total agricultural surplus, as long as the institutional wage rate can be prevented from rising.

The net effect of these two forces on the size of the agricultural surplus during the takeoff phase depends upon a large number of factors. It is clear, however, that the more positive the net effect is, the closer the economy will get to the commercialization point and phase III.

The increase in population is usually related to the improvements in output and resource productivity. The absolute size of the labor force in agriculture is likely to remain very high throughout the takeoff period and not to decline. <sup>31/</sup> A relative decline in the share of the population in agriculture will, however, take place as the migration from agriculture to the industrial sector proceeds.

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<sup>29/</sup> See T. W. Schultz, "Investment in Human Capital" (Presidential address, American Economic Review, March 1961).

<sup>30/</sup> The Ford Foundation is presently financing an experimental development program of this sort. The Ford Foundation has selected areas where the potentials for increased productivity are high and presumably it hopes to induce changes in production methods, by showing the results that can be achieved on experimental farms.

<sup>31/</sup> See F. Doring, "The Share of Agriculture in a Growing Population" (FAO Monthly Bulletin of Agricultural Economics and Statistics, Aug.-Sept. 1959).

During this phase, it is essential that new employment opportunities in the nonagricultural sector open up. Here again, public investment in social-overhead capital projects (B.4.) and specifically in irrigation and fertilizer plants (B.3.) would perform this task and at the same time contribute to the supply of strategic inputs that could raise farm productivity. Taxation (A.1.) will loom more important in phase II than in the preceding one. The agricultural surplus released by the migrating workers needs to be channeled into investment activities instead of higher consumption.

Finally, the development of a number of services is crucial in the takeoff phase. Credit facilities and improvements in the marketing structure (B.6.) appear to be structural changes that are possible in phase II and that will further the transformation process to commercial agriculture.

The most appropriate agrarian means in phase II would appear to be a combination of research, public investment in social-overhead capital, including irrigation and fertilizer plants, education and extension, and new institutional credit and marketing facilities, together with taxation [B.2., B.4., B.3., B.7., B.8., B.9., B.10., B.6., and A.1.].

The integration of the two sectors is achieved, and a relatively high degree of development is attained once the economy enters the commercialization stage (phase III). The structure of the economy during phase III is much less flexible than during the takeoff period, and changes are much more gradual. Whereas at the start of the general transformation, no endogenous force inducing economic growth existed, a number of growth factors have become built into the system in the commercialization stage. Economic policy can become quantitative in the Tinbergen sense (described in section II) and predetermined targets--such as a predetermined rate of growth of national income--can be achieved with the help of instrument variables.

The major problem the policymaker faces in the first two phases is the lack of specific empirical information concerning the quantitative (and sometimes even qualitative) impact of agrarian means on economic growth. Treatment of these empirical relationships is conspicuously absent in this paper. The amount of empirical work on input-output relationships, capital-output ratios, and, in general of the structural changes in an input-output matrix conducive to economic growth is still quite limited and subject to wide margins of error. <sup>32/</sup> The potential social contribution of empirical research in this area is undoubtedly extremely high and should have a very high priority in development planning. It is not an unfair appraisal of the state of development planning at this date to say that the refinement of the tools and methods used is in dire contrast to the quality of the empirical relationships and data used.

IV. The conclusions that follow from the preceding analysis can be stated briefly. It was argued that the methodology developed by Tinbergen in the area of the theory of economic policy provides a valuable framework in the examination of: (1) the various types of agrarian reform--considered as means of economic policy; (2) the various objectives of agrarian reform; and (3) the relationship between agrarian means and the end of economic growth, more specifically.

It was seen that three phases could be distinguished in the general transformation from an essentially stagnant rural economy to a well-integrated economy in which commercial agriculture prevails. As a broad generalization, it was shown that the agrarian means most appropriate to growth are likely to be land reforms in the stationary phase, structural changes in the take-off phase, and instrument variables in the commercialization period.

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<sup>32/</sup> One interesting attempt at trying to maximize the target of national income over a 10-year period (1960-1970) subject to constraints and solving the model for those measures most conducive to this maximization process is contained in J. Sandee, A Demonstration Planning Model for India (India Statistical Institute, Calcutta 1960). Sandee uses a super production function for agricultural output of the following form:

$$O = 4.0f + (2.4i + 514) + (3.7e + 520)$$

where O = increase in agricultural output between 1960 and 1970  
f = increase in the application of fertilizer between 1960 and 1970  
i = irrigation projects executed between 1960 and 1970  
and e = expenditures on agricultural extension between 1960 and 1970

In one sense, the complexity of decision-making throughout the process of economic development is inversely related to the administrative skill of the government. This can be stated somewhat differently by saying that the effects of the policy means available at an early stage of development are much more uncertain than at a later stage, while the administrative skill of the policymaker improves over time. The convergence of interests, however, would appear to be higher at an early stage so that the specification of the welfare function, at least, is a much easier task.

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## AGRARIAN REFORM POLICY AS A FIELD OF RESEARCH

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We are concerned in this exploratory essay with questions of research -- research into the foundations of agrarian reform policies. Among the issues we seek to understand are these: how to relate considerations of land reform and agrarian reform policies to more inclusive issues in public policies, as well as to economic development; how to deal with the issues of freedom and economic power in situations likely to evoke land reforms; the relation of land tenure to meaningful citizenship in new nations; and the problem of continued progress, after a land reform has been carried out, toward the ideals or objectives that inspired the reforms. More particularly, we are trying to formulate categories which may be relevant to analysis of both the conditions that evoke reforms and the requirements of continued progress after the reforms.

It is the fact that reform, and particularly land reform, has become a major issue in American foreign policy and world politics that pushes us into this broader field of inquiry. If America is to have a constructive, consistent, and enduring policy on foreign assistance, the reform issues need to be faced. This is now accepted by our Government. This acceptance puts up to us the question of whether we know enough about the basic issues to train professional people to deal with them and offer counsel to our Government. This requires, as a minimum, that we have a theoretical interpretation of land reform that is global in scope and related to the fundamental powers of government and requirements of economy so we can interpret the experience of Russia, Mexico, India, Egypt, Kenya, the United States, and all the rest, in a common frame of reference. This is a tremendous task, but many of the elements of the formulation have been thought out, and we have much to build on.

### I.

Although land reform and agrarian reform may be considered as the same phenomenon, it seems useful to distinguish between the two terms, the latter being considered the more comprehensive. A land-reform program is directed toward the redistribution of wealth, opportunity, and private power as manifest in the ownership and control of land. Agrarian reform has come to have the broader meaning, at least in the discussions of policy in the United Nations and the U.S.A., of the reconstruction or reformation of the whole structure of the agricultural economy by the creation of appropriate institutions and public services designed to strengthen the economic position of the independent farmer. Thus considered, agrarian reform supplements a redistribution of opportunities on the land with market, credit, and educational services, as well as progressive taxation. On the basis of such distinctions, land reforms are viewed as remedies to correct situations that have become so congested with the inequalities of private power or the backwardness of the traditional economy as to require strong action if economic development and social progress are to be achieved.

Such reforms are matters of public policy. Consequently, systematic inquiry requires formulation as the interrelationships and transactions relate the exercise of the powers of government to the use and occupancy of land and the related dimensions of opportunity. We need ways of identifying and formulating the public issues referred to by such distinctions as order, property, freedom, liberty, citizenship, and taxation, particularly as they relate to the occupancy and efficient use of land.

But the public is not everything; actually, it is not public in a meaningful sense of the word unless the term "public" is understood in relation to the zones of privacy and discretion which we call private. From a policy viewpoint, in our western tradition at least, the public is the matrix for the private -- for the private is made secure and enjoyable only by limits placed on the exercise of public power. The land policy and land use regulations of any country reflect precisely the ways in which public and private are held to be interrelated. Consequently, the principles built into a land reform policy in this regard both reflect the philosophy of government and implement the ways in which public and private are reciprocally interrelated. The exercise of the sovereign powers of government are public functions, and through the exercise of



these powers the public interest is expressed and protected in privately held land. But within wide limits, the use and occupancy of land in a system of private ownership are matters of private choice.

## II.

Let us turn first to the design of the public categories for analysis of the exercise of the sovereign powers of government in relation to the possession, use, and occupancy of land. For the basic insight, I propose to draw principally upon the work of John R. Commons, especially in Legal Foundations of Capitalism. Although his analysis was directed toward an understanding of the ways in which the definitive beginnings of the modern Anglo-American exchange economy were derived from the feudal organization and the guild system in England, I judge the categories to be of general significance because this is a record of the way in which liberty, freedom, and the derivative efficiency were achieved out of absolutism, servitude, and the traditional economy.

Commons notes that there were two elementary sources of the organizational structure of the modern Anglo-American political economy -- the customs of the people and the prerogatives of the rulers. The customs were the social practices or working rules by which landlords and tenants dealt with each other or by which the guilds regulated the practices of their members. The prerogative in the centuries following the Norman Invasion was exercised by an unlimited monarchy. In the struggle between the Crown and the different groups of people insistent upon enlarging their own areas of security and freedom of action -- which lasted several centuries -- the elements of a modern democratic, opportunity-oriented political economy were devised. Among the great landmarks in the struggle were Magna Charta, 1215, and the Act of Settlement, 1700. The latter established a limited monarchy and the way was opened for the modern era. The critical point was the achievement of limits on the exercise of arbitrary power by the Crown. Thus was rule by unlimited prerogative converted to government by limited sovereignty.

This limited sovereignty permitted, in the field of human action, an "indefinite residuum," "an orbit where the will is free" -- to use Commons' phrases. <sup>1/</sup> By the curbing of the powers of the Crown, this residual zone of freedom of action in land use accrued to the tenants of the King -- for it was out of the struggle between the Crown and the landlords that this matter came to final issue. The Crown yielded because it was forced to do so; and the issue was forced because the landlords had armies of their own and the Crown needed their support and willing participation. The outcome was that the landlords, although still "holding" land under the Crown, became the de facto owners. In the process, the customs of landlords and tenants became the common-law basis of the law of real property; as were, at a later date, the customs of the guilds to become the common-law basis of the law of business.

It turned out in an age of technological advance in agriculture, with a widening system of markets and specialization in production for sale, that this "indefinite residuum" became the field of action of entrepreneurs and the area of opportunity to develop and exploit the potentials of technological innovations, capital intensification, and market sale in an era of rapid economic development. The freedom to exploit these potentials was assured by the rules of property which gave the owner and user of land security of expectations, but this security, in turn, was derived from the great fact of a limited field of arbitrary action by government. In the long process of contests and compromises, which has continued down to date, the powers of government with reference to land became functionally defined around the powers of taxation, eminent domain, police power, and the use of the general power of spending.

The separation of property from sovereignty was made secure by a "compromise set of working rules," <sup>2/</sup> which provided the essentials of both the independent judiciary and representative government. This gave a new balance of power in the system and replaced the more limited arrangements implicit in Magna Charta whereby the lords could protect their "liberties" only by threats and even acts of civil war. The significance for the issues of agrarian reform of these provisions, which effectively secure property rights in land and individual freedom through limited sovereignty, representative governments, and independent judiciaries, would appear to be very great. It is not that one would expect to transplant the system, but rather that out of this experience one should be able to derive the theoretically rigorous integral relationship between and among the functioning parts.

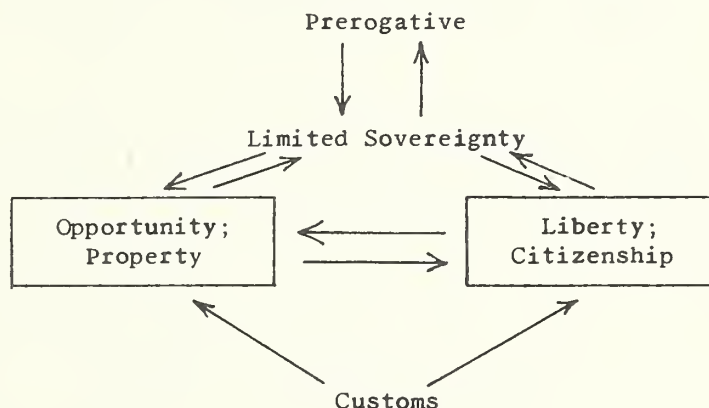
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<sup>1/</sup> Legal Foundations, p. 221.

<sup>2/</sup> Ibid., p. 104.

Consequently, we take from this analysis a set of concepts which we judge to be interrelated by rigorous implication and to have intrinsic relevance to any economy through the necessary interrelationships of authority, order, and interdependence. If there is to be a government by limited sovereignty, there must be some dependable way of placing limits on the exercise of power by those who control the government. It is precisely this set of restraints that is wiped out by the communist and military dictatorships of our day. But unless there is a limited sovereignty, rightful liberty for the citizen is not possible. Or obversely, citizenship is a rightful sharing in the exercise of sovereignty. In a parallel manner, the rights of property are the rights to exercise one's own will with respect to a thing and this right is nonexistent unless there is a residuum of opportunity to use and enjoy where the will is free. The genius of the common law method of rule making was that the working rules by which the rights of property were made secure and the liberty of the eventual citizen assured were drawn selectively from the customs of the people.

This set of interrelations may be visualized by schematic presentation.



The principal points I would emphasize, in anticipation of more specific comments on land reform policies, are: (a) that limited sovereignty, the liberty of the citizen, and the rights of property are reciprocally interrelated -- each modifies the other; <sup>3/</sup> and (b) that these relationships are formal and procedural, with the substantive content in each society a matter of policy, opportunity, etc.

The logical relationship of land rent to land taxes and the exercise of police powers is also implicit in this formulation. The rent of land is derived from the use and enjoyment of land, made secure by property relations which give security of expectations regarding the indefinite residuum of opportunity to use the land. Schematically, this may be presented as:

unlimited prerogative	:	limited sovereignty, defined rights	:	taxes and police
over land use and	:	regarding land	:	power regulations
occupancy	:	_____	:	as sovereign right
	:		:	
→	:	indefinite residuum : property in	:	rent as residual
	:	to holder of land : land	:	value of freedom
	:		:	to use

Again the historic derivation of relationships is of general significance only by the inherent relevance of the categories. In our Western tradition, the retained sovereign rights to tax and regulate are ways of expressing and protecting the public interest in privately owned land. Both take away the value of land without compensation when viewed from the private perspective of property and rent; but property, and consequently rent, are deductions from sovereignty when viewed from the public perspective of history.

<sup>3/</sup> The essential point is the establishment of citizenship and property rights by working rules. It is, of course, possible to have citizenship without property in land in the opportunity-ownership sense of property. However, some kind of property -- such as the ownership of bonds which Commons calls property rights by the law of encumbrance -- is virtually necessary if personal freedom is to be meaningful over a lifetime.

The relevance of this distinction for the issues of land reform is perhaps obvious. Clearly, where ownership of land is encumbered neither with the payment of taxes nor by the contingent liability of land use regulations, landownership becomes a privilege, restricted only by the threat of confiscation. Also, the distinction between rent and taxes disappears where private property in land is wiped out, as in a communist state, along with the indefinite residuum of opportunity for the independent exercise of the will, and land use becomes a matter for specific administrative determination by the government bureaucracy.

### III.

The substantive content of public policy toward land use and occupancy is a matter of emphasis and public purpose, within such relationships as formulated above. Thus an agricultural policy dedicated to the establishment of a system of owner cultivatorship inspired by the ideal of equality of opportunity, leads to a different kind of agricultural economy than where land is granted or taken in large holdings, the cultivators being laborers, peons, or sharecroppers. The concentration of the ownership of agricultural land in a few families, i. e., a skewed distribution of property, modifies both the nature of citizenship and of government.

Consequently, inquiry into land reform or agrarian reform issues needs to be made within the general context of the powers of government. Inquiry into general problems of economic development and social progress, to be achieved, must be limited and selective. It is our judgment now that the correlative analyses of two or three aspects of the experience of a nation in land use and occupancy would suffice to provide major guides to policy decisions. First, an understanding is needed of the historic land policy or land tenure policy of a country. Second, there appear to be differences, which are significant for reform issues, in the histories of countries in the ways in which the traditional subsistence economies of agriculture are modified in the direction of exchange economies. Third, the possibilities for reforms that institute freedom may be limited, at least for a matter of decades, by the density of population in relation to the resources and potentialities of the national situation.

The policy toward land tenure in a traditional society is characteristically built upon the custom that the land belongs to the person who occupies and uses it -- "mixes his labor with the soil." The extent of holdings is related to the needs for survival and direct use. The tenure policy of a sovereign government is based on property in land, or some other administrative procedure, sanctioned by the sovereign powers of government.

Under a property policy of tenure, land becomes an item of investment unlimited by the requirements of personal use. Thus, through development, national independence, and so forth, conditions arise whereby the two systems of land tenure conflict. At the very least, the conflict of the systems -- of customary and state tenures -- poses a problem of "form" -- of molding a customary tenure system into a pattern of property and administrative relationships consistent with modern requirements of state and economy.

Correlatively, the transition from a subsistence to an exchange economy requires basic modifications in the form of the economy -- and again one of the strategic elements of form is the nature of the property relations in land and especially the distribution of the ownership of land. If the commercialization of agriculture occurs in ways that pauperize subsistence cultivators rather than expand their abilities and opportunities, the development process itself leads to a set of conditions such as evoke land reforms.

Since agrarian reforms must start from the here and now, it is not to be expected that ideal forms of society and economy can be projected and achieved in the same way as though the situation had the qualities of clean slates. Probably the most stubborn relevant feature of situations in older countries is the density of population.

### IV.

The land reforms of the modern era, in the sense of a drastic redistribution of equities and interests in land, have occurred, or have prospects for occurring, in situations where there are great disparities of power, wealth, and income in agriculture. Furthermore, land reform programs other than spontaneous peasant uprisings are always political as well as economic. In a deep sense, they are primarily political -- for land reforms are attempts to modify the economic basis of politics. In the reforms in the pattern of western liberalism, they are intended

to put an economic basis under democratic citizenship. Under the auspices of communists, the reforms are intended to break the political power of landownership.

A traditional technologically stagnant agriculture, in which all persons in agriculture were equally poor, or nearly so, would have problems of development and of "form" -- but not of reform. The idea of reform in the Western tradition carries connotations of expected improvement through equalization of opportunities, powers, and privileges. That is, proposals for reform assume that the inequalities are handicaps to progress. This belief lies deep in the mind of modern man, at least in the Western world.

Very probably no completely definitive position is defensive on this issue. However, it seems incumbent upon research scholarship to try to distinguish among significantly different ways in which great inequalities have come about and to devise some means for evaluating the importance of degrees of inequality. There is now great inequality in underdeveloped countries and many influences in life which make inequalities cumulative, including freedom. That is, there are deep reasons for an egalitarian emphasis as a rough guide to reform policy. For example, the economies of scale in agricultural production are such as provide a strong economic efficiency argument for the family sized farm; also, a society of independent farmers has possibilities for democratic citizenship which are lacking in a society of largely dependent peoples.

As a gross beginning for a classification of agricultural conditions evoking reforms and as illustrative of the problem, it may be well to note some of the different kinds of situations -- and how they have come about -- in which there have been such disparities of power, welfare, income, and status as to lead to land reforms or agrarian revolutions.

#### A. Feudalism in the European sense.

The development of feudalism as a land-based economy and society of status -- with reciprocal but unequal rights and duties or privileges and immunities -- occurred over such a large part of the world that it is noted here, chiefly to suggest that both the similarities and differences of Feudal Europe from the contemporary situations in underdeveloped areas deserve careful consideration. The researches of the historians of feudalism are available to students of reform policy as a resource. It is a fact of seemingly great importance that both Western liberalism and Marxian-communism came out of this once-feudal seedbed. Commons has analyzed the first; Mitrany has an illuminating analysis of the way land reform fits into the second -- the triumph of communism.

Of all the feudal societies, only Japan seems to have succeeded in developing into a modern industrial nation while retaining the status structure characteristic of feudalism. The land reform issue in Japan was therefore primarily political, intended to provide an economic basis for a democratic system. In this it succeeded, as evidenced by both the rates of economic growth in agriculture and the neutralization of the communist movement in the countryside.

#### B. Inequalities created by grants of land for administrative purposes by presumed prerogatives of conquest.

The policy interpretation or hypothesis which I would like to see tested out in Latin America may be suggested by the tentative comment that follows.

The granting of huge tracts of land to conquistadors, religious organizations, military people, and court favorites was deeply influential in the history of Latin America and the Philippines. This policy introduced a highly centralized hierarchical system, based on large holdings of land, into the new world. Latin America, generally speaking, was conquered by Europeans, not settled as was the U.S.A. A large number of indigenous people were found -- and used. Consequently the land policy of the colonial era was designed as a method of administering areas, dealing with people, and extracting products for the mother country. As a consequence, there was fastened upon Latin America a system of landed estates and centralized administration which became the basis of centralized governments in the era of independence.

In terms of the categories presented schematically above, colonial government was government by unlimited prerogative. With independence, government remained very much government by prerogative of the few who owned the valuable properties of the countries. Since only these few counted, there was no way to significant citizenship of the masses of the people by

participation in sovereignty. As I would now interpret it, this lack of participation in sovereignty reflected the lack of effective or rightful participation in the economy. In fact, the native people continued to live in their customary world, by a traditional subsistence agriculture.

The Europeans and their satellites lived in the same countries but in different worlds from the native, and now subject, peoples. The Europeans owned property by sanction of the authority of government. The natives subsisted on plots cultivated under customary tenures, which from the viewpoint of property are squatters' rights. This was evidently true even when the plain people worked on haciendas, and later the plantations. They still remained customary tenants producing their own food, and paying for the privilege of customary holding by services to the hacienda. Such was the origin of minifundia and latifundia. Out of this complex came a centralized government, virtually owned privately by the few.

The politics of Latin America since independence has centered around the struggle of devising and maintaining stable governments on such a historical and economic base. The closer these countries move to constitutional democratic governments -- the trend of modern decades -- the more urgent becomes the need for reforms to put an economic basis under a significant citizenship. It is this struggle for a significant citizenship, which can be achieved only by measures combining development with equalization of opportunities, that makes the Latin America of today peculiarly susceptible to peoples' revolutions.

Land reforms are only one facet of this revolutionary drive toward equality. It might have been possible in the colonial era and early years of national independence to have achieved a basic equality of opportunity by a policy of land to the cultivator, just as land settlement and development policies offer some escape from the predicaments of today. But such policies while essential, in my judgment, are no longer sufficient. For one thing, the persistence of the traditional customary minifundia type of survival for the masses of the rural people has exported this same poverty to the cities, which are now being engulfed in it.

The problem of land reform in Latin America is complicated by the progress already made toward commercial agriculture. Whereas in the colonial era, all was subsistence agriculture, there are now valuable areas of highly developed commercial agriculture. Even in the revolutions of Mexico and Bolivia, the basic agriculture was principally of a subsistence sort -- including the haciendas. But in Cuba, it is different. Where a land reform program confronts a commercialized export-crop type of agriculture, it is necessary to consider whether opportunities are to be equalized by grants of land or by the expansion and security of job opportunities for the workers.

The zamindari tenures in India were created by a process similar to that which gave shape to the tenure system of Latin America -- a grant of rights in land as an economic benefit for the purpose of colonial administration. The interest was different, but the tax-collecting privilege sanctioned by colonial prerogative soon matured into an equitable interest in land against which the customary occupiers of land had no rightful protection.

This grant of privilege and power in colonial India was made to native people, to Indians, and this is significant. In Latin America, the privileged position of the Europeans created a dual society which remains a serious obstacle to social progress in several countries.

#### C. The Assimilation of landownership to tribal status.

The processes of economic development that make land valuable are likely to intensify positions of economic power already established in the tribal hierarchy. More particularly where the tribe is headed by a single powerful figure -- as historically in parts of Africa and the Middle East -- there is no separation of powers. The head of the tribe is the strong man -- virtually an absolute monarch -- in whom economic, social, and political power and responsibility are vested.

A deeper understanding of the ways in which the processes of development have been influenced and affected by the structure of these tribal societies would likely shed much light on the background issues in land reform, at least in the Middle East.

The Middle East -- the Arab world, Iran, West Pakistan, and Afghanistan -- is predominantly dry country with cultivation largely dependent upon irrigation. Historically, this has

meant that settled cultivation was on relatively small areas with the vast expanses utilized by pastoral nomadic methods. Since the dawn of civilization, the desert and the field have been in conflict. But the social organization seems to have been influenced most by the tribal societies of the pastoral peoples.

The growth in native population in recent centuries, the opening up of external markets, and the greater productivity of land under a sedentary and irrigated culture have combined to increase the value of land. Consequently, there developed at least rudimentary property rights in land, and land became valuable property.

The economic development of agriculture under Middle Eastern conditions is fairly represented, I judge, by the case of Iraq. Although there was a system of property rights in land under Turkish rule, it was not until after World War I that the country was given its present name, boundaries, and an independent government. One of the first moves toward development was an attempt to establish a system of valid negotiable titles to land. Since this is a very old country and all of the land had been occupied for countless centuries under some kind of customary tenure, one critical question was that of how to determine which land belonged to whom. The principle adopted -- or at least the principle that rationalized the procedure -- was the familiar one that the land belongs to the one who has cultivated it.

When this individualistic idea was applied to tribal societies, it turned out that the "cultivator" was the man whose will was dominant in the tribe or family group. Consequently, titles to large areas of land were assumed and generally validated for the headmen. Because of the laxity of the working rules under which people established claims to ownership for land, large numbers of city persons of wealth and influence also established title claims by brief excursions in "homesteading."

Although this process is more easily traceable in Iraq than in most areas, the outcome was evidently much the same all over this Middle Eastern area; a few of the people with powerful status acquired ownership of much of the desirable land.

As the nation-states of the region took on more modern forms, it became necessary to centralize the sovereign powers of government in the national governments. This process evidently consisted of two parts: (1) depriving the sheiks, or the heads of tribes, of their sovereign powers of government and asserting these powers at the center, which created a monolithic structure of sovereignty, without a significant sharing in sovereign power by either provincial or local governments; and (2) the formation of parliaments to which the representatives elected were almost wholly from the small groups of influential landlords and other persons of wealth. Several of these parliaments have been abolished by the military dictatorships of recent years.

In terms of the set of categories presented above, as the function of sovereignty and the rights of property became differentiated, away from the earlier unlimited prerogatives of the heads of tribes, the ownership of property in land became concentrated in the hands of persons of status in family and tribe, thus giving them great economic power relative to the subordinate members of the families and tribes. But the advent of central government, while formally stripping the heads of tribes of their sovereign powers, actually left such sovereign power as was not exercised by the Kings in the hands of the same class of persons as elected to parliaments, who also owned the wealth of the country. As a result, the people remained essentially members of the tribes and sharecroppers but not effective citizens. The landlords virtually owned both the country and the government -- except as the power of the government was retained as a prerogative of the King or, before independence, as the prerogative of the colonial government.

Such land reform as has occurred in this part of the world, has come chiefly through revolutions by military dictatorships <sup>4/</sup> -- which revolutions have characteristically (1) abolished the parliaments, and (2) instituted land reforms designed to break the political and economic power of the landlords.

This is not the whole story of the Middle East, of course. There are areas in which individual proprietorship has persisted. Also the kind of adjustment of powers depicted above has a historical spread, with Egypt having gone through adjustments in tenure for a hundred years under a commercialized agriculture. Also, new tenure forms have been devised in the Middle East

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<sup>4/</sup> Iran is an exception to this statement.

in recent years, particularly in Egypt, Israel, and The Sudan. The characterization here is directed to an interpretation of how the functions of sovereignty, property, and citizenship have been differentiated and combined in a part of the world where tribal societies have been a strong and dominant form of organization.

D. Situations in which grants of land were made to foreigners by colonial governments for purposes of developing commercial agriculture.

The granting of land by an occupying colonial government to its citizens or to persons of its own selection, was a fairly common way during the 18th and 19th centuries of developing a commercial-export-crop type of agriculture. The development of this enclave type of economy served, as a minimum, to introduce a modern commercialized agriculture into a sea of subsistence agriculture. But it also brought Japanese into Korea, Frenchmen into Indo-China, Dutchmen into Indonesia, Englishmen into Kenya, and by a slightly different route, Americans into Cuba, and so on. Come independence, and the property of foreigners is in jeopardy.

If one may interpret such situations with the set of categories postulated above, we have in the characteristic colonial situation, government by prerogative. The property rights of the enclave settlers and landowners are property rights by sanction of foreign prerogative only, unless and until a constitutional sovereignty is developed by the people themselves which recognizes the rights as valid property rights. Although this seems to have happened in India, it is not the common rule. Consequently, when the powers are assumed by the newly formed independent government, it is quite common that the rights of property in land -- of the once owners by sanction of colonial prerogative -- simply disappear for want of sanctions. The new government either takes over these lands as public domain -- which is a usual case -- or the peasants move in and occupy the lands under their customary rules of tenure, or both.

In such situations, there are actually two very different kinds of reform problems; one is concerned with the future of once foreign-owned land and the other with the future form of the customary tenures. Although the disposition of lands held by aliens is full of dramatic and explosive political issues, the reform of the native tenures is a more important development issue. The natural tendency, one senses, is to pull the lands held by foreigners back into the orbit of customary tenures. But the customary tenures are almost certainly ill-adapted to promotion of the economic development of agriculture. Consequently, the more inclusive problems of agrarian reform are concerned with the modernization of the traditional agriculture and customary systems of tenure.

E. The Transition from customary tenures to tenures based on publicly sanctioned procedures, including property rights.

The transition from customary tenures sanctioned by tribal practices to a more formal, state-sanctioned type of tenure is going on over much of Africa -- and elsewhere. One of the critical issues for research inquiry in such situations centers in the question of the degree to which (a) native ideas and customs of land use and occupancy can be used as a basis for the more formal organization of a modernized agricultural economy, in comparison with (b) the introduction from outside the culture of systems of law and economy. My impression is that earlier colonial policy, of the 19th century, emphasized the latter alternative, but that the progressive European colonial powers have become more concerned with building upon the basis of native practices. 5/

British colonial administration in East Africa has chalked up to its credit several remarkable achievements in recent years relative to this transition from customary to more formally sanctioned tenures. A basic document in this effort is the East Africa Royal Commission Report 1953-1955. 6/ This report, which is essentially recommending an owner-cultivator type of agricultural economy buttressed by public services, marketing boards, and fee simple ownership of land, has been deeply influential in agricultural administration in this area of British influence and responsibility. In Kenya, for example, in the areas of greatest mau-mau disturbance of a few years back, the agriculture is being shifted to this type of owner-proprietor

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5/ This distinction is approximately that noted by Commons, above, in observing that there were two sources of origin for the political economy that developed in England -- the prerogative of the rulers and the customs of the people.

6/ Her Majesty's Stationery Office, London, 1955.

farms, through consolidation of holdings, clear demarcation of boundaries, and registration of title, 7/ with land treated essentially as an item of investment.

Although this type of tenure and development problem is surely a matter of reform, the need for reform comes not so much from the disparities of power and poverty, as in the need to achieve new and improved forms of economy.

In terms of the basic categories chosen as possible guides to inquiry, the problem of land tenure in such situations cannot be formulated without reference to the more inclusive arrangement for the exercise of the powers of government. The strategic problem in both the development of new forms of tenure and economy from customary and traditional agriculture and the disposition of foreign -- enclave -- lands is the effect on public order of the transition from government by colonial prerogative to the exercise of sovereign powers by self government. In the absence of effective parliaments and responsible citizenship (which cannot be developed in a day), there would seem to be virtually no alternative to government by prerogative by those who command the powers of government. This transition in the Congo resulted in disorder. It is possible that the new governments may accept the already established systems of property in land as the means of public administration, as has occurred in The Sudan, but such a performance will almost certainly be confronted by strong pressures from the tribal past over much of Africa.

#### F. Concentration of landownership by the cumulative inequalities of economic development.

This suggestion on a focus of research for agrarian reform policy is made partly out of the general belief, or notion, that the way in which the traditional subsistence agriculture of Asia was drawn into the economy of markets, debts, and property relations was probably a source of great inequality over time; and partly, out of a puzzle as to an explanation for the situation in China in this century. Perhaps something of the same interpretation might explain the need for reform in the Ryotwari areas of India, and possibly too, the financial success of the Chetyar money lenders in Burma.

In brief, the notion is twofold: one, that the gradual though partial involvement of a subsistence agriculture into the market economy of property, debts, and business arrangements works out so that the institutions are absorbed by peasants into their own subsistence survival arrangements by using the security of property to enhance the family wealth through carefully arranged marriages, by meticulous attention to inheritance rights in land, and so forth. Thus, although property rights and credit arrangements put a new capital structure into the core of peasant agriculture, these arrangements have been valued, used, or avoided largely in terms of the family subsistence survival objectives of a peasant society. In contrast, following the distinctions made by anthropologists, the elite part of the society (of which peasants are the other) has been able to use these new arrangements as instruments of business opportunity and power. Under the pressures of population growth, economic instability, and shortage of capital, the elite groups -- landlords, lenders, and merchants -- have been able to skim off the benefits of economic progress. Over time, this process leads to a cumulatively greater wealth for the elite groups and deeper poverty for the peasants. The second part of the explanation is therefore the absence of any genuinely equalizing influence in public policies. Such protection accrues to peasants as a right only as they become citizens. The Chinese peasants have never been citizens in any meaningful sense of the term. Under government by unlimited prerogative, those who are ambitious fight over the right to share in the privileges, and there is no genuine public interest or public purpose. How valid these interpretations are I can only guess, but it does seem to me that more systematic knowledge of the tremendous effort that has been made in China over earlier centuries to engage in land reforms would be illuminating.

The general policy issue here centers on the question of the requirements which public policies need to meet in order to sustain over decades or centuries a tolerable degree of freedom and equality of opportunity in agriculture, once established. More specifically, the issue raised is whether there are not serious structural problems of freedom and equality within agriculture -- (an issue that has been largely ignored in modern agricultural policy of Western countries). Historically, there may have been no genuine possibility of pursuing an effective policy of equalization of opportunities within agriculture under the conditions that have prevailed in Asia. Neither under colonial rule nor under government by the prerogative of Emperors -- as in China -- are peasants citizens with capacity to press for considerations of equity or justice.

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7/ The story is well told by Elspeth Huxley in A New Earth, An Experiment in Colonialism, Chatto and Windus, Ltd., London, 1960.



Agrarian reforms or agrarian revolutions result when direct and forceful assaults are made upon such varying situations in agriculture. Such reforms or revolutions are distinguishable one from the other by the ideology and the purposes that inspire them. Consequently, there are at least four different approaches to agrarian reforms which need to be distinguished: peasant revolutions, revolution by military dictatorships, communist revolutions, and the revolutions or land reforms according to the ideas of the Western tradition.

#### A. Peasant revolutions.

The revolts of peasants in our time should probably be called part-revolutions, but peasant revolutions have been of considerable consequence in the modern era. Characteristically, they seem to be inspired mostly by a determination to regain privileges and opportunities which the peasants of a particular locale once enjoyed, deprivation having come by the impositions and encroachments of an extended landlordism. The power of peasant revolutions is evidently directed to specific situations, for peasants' customary claims to a rightful status on the land run in terms of particular areas of land.

The revolutionary potential of peasant unrest is manifest in two different ways, in the struggles over agrarian reforms. One is the possibility of an explosion of sullen resentment and despair into blind violence. This happened in Mexico in 1910 and ran on for years with great loss of life and destruction of property. Something akin to this happened also in Russia in 1917, and in Bolivia in 1952. But such peasant revolts lack both the power and the ideologies to succeed decisively in carrying out a genuine agrarian reform. It is mostly when the potentialities of peasant revolt are channeled into movements shaped by outside leadership and tough ideologies that peasant revolts become an effective part of revolutionary movements. The Marxian-communist group has become adept at exploiting peasant discontent in this way. But approximately the same opportunity is open also to leaders of democratic faith devoted to economic reconstruction and development.

#### B. Military revolutions.

By military revolutions in this context, I refer to situations where military officers seize the government by coup d'etat and undertake land reforms. Such revolutions have been numerous in the Middle East and Asia in the last decade (similar revolts have taken place in Latin America).

In all cases recalled, such revolutions have occurred where there were the beginnings of a parliamentary system of government. The parliaments are invariably abolished, and the land reforms -- at least in the earlier years of the regime -- center upon the dismemberment of the large estates in order to break the political and economic power of the landlords.

In terms of the basic categories established in this comment, government by the military becomes again government by unlimited prerogative. The closing of the parliaments symbolizes, even if it does not fully effectuate, the removal of constitutional restrictions upon the arbitrary exercise of power by the ruling group.

Significantly, however, in the usual case, private property in land is retained. A ceiling is placed on individual holdings (which are something like 20 to 50 times the size of the average peasant holding). Private investment in land is permitted, although rents are likely to be regulated. However, the nature of property in land, and of expectations regarding the future are changed. The ownership of land becomes in effect a privilege, rather than a right. 8/

Perhaps it would be more accurate to say that such regimes continue to rely upon the private ownership of farmland as the means of public administration of land use. Put this way, it is conceivable that rule by absolute prerogative might continue indefinitely to honor the

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8/ One dimension of the problem of property is, of course, the role and degree of independence of the judiciary in these regimes.

working rules of property in land, for this purpose, by the restraint of forbearance rather than the compulsions of limited sovereignty.

A somewhat similar fate befalls the beginnings of citizenship. The citizenship which remains, if such it may be called, is a privilege rather than a right; and again it is surely significant that major efforts are being made, as in Pakistan, to devise a system of representation on advisory councils by means of popular vote, to institute at least the form of popular elections.

These military dictatorships have come into power in response to deep-seated problems. The parliamentary systems of government have not worked well, and the new regimes have made great efforts toward social and economic progress. But it is difficult to characterize in a definitive way the deeper meaning of land reforms, because the military dictatorships so far seem to lack a consistent ideology. They are experimental.

Very probably this (loosely) pragmatic approach to policy cannot be continued indefinitely. Once a dictator has abolished all restraints on the powers of government, there are tremendous pressures toward complete totalitarianism. Not the least of the pressures in this direction is the Marxian ideology of revolution, readily available, which has answers for day-to-day administrative problems. But there is also the possibility that the devotion to land reform, the desire and the intention to establish a system of independent farmers, can become the de facto means whereby the privileges of property in land and the privileges of "citizenship" are expanded into rights, with tough legal sanctions -- as happened a few hundred years ago in England.

### C. Communist revolutions.

The communist revolutions of our time, like the military revolutions, have come about where there were the beginnings -- sometimes substantial -- of parliamentary government. Here too, parliaments have been abolished and government becomes again government by unlimited prerogative -- by prerogative of the party bureaucracy. Private property in agricultural land disappears -- except for some rights to occupy home sites on the periphery of collective and state farms. Such citizenship as there was for a few is wiped out; instead, there is membership for a different few. In principle, the transition from subsistence farming to an exchange economy is complete, with agriculture organized into industrial-type collectives.

The agricultural policy for underdeveloped areas of the communist-Marxist activists has the central focus of expropriating and eliminating private property in land and replacing the traditional subsistence economy with collective farms. In this scheme, tenure problems virtually disappear, for even the collectives though holding state lands are virtually arms of state administration. However, the functions performed in a system of markets and property relations must also be performed in a totalitarian system, and these functions are somehow and eventually guided by working rules. Consequently, a most useful research effort would seem to be an attempt to formulate as working rules the procedures used in communist regimes and to relate them to the exercise of power and the areas of choice and discretion within the economy.

Although we defer to experts on the interpretation of the communist world, the noting of a few points may make the nature of the issues clearer. Marxian doctrine in the hands of Marx assumed that social organization was a function of the modes of production. Thus the task was left to the Russians and the Chinese, as the pioneering practitioners, of designing the pattern of working rules which the revolutionary governments would follow. With the abolition of private property in agricultural land, alternative procedures for public administration of land use had to be devised. My impression is that with experience the bureaucracy relies somewhat less upon direct administrative stipulation of the requirements of specific performance, and more upon procedural rules. Also, the working rules now seem to give more recognition to incentives and the productivity of willing participation.

One senses an interesting parallel between what is now going on in the Russian sphere of influence and the period between 1066 and 1700 in England. In the case of England, as noted above, the absolute monarchy was changed into a limited monarchy and the basis for a democratic-opportunity-oriented economy was devised, by designing and enforcing working rules which gave security of expectations to the participants and the rudiments of freedom to classes of participants through reserving and honoring zones of discretion and freedom for them. The formal principle of organization, as Commons analyzed the issue, was that of devising and enforcing working

rules which defined the limits within which discretionary acts -- including transactions -- might occur.

The same procedure appears to be happening in Russia, again for the most strategic classes of people -- the mathematicians and physical scientists -- and for the same reason as in England of an earlier day. The willing participation of these classes of people is essential for the survival and growth of the nation. Somewhat the same process of liberalization seems to be going on in the agriculture of Russia. And of course, a study of the changes in working rules would be especially instructive in Yugoslavia, for example, where the policy has shifted from insistence on collectivization to permission for individual farming.

It is not to be expected, however, that a tenure and property structure such as characterizes the economies in the tradition of Western liberalism will reappear within a communist state. The value of property in land in one of these latter modern economies is predominantly a capitalized estimate of the value of future market sales. In the absence of secure market opportunities which permit the occupation and exploitation of the "indefinite residuum" of freedom of action, there will be some other way of exploiting and enjoying the benefits of economic progress. Presumably, this will be manifest in the capital structure of a communist society, which would evidently be based on physical things and the enforcement of duties. This is to say that there would be no intangible value of properties in such a system -- as characterizes capitalism with market values of lands and securities.

This possibility leads one to wonder about the power equivalent in a communist economy of these private enjoyments in the West, which result in the great aggregations of financial values and economic power. Presumably, the exploitation of new technology and the advantages of an exchange economy become "capitalized" in some way in a communist economy -- in terms of the increased power of the bureaucracy.

What I am trying to suggest is that if, through research, we had a formulation of the kind of working rules that a communist state devises in organizing the public administration of an agricultural economy around state ownership of land and collective farms, then we would be able to project with more precision the nature of the changes such revolutions would make in underdeveloped areas.

#### D. Agrarian reform in the Western tradition.

Since these notes have already run to excessive length, I shall not comment extensively on the research into our own experience which we need in order to join issues with and meet the competition of alternative approaches to land-reform policy in the agricultural development of the underdeveloped world. Furthermore, I consider that the fundamentals of the policy position are explained by Commons' analysis.

But in summary, the major issues in agrarian reform policy center, it seems to me, on the question of the degree to which we are required to think in terms of the whole structure of the economy -- or the national political economy. My conclusion is that we do not really understand the nature of the land reform problem, or the more inclusive agrarian reform problem, until and unless we relate the proposed reconstructions to the fundamental structure and powers of government; that is, land reform in the Western sense of establishing independent farmers through secure property or procedural rights has little meaning until and unless a government of limited powers is likewise established and sustained.

One implication of this interpretation is that a land reform must be a political movement, unless the structure of the powers of government is such that there is already a satisfactory matrix for the policies. This means essentially that secure conditions of freedom are among the preconditions of an effective and enduring land reform that would establish or greatly strengthen the position of the independent farmer. If so, then the benefits of a "liberal" reform program of a particular time can be made to endure only by continued policies of government which emphasize and implement equality of opportunity, the development of abilities, and so on, <sup>9/</sup> through constitutional government. The central problem is the control of power within tolerable limits, both private and public.

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<sup>9/</sup> Gunnar Myrdal has observed that "...conditions of general economic progress are necessary for giving a greater degree of realization to the ideal of equality of opportunity: at the same time it is understood that equalizing opportunity is a condition for sustained economic progress." An International Economy, Harper, New York, 1956, p. 11.

It is recognition of such requirements that leads discussions of land reform in the Western world into the more inclusive agrarian reform. The latter includes an array of public services and facilities that make it possible for a family to make progress as independent farmers. This conception of agrarian reform becomes virtually identical with the public phases of agricultural development. But if this comprehensive institutional reform approach is adopted as the means of agricultural development, it seems essential that there will have been sufficiently effective equalizing developments and reforms, such as land reforms, to have created a class of independent farmers.

In short, the idea of agrarian reform as used in the Western world is approximately a working version of Western (individualistic) liberalism. Consequently, the real power in agrarian reform proposals actually derives from the relevance of the systems of ideas and institutions to the kind of problems encountered in agricultural development in the underdeveloped areas of the world. Surely one of the deepest reasons for exploring the possibilities today of agrarian reform in the Western tradition comes from the historic fact that this system of ideas was forged in the struggle of Western man to achieve freedom, equality, dignity, security, and productivity out of previous systems of absolutism, tyranny, servitude, and poverty.

One of the chief merits of the formulation by Commons of the problem of creating zones of discretion and freedom out of unlimited prerogative is that the analysis has inherent relevance to the exercise of power. This comment seems to demonstrate that a land reform program which limits only the private power of landlords can provide no more than a temporary reprieve from the consequences of the exercise of excessive power, unless ways are designed to curb the power of public officials also. At the least, this issue is posed as a problem for inquiry in the analysis of agrarian reform policy.

As Americans looking out upon the world scene, we cannot, of course, escape the imprint of our own experience. Consequently, we need to understand our own history by the guidance of the same basic categories that we use in interpreting the experience and problems of others. As I have tried to do this, I am impressed with the unusual opportunities we have had to establish an economic system in American agriculture. Our forefathers came to this continent and gave our system definitive form at a time when the liberal ideas of European enlightenment were strongest. Furthermore, the country was settled in ways that pushed aside the native people, so that a land policy which assumed an empty space was possible. The combination of all these conditions, and more, enabled our ancestors to establish a system of government and economy in which constitutional government, the security of property, and citizenship could function in stable equilibrium, thus assuring to us an unparalleled opportunity to enjoy the conditions of freedom. The conditions of freedom assured, it has been both possible and reasonable for discussions of agricultural policy by economists to center on the requirements of efficiency. The discussions of agricultural development policy in underdeveloped areas need to be more inclusive.

## FLEXIBILITY AND SECURITY IN AGRARIAN REFORM PROGRAMS

Folke Doving

The reason for this paper is the widespread controversy about agrarian reforms and the apparent contradiction between arguments, each of which can seem well founded in one context or another. The general theme of the paper is that the merit of each argument hinges on the proportions and trends of change of demographic and general economic factors. The difference in relative scarcity of labor, capital, and land in different countries may indicate radically different solutions now and in the foreseeable future. The problems presented therefore cannot be given any general solutions that are valid for all countries and at all times. Rather, it should be possible to establish a general theoretical framework within which the best solutions to each concrete case can be found, provided there is enough elementary quantitative information about population, resources, infrastructure, and so forth, and about the trends of change of these factors.

In a general way, the dichotomy of objectives in the agrarian reform complex can be formulated thus: In many countries, the present agrarian structure embodies elements which act as "bottlenecks" or obstacles to development. On the other hand, it is often feared that a reform of the agrarian structure may introduce new elements which in turn may become bottlenecks, if not in the immediate, in the longer range future.

The purpose of this paper is to show that in many instances, such controversy can be resolved in no uncertain manner -- one way or the other -- by considering the quantities and trends involved, even if these are only crudely known. Needless to say, there will also be borderline cases, standing nearly halfway between the contrasting arguments.

It will also be discussed that the two main types of objectives, security (of personal rights, of invested capital, etc.) and flexibility (in the use of both material and human resources), cannot be maximized simultaneously. Only the actual situations can indicate whether it is desirable to maximize one or the other, or how a compromise may be struck.

As examples of such problems, the following points will be treated with both theoretical and empirical arguments:

1. Size of operations in the immediate and in the longer run future.
2. How radical can land redistribution be made?
3. Security of tenure -- how much is too little and how much is too much?
4. Levels of rent, interest, and taxation.
5. Pace of change.

### 1. Size of operations in the immediate and the longer run future

The trend toward larger farms that is evident in some of the economically most advanced countries, and the attendant scale economies, is often advanced as an argument against land redistribution programs. Recent evidence from the United States and a few other countries is then coupled with the old 19th century argument about the superiority of large-scale operations.

The latter argument forms the theoretical basis for large-scale operating agriculture in the communist countries; the doctrine about economies to scale was applied dogmatically, without asking for any concrete proof as to the degree of its applicability. In other parts of the world, empirical evidence indicates that the returns-to-scale argument is not nearly so strong as the old doctrine assumed and has limits far lower down on the scale of farm sizes than was believed in the age of the steam plow. This is especially true when farm size is defined in terms of number of men employed rather than in terms of number of acres farmed.

Apart from the actual interpretation of farm size data (and their change) in a country like the United States, two basic things must be considered before any doctrine of returns to scale is applied to underdeveloped countries:

a. For agriculture, returns to scale depend on variable proportions rather than on any inherent advantage of large scale as such. Returns to scale come about through economizing with resources which are scarce in one sense or another. Since as these tend to be expensive factors of production, more is to be gained by using them to full capacity than in the case of factors with lower opportunity value.

b. In an underdeveloped country, by definition, labor is abundant and capital is scarce. If this situation exists in an extreme degree, there may be a conflict between the interests of individual large operators and those of the community.

In the account of an individual operator, saving on the hired labor outlay may contribute to maximizing net returns to the operator, because hired labor always has a price, even if often a low one. From the viewpoint of the community at large, saving of labor would in many cases not make much sense if the labor saved remained unused. A system of small family farms is less likely to economize with labor in such a situation. The individual working for himself is more likely to take the risk that some of his labor hours may return very little or nothing at all. Since no cash expense is involved, the financial risk is not increased by maximizing labor input.

When labor is abundant and external capital is scarce (these two situations being corollaries), economizing with the latter would, on the other hand, at any rate affect only a tiny fraction of the total turnover.

The factor to economize on in such a situation is land: maximizing the gross outturn per area unit will then also maximize net benefit to the community. The farm and tenure structures to prefer in such a situation are those which lead to the largest aggregate yield per acre. Until further evidence, there would be no reason to doubt that, in very congested countries, family-scale operation on small holdings is preferable to hired labor operations.

Against this argument, based on present conditions, stands the futurity argument: if the country does develop economically at all -- as it must in order to survive its own population growth -- then factor scarcities are bound to change, capital will become less scarce, labor less abundant. The price relationships will gradually become more and more favorable to the substitution of capital for labor. A rigid family-farm structure might be an obstacle to this, while hired labor farming could more easily meet the challenge.

The validity of this reasoning is relative and in part doubtful. The dominant family-farm structure in North America and Western Europe was not altogether rigid when the pull of the urban labor markets grew strong enough to attract small-farm people. Nor did it really hinder the use of external capital, when capital became cheap enough; the latter goes also for the dwarf-sized farms of Japan.

At any rate, the degree of flexibility required in the farm structure can be gauged from demographic and general economic data. If the initial position is very unfavorable with respect to efficient use of labor, it will take a long time before agricultural labor may become scarce in any sense. When the agricultural population is a large majority in the country and multiplying at a fast rate, it will go on increasing in absolute size for some time, then stabilize and begin to decline only in a later phase, when the nonagricultural sectors have gathered more size. When the latter sectors are a small fraction of the economy, their growth, however rapid in percentage terms, cannot exercise any strong pull on the agricultural surplus population. In the case of India, for instance, examination of recent trends of growth of population and national income by sectors leads to the conclusion that the day is remote when the density of farm people on the land may lessen. A serious reduction in numbers of Indian farm population can be expected only in the next century. By the same evidence, scarcity of external capital will continue. For several decades to come, the persistent need will be for maximizing aggregate output per acre, and there will also be a need for doing this, as far as possible, by maximizing labor input. External capital will need to be mainly in forms which increase output (such as fertilizers and pesticides), while the labor-saving aspect of capital supply to agriculture will remain of secondary importance.

This argument against large-scale operations in a situation of severe capital scarcity is on the whole also valid against collective farming or cooperative organization of farm production.

Cooperative use of certain items of equipment is partly a different matter. (See below under 2.)

In the case of India, this judgment extends beyond the reasonable limits of even long-range planning. The same type of conclusion would hold for several countries in Asia and northern Africa, and for some of those in Latin America.

One of the best pieces of empirical evidence is in the development of Japan over the last one hundred years. Long before the land reform, Japanese peasants, with very little machinery, had brought the per acre output to an impressive level. The large landowners did not, on the whole, engage in large-scale farming. Then, as now, the Japanese farm industry consisted essentially of a mass of dwarf-sized family farms, with many of the operators paying high rents for the use of the land.

There are other such instances in southern Europe. The most intensively used areas of land in Italy, Spain, and Portugal are husbanded by small-scale operators with very little external capital. The wave of intensification of land use that followed upon the land reform in Greece also underscores the same conclusion.

This point is sometimes obscured by comparisons between per area unit yields of individual crops as between large and small holdings. Such comparisons may be misleading because of differences in the intensity of the whole pattern of land use. A classical case of such misleading information is the land reform debate in Hungary in the twenties. The landlords proved beyond doubt that their yields of wheat were higher than those of small holders. But the landlords planted wheat on their best land and used the less fertile land as pasture. The small holders used their best land for vegetables, vineyards, and other highly intensive uses and planted wheat on the less fertile parts of their land. They thus had a more intensive pattern of land use and also produced a larger aggregate output per area unit.

The futurity argument becomes more convincing in situations where population pressure on the land is less extreme than in India. Such a lesser pressure exists in two essentially different types of situations: either because the urban-industrial sectors have grown sufficiently large for their pull on farm labor to become effective, or because the country has so recently emerged from very primitive conditions that it has not yet had time to become overpopulated by the standards of peasant agriculture.

Among "threshold cases," we may cite Japan and Italy. The present trends of the Japanese economy indicate that we can soon expect a radical reduction in the numbers of farm people in the country. Forty or 30 or even 20 years ago, no such development was in sight. The question is whether or not the new trend is really an argument against the recent land reform. The reform was essentially one of tenure conditions; farm size was very little affected. The average size of farm is 2 1/2 acres. Even reduction of the farm population to one-third or one-fourth of its present numbers, which is what may be achieved in, say, 20 years, will only raise the average to 7 1/2 or 10 acres -- a far cry from any concept of large-scale farming. The latter might require an entirely different type of farming and might even mean considerably less output. Such a radical change could in no case be contemplated for short- or medium-term planning. What is required now is unfreezing the present maximum limit for farm size, which is 7 1/2 acres in most of the country. If it were desired to avoid land speculation and sudden snowballing of large properties, the 7 1/2 acre ceiling could be replaced by a higher one for the time being.

In Italy, the land reform has been of limited scope so far as land redistribution is concerned. Despite the overproduction problems, which loom ever larger in Italy as the Common Market becomes effective in the field of agriculture, the reform measures may be defended as being above all aimed at socio-economic rehabilitation of depressed areas. The larger issue of tenancy reform has been left unsettled, with unsatisfactory year-to-year arrangements. As urban pull on rural labor becomes stronger, both the land sale and rental markets are likely to react and to adjust the farm structure, as is already happening in Western Europe.

For countries or regions where the situation with regard to population, capital formation, and general development is intermediate, as between those of India and Japan, for instance, the magnitudes must be studied in order to establish a reasonable hypothesis as to whether a "threshold" case, as in Japan and Italy, may come up soon enough to cause a modification of the land structure model which the present conditions would indicate as most suitable. Even if a case were established to prove that considerably larger farms may become likely or desirable, say 20 years hence, this would still not be an argument against a land redistribution program now if this would have strongly beneficial effects in the near future. What is needed for the

medium-term future is a measure of flexibility of institutions and a mechanism for channeling changes in the desired direction, rather than a blueprint to anticipate a structure that will be suitable at some future date.

In the underpopulated (or not congested) countries of tropical Africa and Latin America (and some in Asia), the futurity of the reformed structure is less of a problem than the reform itself. In most of these countries, as in many of the congested ones, the agricultural population will go on growing for a long time to come, and the difference between the underpopulated countries and the congested ones is that it is less difficult to make the population live on its resources.

When a country of this type is "intermediate," i.e., if it may soon become a "threshold case," the position will allow for more alternative plans to be made. Some of this will be touched upon in the following section.

## 2. How radical can land redistribution be made?

In a land redistribution program, it is desirable to increase the "distributive equity" in the community, and at the same time raise agricultural productivity. The former may be clearly desirable if the existing distribution of landed wealth is extremely unequal, including a few very rich and a mass of very poor people. There is empirical evidence, e.g., from the Mediterranean countries, to show that such an extreme distribution often acts as a bottleneck to development because it may deprive both the very rich and the very poor of any real incentive to work for higher productivity. As was discussed in the preceding section, subdivision of large holdings into small ones is often favorable to total net factor productivity (in the country as a whole) when external capital is scarce.

There may be a limit to this, however. The advantage of higher labor intensity may cease below certain size limits, which should vary with the type of farming and related circumstances and also with the opportunity value of labor. Ideally, a densely settled agricultural country might favor a dominant farm size which would not only be small enough to be farmed by the farmer and his family without any hired help, but also be small enough for the family to apply a high degree of labor intensity. This would, according to our reasoning above, maximize national productivity.

The futurity argument would be applicable when population pressure is moderate and its lessening clearly in sight in a not-too-remote future. But at the other extreme, there are several cases in which a system of maximum productive farms would lead to a farm number that would not be large enough to absorb all those who previously had their livelihood in agriculture as farm laborers, with or without a small parcel of land of their own. A "rational" redistribution program might then leave many people without any livelihood at all. Is this feasible and, if not, what is the answer to this problem?

There are those who bluntly assume that the surplus people should be employed elsewhere. The state should see to that, e.g., through public works. Placed in this bald form the proposition is entirely unpractical in congested, predominantly agricultural countries. The state does not have the organizational apparatus, let alone the capital, to employ the agricultural surplus manpower, nor does it have the financial efficiency needed to make an extensive relief or "public works" payroll system workable.

In such countries, moreover, there is usually a large stratum of unemployed or quasi-employed unskilled workers in the cities, a stratum that is constantly being recruited from the growing agricultural population. As long as this problem -- and the wider one of persistent population increase -- has not been taken care of, the hard core of the agricultural surplus population must continue to be employed, if incompletely, in agriculture. A system must exist whereby unemployment in agriculture is distributed and everyone has a livelihood, such as it can be. Even the Russian kolkhoz is such a system, despite all declarations to the contrary.

The alternatives are: either to maintain in existence so many of the large hired labor holdings that those who get no land of their own can be employed at least part of the year, or else to parcel all of the land out in such a way that each family gets at least a minimum subsistence holding. Needless to say, both solutions may be applied in different parts of the same country if geographical disparities are large and cross-country migrations unlikely.



The former solution was the one chosen in Italy, Spain, and Egypt. In Italy, and in Spain to a lesser degree, this may be justified because a lessening of population pressure is in sight; climatic reasons are also advanced in favor of large-scale farming in dry areas, although this argument is not necessarily convincing. In Egypt, neither of these reasons holds, but the whole situation, with extreme overcrowding, is very vulnerable to the effects of sudden changes.

When congestion is judged to be persistent for a long time to come, it is logical to favor a structure of very small family farms if there are sizable gains to be made in the intensity patterns and in the aggregate yield per acre unit. In such a case, the extremely small farms which will be the consequence of parceling out the land to all who depend on agriculture for a livelihood may be virtually all "undersized," even by the modest standards of efficiency that prevail in the area. The success of the land reform in Greece, by way of the very large production increases that have been achieved in this country, testifies to the validity of this reasoning. The same principle was followed in Yugoslavia and in eastern Europe generally, but the Communist policies have obscured the issue under treatment here so that the corresponding condition does not emerge clearly.

The "undersized" peasant farms will be too small to own certain large capital items. This drawback is, of course, not confined to the undersized farms, only it is more marked on these farms. For instance, the Indian draft-power system, with two bullocks before the plow, can only function through hiring, loan, or cooperation among neighbors. If farms become even more uniformly small than they already are, even more cooperation will be needed, and still more in the future if bullocks become bigger and more efficient. This is far from requiring cooperative tillage, however; and Japanese and European experience with small machinery has been even more favorable to the continued existence of even very small farms.

If an underdeveloped country is not congested, the whole starting point may be very different. If there is enough land to go around for every family in the agricultural population to obtain a holding that will keep them fully employed with present techniques, then this means, at the same time, that the futurity of such a system is doubtful, because the country might become industrialized soon enough to be able to reduce its farm population and increase the size of its farms within a not-very-remote future. Even so, a system of family farms may be judged as more productive, and socially more desirable, than a system of large estates with numerous hired workers. A solution to this kind of problem was tried in the Baltic republics in the 1920's, although it was never allowed to come to the test. The land was divided up into farms large enough to employ two families with the technology and equipment available. This led to a situation where half of the agricultural population were farmers and the other half were farmworkers, mostly employed on a full-time basis. With increasing industrialization, the farmworkers would have been induced to seek nonfarm employment; the same situation would also have increased the supply of capital to enable the farmers to substitute machinery for labor.

Solutions of this type may be feasible in a few countries. In most of the underdeveloped world, no such system could work because the reform farms would be too small to permit hiring any labor.

### 3. Security of tenure -- how much is too little and how much is too much?

Insecurity of tenure is frequently pointed to as a major evil in many tenure situations. If ownership by the operators is regarded as a good thing (as it has been in most writings on tenure reform), then this has been in no small measure because the maximum security of tenure is assumed to give the cultivators the best possible incentive to invest in durable improvements on the land.

Put in this simple form, the theory may still be valid in many underdeveloped countries. Before this can be asserted, however, it will be necessary to discuss some arguments in favor of limited-term tenancy, which have gained support in some of the developed countries, particularly England.

In some versions of this theory, the nonoperating landlord is the main source of both capital and economic wisdom. Experience from England and other European countries is often quoted in favor of this interpretation. Much of the best-farmed land in France, the Netherlands, and northern Italy is tenant operated. Even in Western Germany, where tenancy is more restricted, it is most widespread in the best agricultural regions.

Recent legislation in European countries has been aimed at protecting the tenants. In some countries, this has increased their security of tenure to a degree which resembles ownership. Landlords have been reduced to little more than rent receivers, much as though they were holders of a mortgage in the property.

This degree of security for tenants has been criticized as favoring misallocation of resources. If the landlord is to fulfill his role in the agricultural economy as an active partner, he should enjoy security for his investment, which may require mobility of other resources. This in turn may require a lesser degree of security for tenants. The lack of opportunity for landlords to make alternative arrangements, and the low level at which rents have been fixed, tend to depress the land market, render land a less expensive factor of production (for operators) than it would otherwise be, and thus encourage a more intensive kind of farming than market conditions would warrant.

This criticism of protected tenancy is somewhat (although not entirely) in line with an earlier discussion, also of England and Western Europe, in which the owner-farmer tenure system was considered far from ideal from the viewpoint of the farming industry as a whole. Owner farmers might be too interested in acquiring more land for themselves and their families to sink their savings in farm improvements. This exaggerated interest in owning land might both inflate the land market and tend to put land to more intensive use than the commodity markets warrant. In some of the least fertile areas of Western Europe (such as Norway and the mountains of central France) where the peasants have acquired and maintained ownership of land, the tendency has been to farm the land long after any reasonable relation between input and output shows that it should have ceased to be rentable. Such situations have a parallel in the United States in the mixed farming areas of the Ozarks and the southern Appalachians.

The apparent contrast between this reasoning, on the one hand, and the classical doctrine placing owner operatorship as the best tenure form on the other, can be dissolved if it is remembered that the latter doctrine's emphasis on security for the cultivators stemmed from an interest in maximizing output. This interest in maximizing output is above all connected with scarcity situations. It has little relevance to the present situation in the United States or in most countries of Western Europe. Whenever there is a threat of surplus production at high cost, the policymaker has a reason to be wary of the argument in favor of tenure security which says that it increases output.

It is probably significant that, in both the United States and Western Europe, tenancy is most widespread in areas where field crops for cash disposal dominate. This is the situation in which it is easiest to make year-to-year decisions. Consequently, the flexibility and quick reaction to conditions on the commodity markets, which should belong to the advantages of short-term tenancy, can most easily be applied in such areas. Contrariwise, permanent crops and some forms of animal husbandry, such as dairy farming, require a long planning horizon and a commensurate measure of security against sudden changes. This is also reflected on the tenure map both in the United States and Europe and elsewhere. In Europe, owner-operators dominate not only in mountains and other areas marginal to farming, but also in the highly intensive horticultural areas on the Mediterranean littoral. At the very low end of poverty and backwardness, Iraq (before the land reform) had a tenure situation where most of the grainland was owned by sheikhs and farmed by sharecroppers on precarious terms and against high rents. But the date groves and the fruit orchards were mainly in owner-operated small holdings.

In North America and Western Europe, the argument in favor of nonowning farmers may gain even more strength in the future as the total capital requirement for a full-scale, rentable operation goes up. Even so, this argument will have its greatest strength in areas of annual cash crops because here the requirement for external capital is relatively low. Consequently, the residual to capitalize into land values will be high and a large part of the equity requirement will be in land value. When much has to be invested in livestock, tree crops, and other assets of slow circulation requiring a measure of stability and long-range planning, the value of land itself is less likely to rise in such a way as to become the main component of the farm capital.

Whatever the outcome of these various factors in the developed countries, the problem remains essentially different in the underdeveloped ones. Acute shortage of capital makes it less desirable that wealthy people regard agricultural land as a safe investment. One of the beneficial effects of the land reform in Mexico and Egypt has been to force capital away from agriculture and induce it to go into the riskier, but nationally more essential tasks of industrialization. There may have been a similar effect in Italy, although on a smaller scale, and possibly also in Japan.

Shortage of capital in underdeveloped countries dictates that as much as possible of the available capital should go into the development of other sectors of the economy. Agriculture should be given only as much external capital as will do the job of developing agriculture to meet the community's requirements for farm products. As much as possible of all investment in agriculture should then be through increased use of agricultural surplus labor. This would undoubtedly seem to call for increased security as an inducement to work more.

Application of this reasoning will require careful attention to local culture and psychology. It is true that landlords in underdeveloped countries often are poor counterparts of those in England. Lack of entrepreneurship and excessive wealth often make the landlords in underdeveloped countries mere parasites. But the peasants may also react paradoxically to increased security as well as to lower rent if their outlook is geared to some relatively rigid level of "target demand." Contrariwise, the insecure tenure of a large part of the Japanese peasants before the land reform did not prevent them from developing a highly productive kind of farming; but again this was in a type of farming with heavy emphasis on food grains.

The mentality of both landlords and peasants may raise powerful obstacles against improvement, but both are subject to change, and land reform is among the factors that can prompt such change. The strongest reason to prefer owner farming as a purpose of tenure reform in underdeveloped countries is perhaps in the need to make new relationships simple. A system of carefully balanced division of rights and duties between landlord and tenant may take too much time to make workable under primitive conditions, and may also have less substance under conditions where external capital is exceedingly scarce.

It should be added that spreading ownership among peasants does not necessarily safeguard their security. Debts and high interest rates may again dispossess them, particularly if an entirely free land market allows new concentration of landownership to build up rapidly. This is where ceilings on landholding have their reason for being, by restricting the farmland market to the farming population. Needless to say, a ceiling provision may help or hinder depending on how low or how high it is. Rendering land altogether inalienable would both remove an incentive to improvement and restrict the use of credit with land as collateral.

The problem of excessive security is perhaps the most negative aspect of collective farming, especially in its compulsory forms. When a member of the collective has a right to a share in the farm's output, even if his labor contribution is of low quality, there will be no inducement for the least desirable workers to leave the farm, and the overload of unskilled labor thus becomes more chronic than in any other tenure system.

#### 4. Level of rent, interest, and taxation

Programs of agrarian reform often include "equitable" rents and the provision of "low-interest" loans as measures intended to improve the situation of tenants and farmers in general and to increase the incentive for more modern and intensive types of farming.

Equitable rents and low-interest loans are qualitative expressions which can take on very different meanings in a different context of economic facts. Whatever they mean in a given case, the easing of burdens on the peasants in an underdeveloped country cannot remove or solve the problems of how to finance the beginning buildup of capital in other sectors of the economy. When these sectors are small and weak and the country needs them to grow rapidly, part of the capital must come from surplus agricultural production, which must be mobilized one way or the other. When a country is poor, its agriculture cannot be subsidized in any real sense; on the contrary, it not only must pay (somehow) for its own improvement, but must also contribute actively to the buildup of capital in other sectors.

This is in substance less exploitation of the agricultural population than may appear on the surface. In the typical situation of an underdeveloped country, agriculture is crowded with people who are increasing rapidly. If this situation is not to deteriorate into a completely incurable "rural slum" condition, capital must be formed in other sectors of the economy to employ some of the rural surplus populations, generate purchasing power for a growing urban demand for food and fiber, and produce the physical and intellectual requisites (capital and skill) without which agriculture itself cannot develop.

Typically, the starting capital for urban industries came from agriculture in early phases of development in the now industrialized countries. In some countries of recent

settlement, such as the United States, this could be done relatively easily when population was sparse enough for land to appear plentiful so that a surplus production of considerable size could be disposed of without creating physical hardships. In Western Europe, the USSR, and Japan, the starting situation at the eve of modern development was much more crowded, and the margin of surplus agricultural production that could be commanded to form urban capital was much thinner. In these countries, this was done partly through land rents and partly through taxation of one kind or another. The lowering of rents in Europe and Japan has come only when agriculture was definitely a minor sector of the economy. The recent lessening of the state's tight grip on farm output in the USSR also belongs in a similar context.

In both Western Europe and Japan, the landlord class was sufficiently entrepreneur-minded to use its rents (or at least a large share of them) for capital formation. The real disadvantage about agricultural rents in underdeveloped countries is not so much that they are high, but rather that they are too often used up for luxury consumption and too seldom invested in new productive ventures. Especially when the luxuries have a high import content, or rely to a high degree on traditional handicrafts and service occupations in the home country, they largely fail to set off progressive capital accumulation.

Curbing or abolishing landlords' rents in such a case may not render the situation much worse from the viewpoint of economic development, but it will not make it much better either if no other provision is made for the flow of funds out of agriculture to build up capital in other sectors. This was the big problem of the USSR in the 1920's, before the start of collectivization; and the latter was above all a taxation device to siphon off a large part of agriculture's value-added to serve as a basis for industrialization. Peasant liberation in Turkey, for instance, left that country with very scarce means for its development when the large majority -- the peasants -- paid no taxes.

A similar reasoning applies to the use of low interest on loans to farmers for the development of agriculture. There are cases when it may be desirable, as in developing particularly valuable export crops. But, on the whole, it would have a twofold undesirable effect: to allocate too much of the nation's scarce funds to agriculture and to return too little direct revenue in exchange. Especially in situations where "target demand" among the agricultural population causes backsloping supply functions, cheap loans may backfire on both counts.

The latter point indicates price policy as one means of eliciting a surplus from agriculture. The trouble about this is that the same country may contain areas of "target demand" and of more normally elastic demand at the same time, and the limits between such areas may be unclear and floating with economic and social change. It would then be necessary to use two kinds of price policy at the same time.

This leaves taxation as the most logical instrument for collecting a surplus for investment if the landlord class cannot be made sufficiently entrepreneur-minded. The difficulties of administering income taxes in underdeveloped countries are well known. A device based on the same principle as the traditional tithe may be the most viable system of direct taxation of peasant farmers. If landlords are left in undisturbed possession of part of their rents, some convenient fraction of these could be levied as tax. Any such system would function only to the extent that local public administration can be made to hold its own against the pressures of either the landlords or the peasants or both.

It remains clear, however, that not all facets of agrarian reform can bring immediate and apparent relief to a burdened peasant population. A new structure that promotes economic growth is more essential than a lowering of rents in the immediate future.

##### 5. Pace of change

The dilemma about the desirable pace of change is that the most urgent problems usually exist in countries which are least capable of handling them. This is why the problems have become urgent. Overcrowding of the countryside and a lopsided, ill-organized production structure usually exist together with lack of technical and administrative personnel and weak public finances. Countries with the strength and organization needed for an orderly reform, such as Italy and Japan, are also, ironically, those where the value of a large-scale land reform is most in doubt.

In underdeveloped countries, some kind of compromise has to be struck to avoid the extremes of chaos through hasty reform and stagnation because of no reform at all.

The choice is even more puzzling because a very sudden change may remain on the surface only, as merely a new name for old things. At the other end of the scale, the idea of "pilot projects" as a means of finding the best way of bringing about change sometimes becomes a way of postponing any reform. It is all too easy for a reactionary government to arrange such projects in a way that will deter any full-scale reform.

In either case, precious time may be lost and population pressure may worsen still further before a fresh approach can be formulated and attempted.

Empirically, a slow, gradual transition from one type of structure to another one can be very successful in a country where population pressure is moderate. Such was the case in Denmark, where the subdivision of estates into peasant farms took decades to achieve and the conversion into owner farms even longer.

Similar reforms in the Baltic republics went much faster, apparently without any great disturbance to the economy of these countries. At any rate, a very gradual change of structure, with careful planning of each phase, may be practical in countries of low density and not too fast increase of their agricultural population.

On the other hand, the rapid approach has been successful in a number of countries. The Baltic republics were just mentioned. Land reform in Greece did not, on the whole, extend over a very long period despite the complications caused by the necessity to settle numerous refugees. The very handsome increases in production that have followed indicate that more was gained than lost through the speed of the reform.

The case of Mexico looked less favorable in the beginning, but here too the reform has been followed by some of the most impressive increases in agricultural production on record in recent times. The case is complicated; but the positive role of land reform is beyond doubt.

This discussion about pace of change hinges very much on two things: whether there is sufficient informed discontent among the peasantry to render the shock effect of sudden change a positive experience, spurring on to constructive efforts, and whether the economy is in a position to take the risks attendant upon temporary disruptions of agricultural production and trade in agricultural products.

The latter concern is likely to have contributed to the partial approach used in Egypt, where the whole economy is too tightly organized and the margin of food supply too thin to allow taking the risk of a drop in output. It may lead to a similar approach elsewhere, even in less tight situations. Minimum supply to the cities might be safeguarded by retaining part of the existing farm system as it is, while carrying out the reform in areas which may not be so strategic at the moment. The flaw about such an approach is, of course, that it is illogical in the public's mind and may be misunderstood to mean that the spared areas will be reformed later. That could make the "spared" landlords lose confidence in the futurity of their position. A qualitative criterion, such as exemption (from subdivision) of very well-run large farms, could be the answer to this problem. This is the solution attempted in Italy and Spain.

Misgivings about the "rapid" approach are often based on the belief that too sudden a change will remain superficial, leaving realities "at depth" rather unchanged or leaving the landlord class with too much opportunity of sabotaging the reform.

The latter risk is very real, as was shown in both Japan and Italy and elsewhere. It poses a challenge to the effectiveness of government, but of course, there is no general or theoretical answer.

The former argument is only relatively valid. It is true, for instance, that the sudden abolition of serfdom in Russia in 1861 was followed by a period when many peasants continued to be subject to landlord discipline. But this quasi-serfdom faded out, and we have no reason to believe that anything would have been gained by making the reform of legal status more gradual. On the contrary, the existence of a new legal status must have speeded up the creation of the new social reality.

The dilemma of speedy versus slow progress is less clear than some of the issues treated in the preceding paragraphs. The answer is to be found mainly in the existing sociopsychological climate. Economic realities come in as subsidiary arguments, being coercive only in extreme cases. This type of issue, therefore, requires even more study of the country in question.

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FACILITATING AGRARIAN REFORM THROUGH THE  
INTEGRATION OF LAW AND ECONOMICS

Marshall Harris

The central thesis of this paper is that, regardless of approach, agrarian reform encompasses legal as well as economic problems. In fact, the reform of agrarian structures is basically the improvement of pertinent agrarian law to facilitate, and not to hamper, the attainment of specified economic adjustments. The proposition follows, therefore, that joint legal and economic research is essential in the reforming of agrarian structures to the extent to which they are related to economic growth and development or to other societal objectives.

A parallel thesis in two parts is that (1) in the United States, limited experience in cooperation between economists and lawyers on agrarian reform problems, whether in this country or abroad, does not place us in a favorable position to accept fully our responsibility and (2) our research methods on law and economics are ill-adapted to research on land problems in most of the newly developing countries. If so, many of our highly developed research techniques may need to be adjusted significantly to meet the research needs of other countries.

In our consideration of facilitating agrarian reforms through the integration of law and economics, I hope that we shall not lose sight of three factors: (1) That social science has become highly segmented and specialized, (2) that law and economics are not the only social sciences that need to play a part in the reform of agrarian structures, and (3) that some integration of the social sciences seems essential, particularly interdisciplinary research in law and economics.

The Encyclopedia of the Social Sciences encompasses anthropology, social work, history, economics, political science, psychology, sociology, statistics, law, and education. Many of the social sciences are further subdivided. For example, we hear frequently of production economics, distribution economics, welfare economics, institutional economics, conservation economics, industrial economics, labor economics, and agricultural economics. The assumption can be stated without fear of substantial contradiction that law is equally segmented and specialized. This kind of specialization has its advantages, but it has also some disadvantages. Specialization permits intensive probing in depth in a minute subject-matter area, but it often loses essential integration.

Although other social sciences have their unique roles to play, the greatest apparent need in agrarian reform for integration of the social sciences involves law and economics. The "agrarian reformer" needs to be capable of synthesizing the results of research supplied by various social sciences -- of building into a new agrarian system the concepts evolved and the relationships established. It would take an unusual person who could do this if his academic training, research experience, and viewpoint were restricted to one of the social sciences. For a crash program to meet the present emergency, the agrarian reformer can seldom be found in one person. Agrarian reform must be carried on for a while by a team representing at least law and economics and preferably some of the other social sciences. We may be able eventually to train a few professional personnel with the hybrid analytical and synthesizing vigor that may come from the blending of two or more of the social sciences.

Agrarian Law and Economic Development

The land system and associated laws of the United States are built largely on the common law of England. The common law represents slow adjustment to new conditions over the centuries with an occasional cataclysmic change establishing in statutory form relationships that have proved beneficial in actual practice or inserting new relationships with little evidence of their probable results. Both types of change in agrarian structures in the United States are so common in our national experience that it can be said that we are indeed early agrarian reformers. We can be justifiably proud of those phases of our national heritage that involve changes in our



land system. Our domestic experiences with agrarian problems and their solutions should be of value to us as we seek to assist others. Their value will depend upon our ingenuity in adapting them to solutions of the problems of other countries.

The archaic land system was one of the reasons that many settlers of the United States left Western Europe. When they arrived on these shores they began immediately to make significant adjustments in the decaying feudal system that they brought with them -- both of government and of land. By the time of our Revolution, many undesirable characteristics of our land system had been eliminated and others were ripe for revolutionary change.

The idea of a landed gentry had largely given way to sole proprietorship in family-sized farm units. The concept of economic and political equality was becoming widely accepted. The attempts to establish manors in Pennsylvania, Maryland, and the Carolinas ended in utter failure. Some of the Dutch patroonships of New York survived the Revolution, but they were largely swept away during the rent wars of the 1840's. Primogeniture and entails were rapidly disappearing and were finally outlawed. The concept of equal devolution became firmly established. By the time of the Revolution quitrent had disappeared almost entirely. Land taxes for public purpose supplanted the quitrents and the various feudal incidents that survived the early colonial era. Surveying and recording were regularized and firmly established.

In those days, we did not shrink from making substantial reforms in our land laws. Revolutionary action on agrarian structures was rationalized as easily as were the revolutionary changes in the form of government. The two tended to complement and supplement each other.

More than 10 decades later, after the turn of the 20th century, when farmers were having difficulty in obtaining adequate credit on reasonable terms to fit their needs, Government stepped in and reformed the agricultural credit system. The reformation was truly revolutionary. Note some of the changes, many of which involved changes in law, that have been made in the agrarian credit system in a few decades, beginning with the Farm Loan Act of 1916:

1. The length of the term of farm real estate loans has been increased from 3 to 5 years to 30 to 40 years.
2. The amount of the purchase price that is loaned on a purchase money mortgage has increased from 50 percent or less to 65 and as high as 100 percent.
3. In the last few years, low-equity financing, averaging less than a 20-percent downpayment, has expanded rapidly in many of the better farming areas -- the installment land contract is competing favorably with the purchase money mortgage.
4. Interest rates have been reduced and equalized as between various sections of the country and as between agriculture and industry.
5. The principle of amortization of farm loans was introduced, fully accepted, and firmly established.
6. Deferred payments and permissive prepayments permit the annual cost of credit to approximate more closely the income of the farmer than in earlier years.
7. The capabilities of the farm family -- husband and wife -- have been introduced as a criterion for a farm loan; this criterion is rapidly becoming as important as is the proportion of the downpayment for the lender's "security cushion" in farm loans.
8. Supervised credit has been established and is becoming accepted by many farm lenders and borrowers.
9. Publicly insured loans for the purchase of farmland and other credit innovations are being experimented with successfully.
10. Federal and State moratoria laws and debt composition activities were used when many farm loans became delinquent because of low prices and bad weather.

These innovations were established largely by National and State legislation, tested and supported by the courts, and usually effectively administered by the executive branch of the Government. The relationships between the law on agrarian structures and economic performance

seem clear. Two questions can be raised, however: (1) Would not these revolutionary changes have been more effective if based on legal-economic research? (2) Would not research point the way more adequately than essentially no research to further adjustments needed in this phase of our agrarian structure?

Less spectacular evolutionary adjustments have been made through educational processes. This possibility arises only when existing agrarian structures leave latitude for individual action. A high degree of freedom to fashion relationships best calculated to meet the needs of the parties is a basic characteristic of our agrarian structure. As a consequence, much progress has been made in reforming many agrarian relations; for example, in landlord and tenant lease agreements, in arrangements between mortgagor and mortgagee, in the intergeneration transfer of farmland, in various types of coownership, such as partnerships, corporations and trusts, and in many other arrangements. Unless adapted to their unique needs, efforts to use our educational processes in less developed countries, might well meet with disastrous results. Reforms suited to our needs may not be the ones that will solve their problems, that is, remove existing defects from their agrarian structures.

Experience in the United States with reforming agrarian structures would indicate that reform should not depend upon improvement in only one aspect of the system. A multiple approach is likely to be more effective in most of the less developed countries. We may gain some insight by considering the role of (1) agrarian legislation and (2) innovations by private parties. It is within the framework of the role of government and private action in reforming agrarian structures that the suggested research, training, and service program of integrating law and economics will be outlined.

The legislative branch of the Government establishes the law -- the legal framework within which parties are supposed to act, in other words, the formal part of agrarian structures. The judicial branch interprets the law when there is a difference of opinion as to what is the law. The executive branch puts into effect the reform program. It may be law-forming as it interprets the meaning of that part of agrarian reform legislation which it is called upon to administer. It may create what is sometimes called administrative law in issuing orders, rules, and regulations under which legislative action is effectuated. The action of private parties may give force and effect to improvements in the agrarian structures envisaged by the legislative, judicial, and executive action of government. It may also show by example and experimentation the strengths and weaknesses of the present agrarian system and how adjustments can be made to attain desired goals.

Agrarian Legislation.--Few people have escaped the guilt of saying, "There ought to be a law against that." The typical citizen and some land reformers think that all that is necessary to correct an undesirable situation is to pass a law. Few things could be more in error. Yet, the role of law in the reform of agrarian structures is primary. This may sound like double talk. The law sets the bounds within which public and private action takes place. It may confirm or codify customary practice or it may lay down entirely new relationships. Agrarian law is so fundamental that it demands our most diligent research, the highest academic training coupled with wide experience, and meticulous, time-consuming service in its reformation.

Effective legislative action is not easily conceived and put into proper form. If it deals with economics, as it does in agrarian reform, it must be based on sound economic analysis -- it cannot originate and end in the legal mind, however capable. This is true because agrarian legislation is concerned with economic conditions that affect the production, distribution, and consumption of wealth measured largely in terms of goods and services -- the material means of satisfying human desires.

To the extent that agrarian law is the fundamental framework for the ordering of human behavior related to agricultural production, it involves not only economics but others of the social sciences. Similarly, to the extent that economics is concerned with institutions affecting the production, distribution, and consumption of agricultural products, it involves necessarily the law -- the legal framework that conditions the making of economic decisions. This is the heart of the connection between law and economics in facilitating agrarian reform.

In this context, law controls or guides economic action by the will of society. The action of each person in regard to agricultural land and its products is subject to the wishes of his fellowmen within given limits. Economics may assume that man is free and without restraint to maximize the use of scarce resources in the satisfaction of human wants. In other words, economics may assume law as given. Yet the basic idea of agrarian reform assumes that

law is a flexible tool, a device available to society to facilitate the maximization of human satisfactions.

The conflict between law and economics, if any, arises from the purposes and processes of the two disciplines. These differences seem to be at their maximum in the purposes and processes of research, training, and service in the area of agrarian reform.

The typical economist of the United States who works on agrarian reform in other countries, and who trains foreign nationals for work on agrarian reform in their own countries, apparently assumes that if relations can be established among the various economic elements in the situation, the politician-statesman can enunciate the desired policy and the legally trained technician can develop laws that will effectuate the declared policy. Nothing could be further from the truth. The economic analyst needs to work with the policymaker in formulating the best possible policy -- the analyst needs to interpret the meaning of his findings. He needs to consult with the lawmaker to obtain reasonable assurances that the proposed legislation will accomplish the economic objectives. He can see more clearly than anyone else the connection between the agrarian system and economic performance.

Even if the economist succeeds in getting the best possible statutes, his task is only half completed. He needs to work with the judicial and executive branches of the Government to obtain the best possible interpretation of the law and the most effective rules and regulations in putting the law into effect. He needs to study the effectiveness of the reforming law to determine whether established goals are being reached; and if not, the adjustments that need to be made.

Economics, which is concerned with the principles that guide men in making decisions regarding the use of resources, needs to be integrated with law, which is concerned with adding certainty -- security of expectation -- so that decisions concerned with relations among men will be carried out as agreed upon. The major controls that flow from the legal system arise from the necessity of assuring a degree of certainty in the decision-making process and of security in the protection of resources that are used by those who do not hold complete ownership in them. This includes all of us, for none holds completely all rights in a piece of land. Societal reservations are ever present. The law permits the fuller attainment of expectations by providing a framework in which relations among men are controlled whenever one party fails to meet the standards established in the law or under the law by mutual agreement. The law gives us the means of predicting the incidence of public demand which must be used to secure such expectations. But complete certainty is neither desired nor attainable. Some flexibility is needed in the agrarian system, but flexibility may result in too much uncertainty. Completeness of certainty must be balanced against the desired degree of flexibility.

One problem in integrating legal and economic research, training, and service in agrarian reform arises from the slow development of the land law over centuries of trial and error in many of the less developed countries. Much of the law has not been formalized into written statements. It remains local custom and tribal folklore, passed from father to son by customary practice and word of mouth. In some situations, this customary law exists side by side, and may be subject to the more formal law of the original colonial countries, whether of common or civil law persuasion.

Economic research sponsored by the United States usually proposes to test the adequacy of these laws to meet economic goals by modern analytical devices that may be foreign to the local culture. It seems obvious that legal analysis is essential for comprehension of variables in the law that may need to be tested in economic analyses. The joining of legal and economic research seems essential for maximum effectiveness.

Judicial Decisions.--Adjustments in agrarian structures need to be drafted in light of the functioning of the judicial system. Adequate information on legal content and processes may well come largely from purely legal research. This research demands the same careful rigorous analysis as does economic research. In addition, some insight as to probable future judicial decisions, particularly on new legislation, might well be gained through a comprehensive knowledge of the cultural-educational status of the probable participants. But more of this later. Suffice it to say here that any hastily drafted legislation intended to reform agrarian structures is likely to be poorly conceived and may well do more harm than good. The agrarian reformer does not have a 50-50 chance of being right -- there are so many opportunities of being wrong and so few changes that will meet the demands of the situation.

The legal and economic aspects of agrarian reform are more likely to be in conflict in arriving at decisions brought before the court than in drafting the original legislation. This is not a derogatory evaluation of the court process. It is simply a judgment of the relative necessity, if not the opportunity, of bringing the science of economics to bear as fully upon judicial decisions as upon legislative enactments.

If this condition is recognized, the resulting problems are soluble. Economic analysis is just as appropriate and just as essential to good judicial decision-making as it is to good legislative enactment. This means that economic analyses made after the legislation has been enacted need to meet judicial needs in deciding controversy as adequately as they meet legislative requirements in the drafting process. It also means that economic and legal research must be joined in both processes. Legal-economic research needed to obtain proper interpretation of the legislation might well be more difficult than the interdisciplinary research necessary in the legislative process.

From another viewpoint, legal-economic research on agrarian reform is not a one-shot affair. It cannot be done in a short time and then abandoned. We can seldom move into a country with a research team, do the research, and move out within the year. It must be a continuous process -- not only to guide the original reform legislation and to furnish information essential in the subsequent judicial process, but to keep under constant research surveillance the operation of enacted laws and the functioning of judicial processes. This is necessary to discover weaknesses and remedy them immediately and to keep agrarian law adjusted to emerging conditions. It would seem that economic growth and development may be so rapid and that technological change may be so great in many countries that past processes to keep the law in harmony with economic change may be much too slow, particularly in the countries of sustained economic development.

Executive Action.--Integration of legal-economic analyses is essential also at the point of administrative decision-making. The problems are only more urgent and more numerous. Those who administer the law need insight into the relationship of law and economic achievement. The administrator must have legal-economic assistance in interpreting the law as it is applied to a wide variety of economic-cultural situations. He must be able to measure in legal, as well as economic terms, the results of his administration of the reform law and of any subsequent changes.

In our country, the administrator may well employ an economic analyst to measure, albeit crudely, economic achievement. He may also employ a lawyer to assist on certain legal matters. But it is seldom that the lawyer and the economist form a research team to help keep the program up to date. As a consequence, some well-conceived programs become archaic and fall into disrepute. It is little wonder then that new programs must be developed to take their place or to meet the evolving situation. Legal-economic research is needed to guide executive action, regardless of how appropriate may be the legislation and how wise the subsequent judicial decisions.

Private Action.--The role of government in the reform of agrarian structures may be strengthened and supplemented by appropriate voluntary private action. In fact, private action may reach more effectively many problematic situations than could public action. Since private action is voluntary, although it may be encouraged by the spending power of government, it can be most effective only when it is constantly supplied with a generous flow of the results of legal, economic, and interdisciplinary legal-economic research.

Research on the problems of private action to encourage private agrarian reform seems to be a prime requisite. It is complicated by the fact that many of the relations among and between private parties, and perhaps between private parties and government, are established by oral or written agreement. If private action can be speeded up through research so it will not lag behind economic requirements, the need for agrarian reform by government will be greatly diminished.

The experience of the United States in improving private arrangements regarding the control and use of land offers insight into possibilities that may be adaptable to other countries. Consider improvement in landlord-tenant leasing agreements, farm mortgages, installment land contracts (recently), and intra- and inter-family arrangements for the transfer of rights in land, to mention some of the areas in which private action has been effective. The speed and completeness with which private parties have adopted innovations in credit arrangements that proved successful under the tutelage of government is another example.

It seems clear that research is essential to furnish private parties with answers to the questions that confront them as they strive to improve the agrarian arrangements under which farmland is held and operated. It is suggested that legal-economic research would furnish more adequately the needed information than would nonintegrated research of the two disciplines.

Reference to the reform of agrarian structures in the United States does not suggest that the land system of each country is as subject to change under the fundamental laws of that country as in the United States. Changes in the agrarian structures of any country need to be adapted to that country's legal system, economic and social problems, and its stage of socio-economic-political development. Attempts to impose the land systems and ideas of other countries -- our own, for example -- usually are ill-advised.

#### Problems of Integrating Legal and Economic Research

In order to evaluate and resolve the problems associated with the integration of legal and economic research, training, and service, the subject needs to be viewed from both domestic and foreign viewpoints.

Domestically, economic analysts have traditionally taken agrarian law -- the whole agrarian institutional structure -- as given. The tacit assumption has been that agrarian arrangements are fixed. They are infrequently variables in economic analysis. Some agricultural economists have scoffed at the idea of considering law at all -- of consulting or working with a lawyer on any research activity. Similarly, many lawyers have shied away from any cooperative analytical undertaking with agricultural economists. Custom, jealousy, and intellectual suspicion take their toll.

Before economists and lawyers try to work together on agrarian reform abroad, they need to have experience in working together at home. One might count on the fingers of one hand, those economists who have worked on agrarian reform in other countries and who have also had experience on a domestic interdisciplinary research project with lawyers. Their counterpart in the legal profession is equally, if not more, scarce. Additional interdisciplinary legal-economic research, training, and service on domestic agrarian problems would better qualify our personnel to serve other countries.

Although this conclusion appears to flow from the previous description, two other observations would seem to clinch the proposition beyond any reasonable doubt. In our past agrarian-reform efforts in cooperation with other countries, we have been generous in sending agricultural economists to help. The prime requisite often seems to have been a willingness to go whether or not trained in the specific subject-matter or having had actual experience in other countries. Perhaps my knowledge of the number of lawyers that our government has sent to other countries to cooperate on agrarian reform is meager, but I can think of only two who have had such assignments where the reform has been based on legal and economic research.

Another factor that is affecting agrarian reform adversely is the infrequency with which legally trained personnel come to this country to study, whether formally or informally. If this continues to be the case, the prospects of facilitating agrarian reform through integration of law and economics are dim indeed.

How can lawyers and economists work together, if lawyers are not encouraged to participate in intellectual interchange with other countries? How can integration of law and economics be attained abroad?

A matter of equal importance is the attitude of American representatives regarding agrarian reform in less developed countries. In the last two decades, there have been examples of official representatives in other countries standing against agrarian reforms. In some instances, their actions were in consonance with the "official-position" or with their instructions. In others, it was opposed. Our position needs to be made clear. Our policy needs to be in conformance with our position and our actions need to support our policy.

The legal-economic hybrid may not yield under the best conditions as earth-shaking results as did the intellectual cooperation among physicists and chemists that produced atomic energy. But in the world of tomorrow, agrarian reform will lag as sadly as did the development of atomic energy before the two disciplines joined hands, unless we find ways and means of accomplishing interdisciplinary research in the social sciences.

Adjustments in agrarian institutions may never be as dramatic as the breakthrough in the physical sciences. Social processes are slower and less spectacular -- and rightly so. Yet, in our effort to integrate legal and economic research, training, and service, we need not fear that a hybrid will result with characteristics of a Missouri mule -- with neither pride of ancestry nor hope of posterity.

Many researchable problems of agrarian reform are at the national level. Our experience in dealing with some agrarian problems, however, has been largely on the State rather than the national level. After all, most of the land laws in the United States are State laws. Also, much of our research has been concerned with maximization within the farm firm for those who control and use land and related resources. Emphasis is still in this direction, although not so exclusively as in the past. Much agrarian reform research must deal with national and State levels, not with unique problems of the farm firm. This is particularly true of research on agrarian reform that might result in action by government. The research designed to encourage private action may well be focused with the viewpoint of the farm firm in mind.

A major problem for a team of interdisciplinary researchers is to answer the questions, What is agrarian law? Where is it found? Is it the "law on the books" that might be found in the library, or is it the "living law" as it is practiced at the grassroots in everyday decision-making? The legal researcher usually goes to the books to find the grist for his analytical mill. The economist usually goes to the field to obtain the data for his analysis. The essence of the problem may be stated as follows: What legal variables should be in the economic analysis? What library research might well be done to answer this question? How can the lawyer discover the living law through field analyses? The case-method, library, legal approach of the lawyer is in sharp contrast to the statistical, field-survey method of the economist. The former tends to ignore economic consequences, at least at the national level. The latter assumes law as a constant and therefore tends to ignore it at any level. Joining or integration of the two may not be easy, but it can be exciting.

From another viewpoint, it is doubtful whether the research methodology, legal or economic, that has been developed in and is applicable to analysis of agrarian problems of an affluent economy is usable without substantial change in the less-developed countries. Although the general theoretical-philosophical framework of economic analysis is applicable in any setting, the availability of economic facts is different; the agrarian problems are dissimilar; the catalytic agents for economic development and growth are unlike; and the institutional framework within which change must take place is not comparable. An understanding of the relationship between legal-economic institutions and economic performance and the role of sophisticated economic analysis in policy formulation and action programming is likely to be largely lacking, except in a few favored countries. Also, the time available in which to do economic analysis, measured in terms of our processes, is limited. Agrarian reform in many countries has a flavor of urgency. It cannot wait until long, time-consuming, complicated research projects are completed. Complicating the matter still more is the inadequacy of the existing staff and facilities for the task. Failure to adjust research procedure to the situation in which urgency is compounded by inadequacy would likely be costly.

In the less-developed countries, there is not time to sponsor research that will produce classics for legal and economic literature. We need to concentrate our research largely, if not exclusively, on narrowly conceived practical research about troublesome, everyday problems. We need to be prepared to tolerate research that may seem to be somewhat superficial, so crucial are the issues and so urgent is agrarian reform. The matter of urgency complicates the integration of law and economics.

Another problem of interdisciplinary research is failure on the part of researchers to recognize the essentiality of interdisciplinary inquiry and timidity in taking positive action to bring about such research. The failure to take action may arise partly from the apparent difficulty of integrating ideas of liberty, security, justice, equality, freedom, and such concepts with the ideas of maximization, efficiency, association of costs and benefits, conservation, and economic growth. Yet legal and economic objectives are inseparable in real life. A share of our painful present arises from our planless past which permitted, and even encouraged, the dissociation of societal goals and economic analysis. This has caused our research to bear less fruit than it should. Intellectual leadership in research involving the scientific method has fostered specialization within the social sciences. Integration of the findings of the various social sciences and subdisciplines became the domain of the politician. The most fruitful integration of most research can be accomplished only when scientist, statesman, and politician are combined in the same person. Such an individual is rare indeed.

A problem of integrating law and economic research is to discover ways of showing how the law of a country, from the highest constitutional-statutory law to the lowest customary practice used in daily decision-making at the grassroots, affects economic performance. Tracing the relationships and measuring their consequences are tedious. To carry the analysis a step further, what types of institutional adjustments are feasible, and at what speed can we expect economic adjustment to take place? The writer holds that these questions require the unique abilities of scientists trained in more than one of the social sciences -- as a minimum, in law and economics.

#### Participation in Legal-Economic Research

It is suggested that in building a program of legal-economic research on agrarian reform, our midwestern universities might well focus attention on three areas already referred to (1) research, (2) training, and (3) service.

Research.--The proposed research program would need (1) to ascertain the research needs of the respective countries, (2) to establish some criteria by which priorities of research could be determined, and (3) to plan and conduct as many studies as feasible on the relationships of legal institutions to economic achievement or performance -- economic growth and development.

These matters can be worked out only in consultation with representatives of our Government and of the other governments that request aid. Influential in this decision-making process would be the availability of personnel and facilities at home and abroad. The urgency of the problem would be an important criterion.

As we have seen, trained personnel with adequate experience are limited. A first step would be to give special training in agrarian reform to well-qualified lawyers and economists of the United States. A next step would be to bring to the United States as many foreign students as possible who would become specialists in agrarian reform. We need also to grasp the simple fact that short-time assignments in a strange cultural-political complex seldom permit sufficient study and maturity of judgment to warrant recommendations of positive action on as complicated a matter as agrarian reform.

A cadre of full-time, well-trained, and widely experienced (on agrarian reform) personnel may be needed to develop the research program. Much of it could be done with the help of graduate students working on their theses and dissertations. The research would need to have both short-time and long-term aspects. It would seek to determine how existing agrarian structures impede (or facilitate) the adjustments necessary to economic growth and development. It would analyze the effectiveness of past and current reform programs, including the original problems, the remedial action taken, the obstacles and how they were overcome, major accomplishments of the program, and in retrospect its strengths and weaknesses.

The research program might well include an analysis of the major land systems of the world. It would outline in detail the land system in the United States and how agrarian reforms were brought about in this country including an analysis of failures and successes. The research program would provide for detailed analysis of the consequences of the major tenure forms found in the world and outline as specifically as possible those factors that tend to impede or to accelerate reform.

The research program would try to determine the extent to which the benefits of land reform accrue to present landowners. To what extent does it affect adversely, or is costly to, certain persons or groups? The program could furnish at least gross estimates of the various costs and benefits to private entrepreneurs and units of government. It is the association or dissociation of costs and benefits over time that will motivate owners and controllers and users of land resources to maximize production for domestic consumption and for export. Research should prevent any reform in agrarian structures that would establish a basis for the dissociation of costs and benefits, at least in the long run.

The research program would make that which is economically desirable also legally feasible, furnishing the basis for the prevention of some uneconomically desirable things from becoming legally feasible.

A welfare economist whose experience has been in an affluent society might need to make significant adjustments in theory and in the conceptualization process when researching in a

less developed economy. In the first wave of reform, it may not be possible to make some of those affected by the reform better off than before and to leave none worse off. Research could well show how to reduce to the minimum any adverse effects and how to maximize benefits to the most disadvantaged and to the total society.

The research needs to be concerned with whether it is advisable for the reform program to be pitched at the national level or perhaps on a State, provincial, or regional level. Information could be made available through research as to whether more rapid progress in agrarian reform would be made by less dramatic change that is tailored for local application than with broad sweeping adjustments designed for widespread use. National legislation that will not be carried out locally or that can be administered only ineffectually, could be eschewed. So far as possible, agricultural reform needs to involve adjustments in the "living Law" that are operationally feasible at the grassroots where decisions are made and carried out. Good research would show great discernment on this matter.

In the past, research studies have emphasized analyses of agrarian reform in only a few selected countries. An effective research program would include studies of comparative law in several countries with similar or contrasting conditions of cultural, religious, and physical resources, among other variables. Thus, the research program needs to be intercountry as well as interdisciplinary. The present organization of international agencies should make such studies easy to organize. Intercountry analyses need to be easy to plan and execute.

In some countries, research might be largely descriptive at first. But it would need to reveal how the law operates and how legal services are rendered at the lowest level of government. How are agrarian relationships of the man at the bottom of the socio-economic-legal totem pole safeguarded? The research could cut through the tangled web of economic pressures and legal procedure to show how the rights of the most humble citizen are protected. To whom does he go? Where does he seek advice? What is the process of obtaining, or making certain of his rights?

Some of the research might well be historical in approach and method. Emphasis would be on past land-reform processes -- whether ancient, a century or so ago, or more recent (even current). Study would be made of the strengths and weaknesses of the action program, and the pitfalls that need to be avoided before modern agrarian reform can be executed successfully would be observed. We can ill afford to permit ourselves the luxury of making the mistakes that others have made -- resources are too scarce, time is too precious.

Training.--We have alluded to the need for training United States specialists in agrarian reform, to work in other countries, as well as technicians from other countries, who would go home to contribute to the improvement of agrarian structures there. The importance of adequate personnel trained specifically in land reform would be difficult to overemphasize. Research and training in agrarian reform need not be restricted to an increase in the number of graduate students who can be handled by the existing staffs of our universities. The training might well encompass research method and procedure -- theoretically, conceptually, and actually.

The student of agrarian reform who comes to this country for specialized training cannot get it by studying our experience in agrarian reform and the highly developed statistical processes in the United States. Neither can he acquire the necessary kit of research tools if his research experience is centered on United States problems. Possibly, his research will not be concerned with agrarian structures, and it may not be centered in the section of the United States most like that of his home country. Neither can he accumulate the necessary knowledge if his academic training is confined to typical undergraduate and graduate courses. Special courses, informal seminars, personal consultation (almost tutoring), student papers, theses, and dissertations need to be a part of the academic offerings. The special courses could be directed specifically to training in agrarian reform. The informal seminars could encourage free exchange between foreign and domestic students on agrarian reform. The preparation of student papers, theses, and dissertations could add to the student's ability to communicate to others the results of his research.

All of the training except the formal courses would focus the student's attention on his own country. He would not spend his valuable time on studying, for example, problems of farm credit, marketing, or linear programming in the United States, as important as these problems are.

At the end of his academic experience, he would have the opportunity of returning home to develop a formal research project on some domestic problem. He would be guided in this



research-training experience in his own country by his major professor or someone acceptable to the professor. His research-training experience would result in information and findings on agrarian reform of direct value to his country. The research methods he learned should be useful to him in his native country. And perhaps of equal significance, the United States professor who supervises his research could acquire deeper insight into agrarian problems in other countries.

Institutions of higher learning in the United States cannot expect to render maximum assistance to our Government and to foreign countries so long as their personnel know little about the land problems of other countries. For example, we have had no experience in our past of accommodating indigenous agrarian structures to those brought in from other cultures. We cannot visualize accurately how indigenous tenure can exist side by side with imported ideas from other lands. We find it difficult to conceive of legal and economic analysis when so little basic data is available. Where does one start? What research method does one use? The typical specialist in agrarian reform in the United States needs considerable retooling before he is ready to train effectively his colleagues from the less developed countries and before he can make the training aspect of the program contribute the maximum to the research phase.

Service.--The results of research conducted by trained researchers need to be used effectively if the program is to be of value. If the researcher is to be effective in agrarian reform, he must come out of his comfortable academic ivory tower and participate in policy formulation, action planning, and execution of programs.

His unique services can be made available in many ways. Conferences, symposia, and workshops can be planned and executed in strategic parts of the world. Consultation with responsible officials at home and abroad may be effective. Under proper circumstance, the researcher might offer a short course in agrarian planning. He could render valuable service in keeping agrarian planners up to date intellectually.

#### In Retrospect

Whether you are a lawyer, an economist, or other social scientist, you may agree that the integration of law and economics is essential to the most effective reform of agrarian structures. Yet you may go home from this seminar and divide legal and economic analysis of agrarian problems into additional specialized subdisciplines and even narrower research projects, subjectmatterwise. The current emphasis on domestic research to attain immediate answers to specific problems tends to force us in that direction. Our past experience tends to minimize the amount of pressure necessary to "incline the twig" in the direction of specialization.

I do not feel assured that we possess as yet either the vision, the will, or the experience to do an effective interdisciplinary research, training, and service job on agrarian reform.

We may need to develop a subdiscipline or an essential core of knowledge that would become known as agrarian reform. Considerable versatility in integrating law and economics may well prove necessary before the greatest service can be rendered and the greatest progress expected. Even if we join legal and economic research, we may well find that specialization within agrarian reform on a geographic or cultural basis may be necessary. So we could be charged with combining law and economics, then subdividing the hybrid to attain maximum usefulness.

We need to prevent, in the rapidly developing countries that we try to assist, the almost exclusive specialization in law and economics that presently exists in the United States. Specialization may be necessary for efficiency and effectiveness. But it should not be pushed to the point at which interdisciplinary research is actually prevented or is made as difficult as it is in the United States. In many countries, the attainment of this objective may well be easy, if we cooperate effectively with the local intellectual environment. For in some countries, law and economics are not as completely separated as they are in our country. They are somewhat joined together in what might be thought of as political economy.

It is in this phase of our program that an agricultural economist and an urban-oriented lawyer can make the gravest mistakes. We need to be conscious of the tendency for scholars trained in the United States, whether domestic or foreign, to promote specialization beyond its greatest usefulness. We need to plan each step in our research, training, and service program

to promote close working relations between lawyers and economists, and also other social scientists. To date, we might well be accused of requiring that the social sciences be kept separate and distinctive, with no hybridization.

The future is bright with hope and expectation. It is less dark than the emphasis on problems may have implied. We have again set our hands to the plow. Let us turn the furrows straight and deep in every effort to make the reforming of agrarian structures bear good fruit to the various peoples who seek a better way of life and a place of equality in the family of nations.

Philip M. Raup

I

It is important to emphasize the wording of the heading assigned to this exploration of the role of research in agrarian reform. The term "agrarian reform" carries a connotation that may not be fully appreciated. It is a substantially broader term than is "land reform." It implies a focus on the total agrarian structure and not alone on the part of it that is represented by the land tenure system, important though this may be. The choice is fortunate, for it permits us to begin our inquiry with a focus on land tenure reforms as such; at the same time, it requires that we relate them to the broader social and political structure that in many cases will be determinate for their success.

It is important, too, that we bear in mind the importance of these issues. Where land problems and defective agrarian structures exist, they preclude attention to other problems. In a variety of settings, they prevent attention to the problems of good government, wise resource use, and a host of lesser problems that cry for attention in the underdeveloped world. Until agrarian structural defects are removed, only frustration can result from the professional attention of economists to marketing and distribution problems or to problems of optimum resource combination and allocation.

This is not to argue that agrarian reform is necessarily a touchstone that will trigger economic development on a wide front. Many other steps must be taken parallel with agrarian reform measures, or in sequence following them. It is to argue that until an attack is made on the problems of agrarian reform little success can be expected from efforts toward economic development that dodge this crucial issue.

II

Before exploring the tasks of research into agrarian reform problems, or the contributions that this research can make to their solution, we need a clear understanding of the nature of the training problem facing those of us who would produce research workers. In a fundamental sense, we are dealing with "changing the content of men's minds" when we approach the agrarian reform issue. One of the most important preliminary conditions for a frontal attack on this issue involves the widespread recognition that questions regarding the land tenure system are debatable questions in the policy arena, and are not "immoral" in the fundamental sense of that term.

The idea must gain currency that land tenures are not immutable. In the early history of medicine, it was necessary for a significant fraction of the population to develop a concept of the "germ theory of disease" before successful approaches could be made to personal or public health problems on a wide front. In a modern community, there can be debate over the fluoridation of drinking water, or over the advisability of alternate serums for the control of poliomyelitis. Debates of this nature cannot take place in a primitive community minus a concept of the germ theory of disease.

In parallel fashion, debates regarding the merits of alternative approaches to the land tenure problems cannot take place in a community in which land tenure issues are excluded from the realm of debatable public questions. In some tradition-bound cultures, these tenure questions have become so rigid over time and are supported by so well-rooted a group of privileged interests that the moral bases of the society appear to be challenged when any question is raised about the propriety of existing tenure arrangements.

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In other countries, where tenure structures have been amorphous, tribal, and never specific to an individual, the discussion of tenure arrangements must take place in a completely different setting. We deal here not so much with tenure arrangements that have been ossified by time and tradition as with a culture in which the level of arrangements among men with regard to the use of resources has yet to reach a stage in which we can identify early forms of the concept of a "contract."

This issue may be clearer if we examine the recent history of attitudes toward the business cycle in Western economies. It is widely believed that we have gained experience sufficient to enable us to forge tools that can be used to control disastrous movements in the business cycle. There is even some basis for the belief that we have acquired political wisdom sufficient to permit their effective use. Fundamental to this achievement, if we have in fact achieved it, is a basic recognition that price levels are not guided by an "unseen hand." Before fiscal or monetary policies can be debated as tools in the attack on business cycles, or before differences of opinion can arise over the wisdom of balanced versus unbalanced budgets as contracyclical devices, we must first have general acceptance of the proposition that price levels have been made by man and can be changed by man. It is in this sense that a fundamental precondition for successful research into the problems of agrarian reform lies in the fact that the community involved must accept the view that land tenure arrangements are the product of man's ingenuity, and can be altered by it.

The creation of an intellectual climate in which this recognition can grow is the first task of those who would train workers for research in the fields of agrarian reform. For it is this recognition that lies at the root of the scientific method. Before there can be debate over the possible causes of an event, there must be a concept of cause and effect. There are significant areas of the world today in which this understanding of agrarian problems, at the folk level of culture, is substantially lacking.

The development of a concept of cause and effect is only the first step in the promotion of analytical attitudes toward agrarian institutions. It is, however, a fundamental precondition for the realization that there is no one best system of tenures in land. The open mind with which we hope to equip the research worker in agrarian reform fields can best be developed by teachers who are themselves aware of the possibilities of alternative solutions to tenure problems.

To succeed in this effort, we must first abandon the notion that we fail if we do not turn out research workers convinced of the overriding merit of systems of private ownership and individual tenure. The promotion of a scientific attitude toward the analysis of agrarian problems is our task, and not the indoctrination of foreign or domestic students with the merits of any particular system. In the succinct phrase of one friendly foreign critic: Cut out the preaching and get on with analysis.

A related change in basic attitudes essential for the successful prosecution of agrarian reform programs concerns attitudes toward debt. Throughout much of the world, including many areas that are not commonly regarded as underdeveloped, there is no functional appreciation at the folk-culture level of the distinction between consumption debt and production debt. Our traditional attitudes toward debt, in all of the major codes of moral conduct of the world, were evolved in periods in which consumption was the principal purpose of debt, and in most cases the only purpose. There was little conception of the borrowing of money or of goods for use in the production process, with a rental charge for their hire. Admonitions against debt in the major religious and civil codes of society have built into the cultural consciousness an attitude toward debt that identifies it with evil.

One of the attitudinal changes that we must keep constantly in mind is the change that occurs when debt is no longer equated with sin. This topic is so fundamental, but so far behind us in the cultural development of Western Society, that it is difficult to discuss it without inviting snickers or sounding clerical. If we are genuinely interested in creating attitudes that will foster research into agrarian problems, we cannot afford to ignore the attitudinal change that is required in regard to debt.

There is one other phase of this inventory of beliefs and understandings that we should explore as a preliminary to an examination of researchable problems in agrarian reform. This relates to the inadequate understanding of the institutional structure and cultural history of underdeveloped countries by the people in those countries. One of the greatest barriers to local progress is the imperfect understanding of their own history by the people involved.

Many of the foreign students who study in Western European countries or in the United States are shockingly unaware or even uninterested in their own histories. It is a common occurrence in the graduate schools to find that foreign students often make some of their poorest academic grades in courses of area study or regional history relating to their own segment of the globe.

In some respects, it is not surprising that this should be so. Many countries lack library facilities, a tradition of history writing, or the leisure time required to pursue the refinements of historical research. As a consequence, much of the history of the countries most in need of agrarian reforms has been written by scholars from countries already well developed in terms of the rights and legal relationships comprising their tenure systems.

A consequence is that many of the terms and concepts that we have available to describe tenure relations in primitive societies or in underdeveloped areas have been imported into those areas from more advanced regions where the concepts were indigenous. We can see this today in two examples: The best published works on the tenure institutions of Nigeria are by English-trained Nigerians, phrased in terms of British legal and institutional structures, and written by authors who returned to Nigeria after extended periods of study in the United Kingdom. Though ethnically by Nigerians, the studies are culturally a part of the British economic and legal tradition.

Similarly, in Iran the principal analytical treatments of land tenure problems have been prepared by Western-trained students using terms and concepts developed for European cultures and north-temperate zones.

One resulting problem may be the importation into tropic and arid regions of conceptual and institutional frameworks that developed and were perfected in humid and temperate zones. We recognize widely that temperate zone techniques of agriculture and forestry may not apply to arid or wet tropic areas. We do not admit so readily that institutional structures and legal systems may also need to be modified before being exported to arid and tropic zones.

For an example, we can turn to our attitudes toward forestry, in humid and arid regions. Where lands have been abused or are of low agricultural value, reforestation or afforestation may be a desirable policy in humid areas. These may be the wrong policies for poor arid lands. Where evaporation loss is great and evapo-transpiration rates are high, a land-use policy that will increase water run-off may be the best policy on some land, even if it means continuing severe erosion.

Similar changes have had to be made in water rights. Riparian doctrines in humid regions have had to be changed, when introduced into arid zones. Moreover, the simple concepts of rights in water that are adequate to humid areas are inadequate to encompass all of the variations in rights to water, for man, animals, and crops, that have grown up in water-short areas.

Accompanying each of these examples from forestry and water management, we can draw parallels with regard to the exportation of land tenure rules of conduct that are appropriate to developed countries and unsuited to those underdeveloped.

One additional research need is for an understanding of traditional and cultural roots of present patterns of behavior in order that proposals for change can build upon or work parallel with the traditional behavior pattern. Too sharp a break with traditional or cultural patterns may lead to resistance, and may set the stage for ultimate retardation in the adoption of new practices and skills. Where proposals for change must run counter to existing patterns of behavior, it would be well to know what the extent of this conflict is likely to be.

Israel has been able to draw upon its history and traditions in mobilizing a development effort. Old Testament prophets and the most conservative parts of the Hebraic tradition have been drawn upon for support in irrigation projects, the establishment of collective farms, desert land reclamation, and the like. Properly used, a knowledge of their cultural tradition has been an instrument for change, instead of a barrier to it.

That this appeal to tradition is not without its dangers is illustrated by the fact that some projects in Israel, undertaken on grounds of religious fervor and injunction, may be difficult to support in the long run. Real though this danger may be, on net balance, the Israeli achievement in harnessing modern technology to cultural tradition is impressive.

One of the barriers to development may thus be the lack of any systematic attempt to yoke development plans and programs with local customs and traditions. This shortcoming has not always been the result of blundering intrusion by ill-informed outsiders, whether colonial officials, missionaries, or the more recent technical experts. Much of the failure comes from the fact that the local people themselves know little about their fabric of culture and traditions. The research and education needed by foreign students for effective work in land tenure problems may thus involve a heavy investment in the history of their own countries, and in related fields of anthropology and the comparative analysis of social systems.

### III

The preceding discussion has outlined some of the more important conditioning factors that determine the setting in which research contributions to agrarian reform can be appraised. We can now turn to an examination of some of the specific research problems in this area. It should be acknowledged at the outset that the range of possible problems is tremendous, and that no attempt can be made at exhaustive treatment in a paper of limited scope. Those problem areas that are here presented are in effect a form of priority list for research workers. The sequence in which they are presented should not be interpreted as a rank order system. The interdependence among problem areas is so high that there is little point in attempting to arrange them in terms of narrowly conceived orders of seriousness. They are all serious and the approach to their solution must of necessity be made on a wide front.

In major areas of the underdeveloped world, current efforts at agrarian reform are inhibited or quite literally precluded by an ideological conflict between the merits of individual family-type units on the one hand and communal or collective forms of farm organization on the other. One consequence of this confrontation of conflicting interpretations of production economics has been the widespread emergence of interest in various forms of cooperative types of farm operating units. The term "cooperative farm" has become a political slogan closely identified with positions of neutralism in the conflict between Marxian and communistic approaches to farm organization and those of the more conventional peasant cultures of Western Europe and North America. In most countries, the cooperative farm slogan has yet to be given factual content; it remains a political slogan without roots in reality. In this situation, one of the most pressing needs for research is to be found in the study of alternative structural arrangements that might be developed to adapt cooperative forms of human endeavor to the organization of agricultural production.

This is one of the neglected fields in agricultural economics and in agrarian reform studies. With pitifully few exceptions, there have been no comprehensive and objective studies of cooperative forms of farm organization. In those countries and institutions that offer research training in the study of various forms of rural cooperatives, little or no attention is devoted to cooperative farm production units. This is largely true, for example, in England, the Scandinavian area, Germany, and the United States. The few individuals in the world who claim competence in this field are in such great demand as consultants to governments of the Middle East, Southeast Asia, Africa, and Latin America that they have been precluded from any serious research efforts in the last 15 years.

One of the key problems is that past experience provides little evidence on which to base our research. Quite simply, there are few areas of the world in which cooperative farming can be studied, in terms of viable production units.

There are nevertheless limited examples of cooperative and related forms of communal farm tenures that would merit serious research. Most of these, surprisingly, exist in the relatively developed areas of Western Europe and North America, with the recent addition of Israel to this list. Where they have enjoyed some measure of success and durability, two criteria seem to have been met: First, they have involved a dominant motivation tracing to the successful maintenance of a "closed" and often religious-based social structure. Second, they exist as fractional portions, in the form of closed enclaves, within and surrounded by functioning agricultural economics based on peasant-type farm tenures. In other words, many of the costs of providing social overhead capital to the rural community, together with the cost and intellectual levels of achievement represented by the establishment of local systems of government with local access to courts of law, are being financed from a community greater than that represented by the cooperative or communal tenure group.

Upon first inspection, it might appear that the kibbutzim and moshavim of modern Israel are exceptions. The present history of these forms of communal or collective tenure in Israel,

however, is too recent and too much a part of the total struggle to establish the Israeli state to permit any final judgment on grounds outlined above. Here we can only say that we must await the passage of time.

Research is therefore badly needed into the motivational and incentive roots of successful cooperative forms of land tenure. The operational structures involved are reasonably clearly defined, and exist in sufficient number to permit some comparative analysis. The ejido in Mexico, the kibbutz in Israel, the Gezira tenure structure in the Sudan, and a variety of religious-oriented cooperative communities in Europe and North America could all be taken as the raw material for this comparative research. Although these possibilities exist, a distressing fact remains: The scientific literature on cooperative forms of land tenure is sadly deficient.

A related area in need of further research concerns the approach to agrarian reforms via the tax structure. This is in many ways a close parallel to the cooperative farm issue. The tax reform solution to agrarian reform problems has an instinctive appeal as a middle-road approach to what might otherwise be a painful, if not violent, social and economic experience. The force of this argument falls with particular weight on Latin America. Extensive reliance in a number of Latin American states has been placed for some years on tax reform and on graduated land taxes as the major manifestation of agrarian reform efforts. The land reform laws enacted in the state of Sao Paulo, Brazil, on December 30, 1960, are built around a progressive land tax as a key financial device to generate funds for the purchase of land for resale to farmers or landless farmers. This procedure is the core of the agrarian reform approach.

Pending land reform legislation in Peru also relies heavily upon a land value tax, graduated to increase with the size of the holding. Taxes of this nature are not new in the Latin American scene; they exist on the books of a variety of Latin American states and have been there for upward of a quarter century.

This underlines the importance of land taxation as a part of the subject matter with which students facing agrarian reform problems should be familiar. Recent attempts to build agrarian reform programs around tax reform, including those in Brazil and Peru cited above, would benefit greatly from research into the past history of this method of approach. The argument at this point should not be interpreted as an argument against tax reform as a component of agrarian reform measures. It is instead an argument for more objective research into the pitfalls and deficiencies of this means of attack.

A third area of topical research that can contribute greatly to the understanding of agrarian reform problems involves the procurement of systematic information on the nature of the markets in which land is rented and sold. This is not a popular topic in many areas of the world and it is anathema to some doctrinal approaches to land tenure problems. A proposal, for example, for research into the nature of sale and rental markets for land is calculated to run head-on into opposition from those who hold that the "wave of the future" includes little place for the individual or peasant-type form of farm production unit.

A peculiar fact emerges: Countries that occupy a half-way position in the process of socializing tenures in land have found need for comparatively elaborate systems of land valuation and pricing. It is a strange commentary on the nature of public control over tenures in land that the countries in Europe that today provide us with the best operational examples of a functioning market in land are England, Denmark, and Sweden. These are precisely the countries in which social controls over land use have been carried to a high stage of development.

Whether or not a land market exists or is permitted to develop, there remains the problem of valuing land in order to arrive at measures of cost and benefit, or to evaluate the opportunity costs of alternative land development measures. In the last 5 years, we have witnessed the surprising emergence of a substantial technical literature in the Soviet Union dealing in fact, if not in name, with problems of placing relative "values" on land and of determining relative levels of "rent." These have emerged in the course of the development of workable procedures for measurement of the performance of collective and state farms, and in evaluating probable returns from irrigation and land improvement measures.

There is no novelty in a plea for better research into sale and rental markets for land, in a European and Western hemisphere setting. It will be treated as provocative, and by some retrograde, to urge this approach in Africa, in portions of the Middle East, or throughout Southeast Asia. The fact remains that in these largely underdeveloped areas of the world, factor markets for land are now developing before our eyes. Despite doctrinal differences

regarding the merits of individual and communal tenures in land, there is no justification for persistence in an ostrich-like attitude toward the necessity for research into the nature of these markets. They exist, and they merit our attention.

#### IV

Having suggested some areas in which further research is needed for the successful prosecution of agrarian reforms, it is now in order to explore the nature of the training required for the production of research workers. Institutions qualified to train research workers are typically weak or almost totally absent, in countries in which agrarian reforms pose current problems. This makes it necessary to survey the total requirements for training institutions and research action agencies in the types and quantities needed.

We can approach this question by asking, What are the requirements for research workers at specified levels of performance? Vocational or intermediate schools, agricultural colleges or institutes, universities, training centers for adult farmers, institutes for short-course training, and various intermediate forms of training organizations?

Before estimates of minimum training requirements can be prepared, there must be some agreement as to the nature of the training and research jobs to be done. This in turn requires agreement, in general terms, on the nature of the problem areas in which shortages of skilled manpower and technically trained staff are most serious.

An outline of the approach needed in the fields that can promote and support agrarian reforms is provided by the following grouping of major subject-matter areas most in need of attention:

- A. Farm Management, Land Use Planning, Location of Producing Areas, and Balance Among Types of Land Uses.
  1. Studies of location of industry; economic forces determining the optimum areas for specific crops, or types of production.
  2. Transportation development; rural roads, local motorways; economic analysis of costs and returns for investments in transport.
  3. Analysis of the forces determining the major margins of transfer among land uses; farm-forest; farm-grazing; rural-urban; watershed protection.
  4. Zoning; land use regulation; control of platting, subdivision, and urban expansion; recreation land use planning.
- B. Land Improvement; Soil and Water Conservation.
  1. Irrigation.
  2. Drainage; salinity control.
  3. Wind and water erosion control.
  4. Water conservation, flood control.
- C. Watershed Management. (For units ranging up to 200,000 acres or more.)
  1. Work with land users: farmers, foresters, graziers.
  2. Work with existing unit of government: cities, municipalities, provinces, communes.
  3. Work with newly created special-purpose units of management: conservancy districts, flood protection areas, and the like.



In appraising training and research needs, it will be necessary to group the requirements for skilled manpower under the following headings:

1. Higher education.
2. Secondary.
  - a. College Preparatory
  - b. Vocational
3. Adult education and farmer training.

Broadly speaking, two classes of trained manpower are needed: a large group of technicians, who have had some training in farm management, surveying, land improvement, and soil and water conservation.

A smaller but more intensively trained group of workers who can lead in the study of the following types of problems: land tenure structures; land taxation; lease and rental arrangements; land sale and transfer; land use planning, location of producing areas; balance among types of land use; watershed management; and river basin development.

In the more developed countries, it is customary to think of the research worker, and of the task of training research workers, in a context of institutions of higher learning -- colleges, universities, and graduate schools. In some of the developed countries, but by no means all, research in a defensible use of the term is also a function of ministries of agriculture and agencies of central and provincial government. When we consider the training of research workers in this setting, we do not customarily think of the broad body of secondary and tertiary workers in the general field of agriculture and economics upon whose product the more sophisticated analyses of the research worker rest.

In the underdeveloped country, we need to look at the full range of the spectrum of trained and skilled talent. One of the tragedies of educational planning in several developing areas of the world can be traced to the fact that funds have been invested in institutions of higher learning for the training of research workers in the image of those found in more developed countries, without the necessary base of raw data and local statistics, or the manpower required to produce them. A long list can be compiled of countries possessing at least one institution of higher learning, in which creditable research workers have been trained, often in law, linguistics, or archeology, but with no adequate secondary school system for the vocational training of agriculturists.

The task of providing this broad mass of data gatherers, agricultural advisers, and local educational leaders, must by and large be performed in the area concerned. There is a rough parallel here with principles of location of industry in the processing field. The analogy is with low value-weight goods, whose processing or packaging must be performed close to the site of production or to the market area. The "value added in manufacture," is relatively small compared with the cost of assembling and distributing the product. This is parallel to the educational task faced at the local vocational level. The mass of individuals involved, the cost of transport and maintenance during the period of education, and the relatively brief period of training all argue for the provision of this training at local and provincial levels.

If we extend the analogy to the college and university level of training, we can note that a good demanding a considerable amount of processing in manufacture, capable of absorbing a considerable labor input and rewarding it with a high value added in production, can bear the cost of transport to more distant and highly specialized processing centers. It is on this basis that we can argue for the central training of skilled research workers at a central capital city or in adjacent countries where cultural traditions, costs of travel, and price levels do not lead to high unit cost.

At the graduate level of training, the analogy can be extended to precision engineering industries in which extensive skill and equipment are required relative to a given quantity of input. The processing represented by training at this level, paralleling the experience with industrial location, can be provided at almost any location within a wide range of alternative possibilities. Historical accident will largely determine the location actually chosen.

If we view the provision of trained manpower in these terms of economic costs involved, we can see every reason why training at the vocational and applied level should be done locally,

and why the training of key research workers, top administrators, and educational leaders can be conducted at almost any location at which the accidents of history have sited an appropriate institution.

This analogy should not be overdrawn. In terms of the cost of moving and processing the product, it is apt. In terms of a clash of cultural backgrounds, or when faced with the prospect of producing a precision tool only to see it used in the simplest of fashions or allowed to rust in disuse, the analogy breaks down. But it has a lesson to teach us. We have distressing examples of countries that have planned for steel mills; the output of which far exceeds prospective domestic market demand for years to come. Where local needs have called for an expanded output of farm handtools, automobile assembling plants have been erected. A similar history of misallocation of resources can be traced to the desires of emerging countries to establish their own institutions of higher learning, for the training of the research workers they so desperately need. In the same fashion that the steel mill may be misplaced in the country short of handtools, institutions of higher learning can be misplaced in countries desperately short of vocational high schools.

In the final analysis, the location of research training will be dictated by considerations of national prestige, foreign exchange conservation, and in particular by the vigor with which a given culture holds to its distinctive beliefs and values. These decisions will commit the investment of large sums of resources but they will not often be made on strictly economic grounds.

The argument of this section is intended to stress the economic base on which these decisions rest, and to draw the attention of planners and educators to the necessity for careful consideration of the problems of resource allocation that are involved in decisions whether or not to send prospective research workers abroad for higher training. There are sequences and proper stages in the course of development of investments in education in developing countries, as in all other aspects of their national growth.

The economic arguments are overwhelming for the local provision of vocational levels of training needed to support agrarian reforms. At the graduate level of training, the economic argument for local or even national training of senior research workers falls largely away. In specifying a background needed for successful research work we pay lip service to the need for grassroot awareness. It is a cliché to point to the necessity for an immersion in local cultural patterns, which can come only from intimate and prolonged exposure to rural life at the farm level. The fact remains that the intellectual leaders of successful agrarian reform efforts have rarely come from the farm.

We should be under no illusion here. In training foreign agricultural research workers at the graduate level in the United States, we deal almost exclusively with city boys. This seems likely to continue for some time to come. If any attempt is made to shift this level of training to the countries where agrarian reforms are needed, there seems every likelihood that the men who will be trained will continue to come largely from urban areas and not from the villages.

It has been fashionable in recent years to question the usefulness of research training provided in highly developed countries for men who are expected to do effective work in the most underdeveloped areas. This is an extension to the international scene of an ancient bit of folk wisdom which holds that to work effectively with rural problems one must come from the farm.

For extension and agricultural advisory workers, there is undeniable truth to this argument. For higher levels of training and in research fields in particular, there is reason to question the dogma.

As long-term policy, it is unquestionably right to promote the growth in underdeveloped countries of training institutions that can offer a full range of higher education, including research training at graduate levels.

In the shorter run, and this may mean for the next 10 to 20 years in some countries, it is unrealistic to argue that the execution of agrarian reforms should wait upon the production of trained personnel at local institutions. For better or for worse, the crucial political and economic decisions in underdeveloped countries are likely to be made by men whose professional training has been acquired abroad. We should recall our own history in this regard. It was not

until the 1890's that our institutions began to compete successfully at advanced levels of training with the universities of Europe.

There can be no debate about the necessity for research training for foreign students that will be relevant to the problems they will face when they return home. This does not necessarily lead to the conclusion that this training can be provided only in their home countries. It is not now available in most countries in which the problems of agrarian reform are pressing, nor is it likely to be available in the near future. Even where local institutions of higher education are capable of performing this training, the political climate often works against it.

In this setting, developed countries need not apologize if they continue to offer research training in fields that are relevant to agrarian reform. Apology will be needed only if that training fails to relate to the real world in which the prospective research worker must ultimately function.

## V

Recognizing that in the past a considerable fraction of the total task of research training for underdeveloped countries has been done in a relatively small number of institutions in Western Europe and North America, and in anticipation of a continuation of this trend, it is in order to ask how we might improve the training offered. We should recognize at the beginning that the range and variety of training required for the foreign student in Europe and North America is much greater than is customarily offered to the domestic student in our institutions of higher learning, graduate schools, and research centers. Domestic research training in a developed country can begin with the assumption that a substantial background of institutional understanding and specific training has been acquired in elementary and higher levels of the local educational system.

No similar assumption is valid for the bulk of individuals coming for training from underdeveloped countries. For them, there is need for the tailoring of the training offered to the needs of the individual in each case. For some, instruction may be required on a level that is typically offered in the secondary schools of more developed countries. In many cases, higher level research training at the graduate school plane must run parallel with instruction to fill gaps in subject matter fields that ideally should have been acquired in the first 2 years of college. The first requirement for successful performance in this difficult task of training research workers for agrarian reform is that the boundaries in which the training will be offered should be set as wide as possible. Some of the most successful products from North American schools have been students who combined graduate school instruction with essentially high school levels of training, undertaken at the same time, but under the coordinating guidance of a sympathetic adviser.

A diversion is in order at this point to note a problem of persistent seriousness in the training of foreign students. The incoming foreign student in the United States, no matter how well trained at home, is typically faced with a language problem unless he comes from the few areas of the underdeveloped world in which English is the language of instruction in the secondary schools. He is also typically introduced into an educational system at the highest level of specialization, in a setting in which he is assumed to have a threshold knowledge of institutional structures and the social and cultural characteristics of the country in which the research instruction is being offered. In the United States, he is typically brought in at the graduate level of instruction, finds himself unable to comprehend much of the peculiar terminology or the regional dialect in which instruction is offered, and discovers that he is expected to possess a fund of knowledge regarding American cultural characteristics that cannot possibly be obtained abroad.

In this situation, a typical reaction of the better trained student is to fall back upon a substitute language, in the form of mathematics. Where he has had training in the natural sciences, his agricultural background, coupled with language problems and cultural gaps, attracts him inevitably to a laboratory field in which formulas and figures substitute for a command of English and an understanding of the American scene. The student in this situation finds himself forced or attracted to the more isolated, and often more highly specialized, branches of the biological and physical sciences, or into the mathematical and econometric phases of economic study.

It is important to note that the abler the student and the better the level of his training in mathematics in his own country, the more likely he is to fall into this mold. In courses in which language comprehension and understanding of the local social scene are important, his first-semester or first-quarter grades may be poor. In courses where the international

language of mathematics permits him to transfer concepts and skills acquired at home, his first grades may be good. He is inevitably persuaded or advised to burrow deeper into the insulating cocoon of the international language of mathematics and science. Many of the ablest foreign students are lost in this fashion to the subject matter fields that could lead to an adequate training for work in agrarian reforms.

This trend is compounded by political considerations. In a number of countries, it is politically unsafe to go abroad and study economics. It is safer to study science in any guise, the more abstract the safer, and to eschew any field of study that would call into question the fitness of native cultural patterns in his home country. It is a brave and typical student from an underdeveloped country who goes abroad and consciously pursues the study of problems of agrarian reform!

There is another thread in the pattern of training that is characteristic of foreign students interested in agrarian reform and that should not escape our notice. Earlier papers in this seminar have emphasized the importance of law in economics, and of the necessity for the combination of research training in these two disciplines. Marshall Harris has specifically pointed out that reliance on law as contained in the statutes, and in codified form, is quite pronounced in countries that do not share the "common law" tradition of England, the United States, and the countries whose legal codes were patterned in similar fashion. In noncommon-law countries, the course of development in higher education has kept the study of law in close relationship to the earlier disciplines of religion and theology out of which the more specialized study of legal codes of behavior typically emerged. In some important areas of the world, the identification between law and theology is still largely intact.

In this setting, it has been easier and safer to study law in many developing countries than to profess an interest in economics or particularly in land tenure problems. The typical student from these countries, coming abroad for further training, is more or less at home in the disciplines of the law, within the boundaries in which it is interpreted in his home country. We have driven an unnecessary and disturbing wedge between the pursuit of law and economics in many cases of this kind, by reason of the sharp separation of these disciplines in the typical institute of graduate training in the United States. The plea has been made at this seminar and on other occasions for a close development of the disciplines of law and economics as they relate to the study of problems in land tenure. This plea deserves great stress when we are considering the task of providing adequate training for foreign students for the study of agrarian reform.

There is yet another factor to be kept in mind as we tailor research training programs for students interested in agrarian structural problems. We need to offer them concrete training in the conduct of research that involves close working relations with a variety of different groups. It is axiomatic that research workers will be scarce in the home countries to which these students will return. It is also one of the professional burdens which they must bear that much of their research undertaking must be done in relative professional isolation. There will be few occasions on which they can get together with men similarly trained from their home country to exchange research experiences and enjoy the cross-fertilization that frequent research conferences can provide. This fact is self-evident; it calls for particular attention in the supporting measures that may be taken in underdeveloped countries through programs of technical assistance and foreign aid.

There is danger, however, that the nature of this isolation in the pursuit of research will be misunderstood. While they may be professionally isolated as individuals, they will be called upon to work with a greater variety of groups of their fellow countrymen and at a wider range in levels of understanding and education than is typically the case in the United States or Western Europe. The research worker in a developed country, in short, may find it comparatively easy to come in contact with fellow research workers in the same or related fields and in this sense, he is not working in isolation. On the other hand, the level of specialization to which research has been carried in most fields often permit him to pursue successful work at several stages removed from the problems of raw data collection and grassroots contact.

No such luxury will be available to the research worker returning to an underdeveloped country. He will typically be called upon to exhibit technical proficiency in every stage of the total research process, from the level of basic problem formulation through the stages of data collection and processing to and including reproduction, processing, and publication of the results. Some of the more successful social science undertakings in underdeveloped countries have been conducted by workers who devised their own schedules or questionnaires, conducted the

data collection or interviews themselves, performed the bulk of their own tabulation and analysis, and personally supervised publication and distribution of their research product. This level of total mastery of all of the skills involved in research is rarely demanded in the United States today and we can be forgiven if we do not train domestic students to perform with this virtuosity. We cannot be forgiven if we send foreign students home to underdeveloped countries unaware of their probable responsibility in this regard.

A plea that has been made before and that should be stressed here is for an arrangement that will permit a graduate student to return home to work on his thesis. In a number of our universities, there are arrangements that permit our domestic students to go abroad under university auspices and continue their study or work toward a degree. How much more important it is that we develop similar procedures to permit the foreign student to return to his home country midway in his training program, or in order to assemble material for a thesis.

This can pay dividends in many ways. Some foreign students are away from their home countries so long that they are virtually strangers to their own culture. This increases the prospect that they may elect not to return home when their training is completed. A chance to return after an appropriate interval -- 2 years might be taken as a norm -- would keep alive the student's ties with his own people and increase his awareness of the nature of internal change underway. The contribution it might make to his research or thesis program is so obvious that it scarcely calls for comment.

There are many ways in which this might be achieved. We have now, in some of the larger universities, a systematic program of foreign study in the course of a student's regular undergraduate program. We have Stanford-in-France at Tours; Stanford-in-Italy at Florence; and Stanford-in-Germany near Stuttgart. Regular faculty from Stanford University staff these outlying institutions, and the full quality of work at the parent institution is maintained.

In many countries we are now engaged in building up agricultural faculties and research centers under contract between some U.S. institution and a local government or educational center arranged through the AID (formerly ICA) program. We send faculty to these foreign centers, of which there are now a considerable number, in Ethiopia, Pakistan, India, Korea, the Philippines, Colombia, and many other countries.

Why should we not send students to these foreign centers as well; our own and also foreign students? Why can we not marry the Stanford-in-Germany idea; for example, to the type of program represented by the Oklahoma State University training contract, with the university near Addis Ababa, and make out of these sister-university contracts a true 2-way street?

If we could place both staff and students from the United States in these growing centers abroad, it would be an easy step to encourage foreign graduate students to return to their native countries to write their theses. Supervision could be arranged through the sister university. The presence of American students and staff at the foreign center could supply a needed incentive and yardstick to insure the maintenance of high research standards. And the fears of domestic graduate schools could be stilled, for supervision of the thesis could be under the regular faculty of a domestic U.S. institution.

## VI

The discussion above stressed the fact that cultural and language problems deflect foreign students from the pursuit of studies that would equip them for work in an agrarian reform setting in their native countries. We need to face openly the fact that the overwhelming majority of foreign students studying in the fields of agriculture in the United States today are studying in the biological and physical sciences and not in the social sciences or economics. Although the argument in this paper, and the whole structure of this seminar, points to the primacy of structural defects in agrarian organization in country after country, the fact remains that the bulk of the training effort is not being devoted to the production of research workers who are qualified in this field.

For this reason, there is a particular need for us to develop in our respective institutions a working contact between the sister disciplines in agriculture and the field of agricultural economics and land tenure studies.

We have seen how understandable it is that young men from foreign countries should choose to pursue research training in fields other than economics. This does not absolve us from responsibility for making these students in our midst aware of the importance of the economic aspects of their training in the physical and biological sciences. In general terms, we have failed to explain the importance of these structural problems of agrarian reform to our own colleagues in departments of economics or in related disciplines in our institutes and colleges of agriculture. It is little wonder that we fail to carry to the foreign students in these sister departments some awareness of the importance of these problems of agrarian reform. The participants in the seminar can surely recall instances in which foreign students have spent 3 to 5 years in the United States or in Europe in an intensive course of training for research in agricultural fields, only to return to their home country completely unequipped to analyze the agrarian reform problems which, if unresolved, will dominate the scene in which they hope to apply their newly acquired professional skills.

It is in this sense that we need to ask ourselves in all humility why it was that technical assistance in substantial volume, including specific efforts at training for research in the problems of agrarian reform, did not fail to prevent political catastrophe in Iraq. We need to ask ourselves in more pressing tones why, in spite of proximity and close trade and commercial relations, Cuba in 1960 found herself lacking trained research workers capable of steering the Castro revolution into healthy channels.

In a still broader sense, we need to ask ourselves why we have failed to an important degree to educate the United States public to the importance of these agrarian reform problems abroad. When we can devise satisfactory answers to these questions that touch at our hearth and doorstep, we will be in a better position to offer effective training in agrarian reform to research workers from abroad.

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THE SOCIAL SETTING OF LAND TENURE SYSTEMS :  
IMPLICATIONS FOR RESEARCH

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How can research be useful in appraising, planning, and carrying out land reform? Included in this question are two other questions, How can social scientists help the government agencies responsible for agrarian reform? How can graduate training be improved to prepare American and foreign research workers to deal with land tenure and agrarian reform?

I shall attempt to deal with these issues by first considering some differences between the tenure system in this country and systems in some underdeveloped countries. The crucial difference is the fact that in many countries, relations between tenure classes are manifestations of differentiation in the underlying social structure. By contrast, in the U.S.A. there is little social distance or social difference between owners and tenants.

The close relation between tenure and the social system makes it important to study the historical background and the social setting of tenure arrangements. Attention to these phenomena is important in studies designed to describe how the tenure system works, and in studies whose purpose is to aid in planning reforms. I shall try to illustrate this point with examples from India and Japan.

Background of tenancy in U.S.A.--Tenancy in the U.S.A. is due primarily to two phenomena: the economic independence of young adults and investment by nonfarmers in farm real estate.

Much American tenancy arises in the process of one generation of farmers taking over the assets of the preceding generations. Younger farmers become tenants and borrowers rather soon after they assume adult workloads. On the other hand, farmers of the older generation continue as landlords and creditors after they have ceased to operate their farms. These tenure and credit relations are sometimes between relatives and sometimes among unrelated individuals. But even in family arrangements, the relation has a formal and legal status, indicative of economic independence of young operators and recognition of separate legal identity and legal rights of the two generations.

This kind of tenancy simply does not arise in most countries because land is controlled by the extended family. In an extended or joint family, three or more generations continue to operate a joint household and a joint family business. It is taken for granted that as young people grow up, they take up their share of physical labor; conversely those who are too old to work, share in the family food supply and family wealth. The change in the roles of the maturing and aging family members is not accompanied by any transfer of rights in land. Ownership is only transferred after the death of the father or even later, if adult brothers continue joint operations and joint households. Or to put it another way: the cohesion of the extended family obviates the necessity for an agricultural ladder in the American meaning of that concept.

Partly associated with the above is a lack of social differentiation between tenants and owners. Since many landlords in the U.S. are retired farmers, they do not constitute a separate social class from the tenants of the younger generation. Nor are nonfarm landlords a single distinct social class. They are a heterogeneous group of people who do not usually depend upon rents as their major source of income.

Within the U.S.A., the only areas with tenure situations resembling those of the underdeveloped countries are the South, with its plantation agriculture, and possibly the areas of Spanish-speaking farmers. It is characteristic of such situations that landlords and tenants also differ greatly in their wealth and social status and that individuals rarely cross from one class to another.

Within this setting of the American tenure system, it is easier to center tenure research on "purely" economic problems: efficiency implications of leasing versus buying a farm, or

effect of tenure arrangements on resource allocation. The development of our national land policy and the effect of economic development in reducing agriculture to a small sector of the economy provide an important background for understanding our tenure situation. But it is both easy and legitimate to take this background for granted and concentrate research on other issues.

In a country like India, the first research question (leasing versus buying) has almost no relevance. The second research problem (tenure arrangements and resource allocation) does of course have some relevance but the achievement of agricultural efficiency depends much more on speeding up the rate of development of the whole economy and on success in developing a research and extension service and credit and marketing cooperatives.

Also, in India, problems of tenure and tenure reform are a part of the problem of economic development and widespread demands for social change. A research worker who wants to understand Indian tenure and reform problems soon feels a need to understand the historical and social background of Indian tenure. In part, this conclusion rests on the difficulties I experienced in understanding Indian problems because of lack of background knowledge about India. But independently of that, it seems to me that the nature of tenure problems in underdeveloped countries lead us much more directly to the above areas which need not concern us quite so much in studying American tenure.

Background of tenancy in India.--India provides a good example of the effect of history and the social structure on the tenure system. A catalog of the forces responsible for the present situation would include the following:

(1) The unique development of the Indian relation between the state, the intermediary and the cultivator, as it emerged through the turbulent centuries of the decline of Moghul rule, the spread of British rule with its superimposition of western property rights, and as modified by recent legislation dealing with abolition of intermediaries (approximately the period 1700 to present, described in 1, 2, 11, 12). 1/

(2) The mutual customary relations between upper and lower castes within the village and their expression through the tenure rights accorded to different castes (3, 6, 7, 8, 10, 13, 14, 15).

(3) Passing of landownership to money-lenders and traders (often the same person) following the emergence of markets for products, and enforcement of debts by foreclosure under the British (5).

(4) The emergence of contractual (rather than customary) relations between landowners on one hand and tenants and hired workers on the other.

Present Indian tenure relations are a complex result of the interaction of these developments. These interactions have resulted in the development of many more tenure categories than those with which we are familiar in this country and have also created great regional diversities in tenure systems within India.

Brief history of Indian tenure. 2/ --The peculiar institution of intermediaries arose out of the attempt of the state, through much of Indian history, to capture approximately half of the gross produce of land for various purposes of the state and the sovereign. The theory was that peasants were entitled to their means of subsistence, while all of the "economic rent" belonged to the state and was collected as land revenue.

Land revenue was collected by two methods. Usually, both methods were used simultaneously, with one method used in some districts and the other in remaining ones. It could be collected by the administrative hierarchy of the state, accumulated in the state treasury, and then disbursed to carry on activities of the state and the court. Or the right to collect land

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1/ Numbers in parentheses refer to Literature Cited.

2/ Descriptions of Indian tenure have interested and baffled me for a long time, particularly statements about land revenue and intermediaries. During my second year in India, Moreland's book and some lectures by Professor Neale helped me to see some order in the tenure system of India. The description that follows is a statement of the situation as I now understand it. It is oversimplified, and I'm afraid that it might be incorrect in important details.



revenue could be given to various individuals for a variety of reasons. Such individuals might be: 1) assignees: officials, army leaders, and warriors who were given right to collect land revenue from designated areas; the proceeds constituted their salary and provided funds for carrying out their duties, 2) grantees given right to collect land revenue in recognition of service or merit: deserving officials, poets, musicians, court favorites, 3) conquered vassal kings (rajās) who retained administrative controls over their territories in return for accepting suzerainty of a superior ruler and paid part of their land revenue collection as tribute, and 4) tax farmers who assumed obligation for collection of land revenue, and kept a share of the collection as a reward for their services. The above functionaries, collecting a share of land revenue, were intermediaries. In addition, the state and the above intermediaries usually dealt with a village headman rather than directly with each cultivator. Village headmen also received a share of land revenue for their services, and thus also became intermediaries.

The above division of rights is a division of the streams of income from land, but rights differed from western conception of property in that duration of right was uncertain, and shares in income were indefinite. All intermediary rights were theoretically at the pleasure of the court, and in times of strong rulers were actually so. Intermediaries attempted to increase their share at the cost of the peasants subject to limitations of peasant cunning, control of strong rulers over intermediaries, or abandonment of cultivation by peasants who escaped to areas where exactions were smaller or administration not well established. Strong rulers attempted to dispense with intermediaries, and increase their share at the cost of vassal kings. In times of strong rulers, there was no inheritance of intermediary rights.

A state of anarchy prevailed in India in the XVIII and the first half of the XIX century following the decline of Moghul rule. A number of independent principalities emerged. Intermediaries and other persons who had a base of local power either emerged as independent rulers or as intermediaries who collected land revenue from peasants and passed a share of it to a superior ruler. An unstable situation emerged in which the prerequisite for being an intermediary was sufficient power vis-a-vis the peasants, potential usurpers of the intermediary estate, and superior rulers. An intermediary needed power not only to exact land revenue from peasants but also to protect himself and the peasants from forcible seizure of the estate by another. On the one hand, the intermediary's local power was needed by the superior ruler so that he could get some land revenue. On the other hand, local power protected the intermediary so that the superior ruler could not get along without him. Thus in this period of anarchy, all intermediaries tended to become a combination of vassal, tax farmer, and local official of a superior ruler.

With the sovereignty over India, the British East India Company and then the British Empire (after 1857) acquired the right to collection of land revenue. The British attempted to define landowners among the various claimants to the produce of the land, to give them rights possessed by British landowners, and in some areas to subject such right holders to a specific unvarying land revenue (so-called "permanent settlement"). They were motivated by the hope that such landlords, given security of tenure and right to all additional income following from improvements, would follow the example of British landlords in increasing production of the land. However, no progressive landlord class ever emerged from that attempt.

The Western structure of property rights which the British were trying to impose did not fit relations between intermediaries and peasants. Intermediaries were interested in the largest possible exaction from peasants, but they had no interest in such landlord prerogatives as choice of tenant or choice of techniques of cultivation. Peasants were as secure in possession of the land as the turbulent times would allow, but they were at the mercy of the will or whim of the intermediary. Since a land market did not exist, the question of who was entitled to sale proceeds of the land did not arise.

The process of attempting to vest sole rights of ownership in one of a number of right holders in land, none of whom possessed rights defined in a Western sense, caused considerable injustice. Eventually, the British adjusted to the situation by giving limited rights to both the intermediaries and the peasants, and also by introducing distinction between some land in which the intermediary had greater right and other land in which he had smaller right. A very complex structure of rights of various people in various kinds of land emerged with such tenure terms as absolute occupancy tenant, occupancy tenant, subtenant, and distinctions between "self-cultivated" land of the intermediary in which he had the greatest right as against the actual cultivator, and various types of other land on which his rights were more limited. The above description holds for areas characterized by the intermediary tenures, the so-called, zamindari tenures. The historical development of land tenure is different in the remaining, or raiyatwari, areas.

Throughout India, there is a further division of rights in land related to the caste system. Each village would typically have a dominant caste of cultivators. Members of the cultivator caste would either be landowners or would hold a superior tenancy right. Below them there would be present a number of members of service castes: goldsmiths, smiths and carpenters, barbers, tailors, oil pressers, washermen, leather workers, sweepers. Each service family would be tied to a specific cultivator (upper-caste) family in a heritable patron-client relation (the jajman-Kamin relation). The upper caste family would receive the services of the lower caste in return for shares of produce of the land and sometimes in return for use of a small parcel of land. Members of service castes helped their patrons at harvesttimes. But also the patron would traditionally abstain from some agricultural activity, such as plowing, and this would be done for him by a member of the service caste. Clients who were not fully employed in the traditional service occupation would often become tenants or farmworkers of their patron.

The passing of ownership from peasants to moneylenders followed in the wake of commercialization of agriculture, emergence of a land market, and court enforcement of foreclosures to satisfy debts. This is a process that has been experienced by every peasant community exposed to a market economy. In India, this relation is aggravated by need for large expenditures for certain ceremonial occasions, particularly marriage.

Commercialization of agriculture and some breakdown of traditional ties between castes have given rise to contractual tenancy and employer-hired worker relations outside the traditional patron-client relation. Richer peasants have become landlords and moneylenders.

#### Social differentiation of tenure classes in Japan.

Excerpts from Dore's book about Japan (16) are used below to describe 1) some effects of the rural social structure on the tenure system and 2) the manner in which the social structure influenced the enforcement of land reforms. In Japan, it made a difference whether the landlord came from a traditional landlord family of high social status or whether his landownership resulted from recent accumulation of wealth. Where the rural social structure was largely unimpaired, it could act to protect the rights of landlords and other privileged groups from criticism and defiance, and it could modify the enforcement of national legislation to local standards of fairness.

Dore points out that in hamlets dominated by several successive generations of a single landlord family, such a family would tend to monopolize the administrative structure and the informal councils of the hamlet. At the opposite pole were hamlets in which there was a broad stratum of owner-operators and small landlords, and: "Differences of economic power did not necessarily entail relations of economic dependency. Tenancy relations, where they existed, tended to be contractual and were not overlaid with personal relations of patronage and service, requiring respectful behavior from the inferior" (16, p. 366).

The newer process of becoming landlord by acquisition of wealth does not achieve the same position in social status. The contrast is vividly described in the following passage:

"A recent study of a village in Tokushima on the island of Shikoku shows how, at the beginning of the Meiji period, a single landlord family held all the marks of high hereditary status, received careful deference, and exercised dominant authority in the hamlet. Its fortunes rapidly declined, however, and in a little over a generation the special respect terms of address ceased to be used. Another family rapidly accumulated wealth during this same period, and by the turn of the century was in as dominant an economic position as the old 'masters' of the hamlet had been. But the old respect terms of address were never revived for its benefit, and it never acquired the same high prestige status, and never achieved the same unquestioned control over hamlet affairs as the old 'masters' had had. By contrast, the Otakis' relations with the rest of their hamlet were almost as 'feudal' in 1945 as in 1870.

"In other words, the egalitarian tendencies of Japanese society over the last hundred years, even if they have not been strong enough--and particularly in northern areas--to destroy active and continuing status relations between families when they were both supported by tradition and by continuing economic dependence, have been strong enough to prevent newly developed

economic inequalities and relations of economic dependence from taking on all the implications of traditional status differences and extra-economic dominance.

"At the same time, where relations of economic dependence have disappeared the traditional status structure has crumbled away. The importance of the land reform lies in the fact that it has largely destroyed the most common and overt form of economic dependence--tenancy relations--and done so, moreover, at a time when the influence of ideological egalitarianism on the villages was greater than it has ever been " (16, pp. 366-367). 3/

One of the greatest difficulties in enforcing Japanese land-reform laws was caused by the attempts of many landlords to resume cultivation of rented land. It was at this point that rural standards of fairness modified the intent of national legislation.

The provisions of the 1946 Japanese Land Reform Act limited the total amount of land that could be cultivated by the owner and the amount of land that could be rented. All land of absentee landlords was expropriated, while landlords resident in a village were allowed to keep up to about 2.5 acres of rented-out land and up to 7.5 acres total of both cultivated and rented-out land. Also, rent on the rented-out land was to be controlled far below prewar levels.

The provisions of the law created great temptation for landlords to take into self-cultivation some of the rented-out land. A landlord who owned 30 acres and rented all of the land out would lose ownership of 27.5 acres and be left with only nominal rent from the remainder. But if he could persuade some of his tenants to give up some of their land and resume cultivation of 7.5 acres, he would have an above-average holding and above-average income, even though his income would be reduced from prereform levels (16, pp. 150-51).

These attempts of landlords to repossess tenanted land were the chief source of evasion of the land-reform law. In some cases, landlords could repossess such land because of their dominance of local Land Committees. In other cases, the local Committee prevented such landlord exactions. But evidently in many cases, disputes between landlords and tenants over repossession were turned over to mediators from the hamlet, with the following results: "In most cases the object of their mediation was to restore harmony to the hamlet rather than to see that justice was done as defined by the provisions of the law. The most common solution was to split the difference " (16, p. 162). Another motive at work is described by the following passages:

"'What is the world coming to if a landlord can't use his own land when he needs it?' was an argument for which only the most hesitant of 'Yes, but's' could be found in answer. Then, too, the traditional hierarchy of families within the hamlet or village seemed too much a hallowed part of the order of nature. It was accepted that there could be some leveling up, but a complete reversal of roles was difficult to contemplate. 'If X / a tenant/ had been allowed to take that land too, he would have been better off than the landlord' was an argument used to me in justification of a Land Committee decision by a former tenant representative in the same Yamanashi village " (16, p. 161).

I have cited these examples to show how permeated is the tenure situation in many countries with "personal relations of patronage and service" and other aspects of the social structure. If we want to study land tenure and land reform in such situations, we need to include in our analysis the social setting of the tenure system.

Demand for land reform is a demand for social justice in situations in which the criteria of social justice are changing. These criteria are relative. They seem to accompany the spread of ideas that life can be better than it is, they follow contact with cities and import of ideas and ideologies from the West.

There are degrees in the thoroughness of the reforms that are demanded, related probably to degrees of breakdown of the traditional social structure in rural areas. In Japan, land reform was not only an act imposed by the occupation. Dore indicates widespread activity in the 1920's and the 1930's of tenant unions, and many landlord-tenant disputes in which these unions

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3/ For an excellent description of the way the social structure permeated landlord-tenant relations in Japan, see (16, chapters 2 and 15).

were bargaining agents; the first such organizations can be traced to the beginning of the century (16, pp. 65-80). Land reform was preceded by half a century of discussion, and the demand for it had become familiar in the villages through the tenant unions and their actions. These developments are a manifestation of breakdown in the traditional social structure. But it was a limited breakdown. It did not go so far as to make land reform a class issue of landlords versus tenants. As shown above, leaders of hamlets, mediated disputes of landlords and tenants over landlord repossession by criteria of preserving hamlet solidarity, rather than by strict provisions of the law.

#### Social and economic consequences of land reforms.

Recent economic discussion on land reform has usually been formulated around the issue of reform as a means of removing obstacles to economic development. The above discussion of the social setting of land tenure points to another connection between economic development and land reform. Economic development can affect the rural social structure, either by creating new non-agricultural opportunities for depressed classes in rural society, or by undermining the traditional relations in agriculture by the example of contrasting social relations which grow up in urban sectors of a developing economy. Three contrasting situations described below illustrate some of the possible interrelations.

Rapid economic development, greatly increasing employment opportunities outside agriculture, can decrease the number and increase the bargaining power, income, and status of classes at the bottom of the rural social and tenure structure. The rapid increase in new types of jobs and immobility, enabling new people to achieve higher status in the growing nonagricultural sectors, can outflank the exclusive prerogatives and high social status of landowners. Decrease in the status and economic power of the landowner can then occur without a frontal attack on his tenure rights.

Land reform is not likely to be a policy issue in societies in which economic development has produced the situation described above. In these circumstances, the demands for social justice are likely to take the form of attempts to create the welfare state: social security, policy of providing public minima in education, medicine and housing, collective bargaining legislation, and so forth.

By contrast, the demand for land reforms which limit landownership or rights of landlords is likely to arise when ideas of social justice change more rapidly than the rate at which economic development creates opportunities for advance in income and in social status outside agriculture. This may happen even in the presence of rapid economic growth, if population growth prevents a decline in the absolute number of the agricultural population. In the case of Japan, Dore mentions strains in the 1920's and the 1930's resulting from the coexistence of a continuing superior-inferior status relation between landlords and tenants on the one hand and of compulsory education and universal conscription on the other (16, p. 54). It is significant in this connection that the absolute size of the agricultural population in Japan did not decline in the course of rapid development of the economy.

Yet another situation may exist in countries in which economic development is slow or is only getting underway. If change in the rural structure has not yet resulted in attitudes of widespread opposition to traditional ideas of the relative roles of various social groups, then it is possible to concentrate on increasing the rate of economic development without the need for wholesale land reforms (reforms which drastically change the distribution of ownership or the distribution of rural income). With this strategy of development, rural welfare could at first be attained primarily by indirect measures of increasing income and employment outside agriculture, and increasing the bargaining power of the lowest income and tenure groups in agriculture.

Thus land tenure and economic development may be related in several ways. Professor M. L. Dantwala has recently spoken on this theme in his 1960 presidential address to the All India Agricultural Economics Conference. His concluding remarks were: "In the ultimate analysis, the problem of the removal of the defects in the agrarian structure cannot be separated from the problem of economic development as a whole. To say that the former constitutes an obstacle to the latter is but a partial statement of the phenomenon, because it can be said with equal validity that absence of economic development constitutes an obstacle to the removal of defects in the agrarian structure " (4, p. 25).

There is some danger in making the desirability of land reform depend entirely on the issue of land tenure as an obstacle to development. The danger is that on the one hand we lose both sympathy and understanding of demands for land reform which arise out of social and political grievances (but which promise little economic benefit for the economy as a whole), and that on the other hand we might prescribe land reform as a solution in situations in which little political pressure exists for reform and in which agricultural development may well proceed in the near future without tenure changes. Japanese experience illustrates the point made above in three ways: 1) increase in agricultural production and improvement in techniques accompanied economic development and preceded land reform, 2) land reform was preceded by a period of discussion, agitation, and landlord-tenant bargaining which created some base of political support for reform, 3) even so, it took defeat in war and the fiat of the occupation to carry out land reforms against landlord opposition.

Doreen Warriner, in a book about Egypt, Syria, and Iraq (based on conditions in 1955), states the need for political support of land reforms as follows:

"Land reform in its initial and crucial stage is emphatically not a question for experts; it cannot be advised into existence, but must be based on an impetus arising within the country. Once that impetus is there, and recognized in a decision to legislate, experts can help in overcoming technical difficulties. The choice of the type of group farming appropriate for the country as will be seen, is not a simple matter, and the experience of administrators who have themselves carried out reforms can be a useful guide. At this stage the integrated approach is relevant, though it is valid only when the economic sails are filled by a political wind. If there is no real drive for reform, experts can produce expensive little demonstration projects, but they will not be able to achieve any general and genuine improvement in the position of the cultivators (18, p. 9).

Warriner in the same book also describes an example of agricultural development without aid of a favorable tenure situation (and without other governmental assistance). The development described is the rapid spread of mechanized wheat farming introduced by private enterprise in northern Syria. These developments took place in a few years preceding 1955:

"The expansion in agriculture, judged by the inertia prevailing ten years ago, is surprising. It completely confutes some current doctrines. It is now fashionable to believe that the economic development of underdeveloped countries needs foreign capital, foreign experts, good public services, long-term planning, agrarian reform, plus, for good measure, a revolution. But Syria has done none of these things, and in the north, where progress has been so fast, every one of these conditions is lacking. Transport is expensive, roads are bad, labor is scarce, credit dear, and land tenure confused and insecure. Revolutions of course Syria has had, but they have been self-destroying seizures of power without much effect on economic policy, and none on social structure.

"Syrian governments have done almost nothing to promote agricultural development " (18, p. 74).

Long in his recent article (9, p. 114) poses the issues in terms of two objectives in land reforms: providing incentives for a more rapid increase in agricultural production, and creating "a sense of security (and participation) among the peasantry as a basis for needed political stability." He then goes on to point out the dangers to stability from either acting (attempting to institute land reforms) too early or from postponing reforms even after great pressures have built up in their favor (Dovring in his paper in the present seminar poses somewhat the same issue in his section on the Pace of change).

The argument about economic consequences of tenure systems consists largely of three parts: 1) in underdeveloped countries, small farms employing family labor, either owner or tenant-operated, achieve more production per acre (than larger family farms and farms employing hired labor), and thus economize on scarce resources (9 and Dovring's paper in this seminar), 2) ownership and security of tenure promote many forms of investment which result from direct application of labor, (such as buildings, terraces, livestock herds, etc. (19)); these investments occur within the traditional agricultural technology, and 3) insecurity of tenure and share tenancy may be among the reasons that inhibit adoption of new output-increasing

techniques, such as use of fertilizers, insecticides, new varieties, better feeding of livestock, artificial insemination, and so forth (19).

It seems to me that the third effect has the least necessary relation to the tenure system and yet is probably the most important factor for potential increases in agricultural production in underdeveloped areas (here again, Japanese experience is relevant). This raised the policy question, whether effort in extension, probably associated with effort to build up public or cooperative credit and marketing agencies can produce significant results without land reforms, or whether the success of such effort must depend upon prior completion of reforms.

I think the answer is that it is possible to use the extension and service agency approach without land reform, at least in some situations. Such policies might well be applicable to agricultural economies characterized by the coexistence of farms of different sizes, and operated under different tenures, all, however, using approximately the same technology. This is a situation in which large ownership units are usually operated in small tenant cultivating units, though occasional farms employ a few hired workers; it is a situation typical of most of Asia, except for areas of plantation agriculture. Such areas are to be distinguished from areas where large ownership units are usually also large operating units employing many hired workers and using a different technology than the small units which exist by their side.

The beneficial economic consequences from improvements in tenure may not result if attempts to institute land reforms increase instability. This may readily occur if there is not sufficient political support for reforms; in such circumstances, reforms may not be undertaken, or they may be legislated but only feebly enforced. It is in such circumstances that the above policy alternatives might be particularly relevant.

The intent of the above discussion is to suggest a framework of ideas which may be useful for the study of tenure and land reform. Possibly, the only valid point is that situations differ a great deal, and that we need to be careful in ascribing one-to-one relationships between tenure systems and certain economic consequences.

Some other problems for tenure research.--Almost all of the above discussion has dealt with the implications of social differentiation of tenure classes. I would like to add just a few comments about some other problem areas on which tenure research is needed.

In many underdeveloped countries, owners of existing small farms or of new small units created by land reform need help from credit and marketing cooperatives and from an extension service. The basic purpose of such remedies is to adjust peasants to opportunities of a market economy, keep them out of the clutches of moneylenders, prevent recurrence of loss of ownership, and increase incomes and production.

There is general recognition of the need, and many attempts have been made but without significant success. In India, attempts to introduce cooperative credit date to the beginning of the century, and extension was introduced shortly before independence. Neither movement has yet taken root.

The nature of the difficulties facing extension and cooperative credit (in India) are known, at least in a general way. The difficulties are caused partly by social divisions in the villages, partly by peasant distrust of outsiders and particularly of officials, and partly by the unsuitability of bureaucratic attitudes developed in administration of law and order and in revenue collection. However, if one reads government reports, one gets an impression of rapid growth and popular enthusiasm which simply isn't there. There is need for considerable additional research to indicate what is really happening, and to help formulate more useful methods of developing these service agencies.

Useful research can also be done in describing more precisely how the rights and duties of different tenure holders are exercised in practice (law-in-action type of research). This is probably more important in underdeveloped countries because of the greater variety and complexity of tenure rights which exist in these countries. Rights of different kinds of tenants in India seem to require considerable administrative supervision. For example, an occupancy tenant in the Indian state of Madhya Pradesh (before abolition of intermediaries) could have his rent raised 1) if it was below rates paid by other occupancy tenants on similar land, 2) if prices had risen since rent was fixed, and 3) if there had been an increase in cultivated area within

his holding. 4/ It would be useful to know how much recourse is had to the administrative hierarchy, and what kind of decisions the administrators have actually been making.

Implications for graduate training.--A number of difficulties face us in providing better graduate training in tenure research to students from our own country and from abroad. I think Phil Raup (in the paper contributed to this seminar) has made an excellent statement of the difficulties facing a foreign student: 1) language problems of the foreign student and the resulting tendency to emphasize the most mathematical and abstract areas in economics, 2) lack of interest and knowledge of the history of his own country, 3) an ideological rather than an analytical approach to tenure problems, and 4) a tendency to describe tenure problems of underdeveloped countries in terms of concepts relevant to developed regions.

A few observations can be added to the above. I have been stating the case for tenure research, which would include recognition of the historical development of tenure institutions and recognition of how tenure functions within the structure of rural society. Agricultural economists in this country, in India, and probably in most underdeveloped countries have not been doing this kind of research. The only major recent works by American agricultural economists that come to mind are Marshall Harris' Origin of the Land Tenure System in the United States, and Hewes' Japan--Land and Men.

A few comments about possible modifications in training of foreign graduate students follow. These comments can be grouped under three headings: learning to understand better the tenure system of their own countries and to use this broader understanding in tenure research, developing an analytical approach to tenure problems, and applying theoretical ideas of production economics to understand problems of farm people in their own countries.

The effort to understand tenure calls for wider reading, much of it outside agricultural economics literature. The application to research calls for some attempts to classify various tenure holders by all appropriate tenure categories, (rather than just into landlords, owner-operators, tenants, and hired workers), attention to processes by which tenure rights are obtained, attempts to differentiate customary from contractual relations in tenure arrangements, description of the extent to which people in any one tenure category control the credit and marketing alternatives of those in other tenure categories, and attention to appearance of new patterns of behavior.

Developing an analytical approach to tenure calls for developing habits of appraising by research ideological and emotional solutions to tenure problems. There is a great danger that we ourselves equate analytical approaches with our own ideologies; Raup warns that: "We must first abandon the notion that we fail if we do not turn out research workers convinced of the overriding merit of systems of private ownership and individual tenure." But to avoid this danger, we must not draw back from analysis of solutions commonly proposed in many underdeveloped countries simply because they happen to be popular with students from those countries.

Finally, we might help students from underdeveloped countries, who are interested in tenure, to learn how to apply concepts of production economics to the peasant farms of their own countries. Many foreign students think of agricultural problems entirely in aggregate terms: relation of agriculture to rest of economy in course of economic development, problem of marketing surplus in a peasant economy, and so forth. It would be very desirable if students had some data about resources available on typical farms in their own country, combinations of enterprises, present production practices, and some research findings about new practices. Students should be helped to learn from such data what alternatives the peasants have, the implications for farm organization of scarce land and abundant labor, the possibilities of improved practices (seed, fertilizer, better rotations), and the relative opportunities for using such new practices versus the more glamorous introduction of tractors.

This in any case is what we can do best in agricultural colleges. In relation to tenure, the most immediate contribution should be a clearer understanding of issues in economies of scale, relevance of mechanization, and so forth. I would also hope that we can make a contribution to tenure problems by putting together some of the techniques of production economics with the insights of economic historians, sociologists, and anthropologists.

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4/ From an unpublished paper by a research scholar in Punjab University, M. L. Patel, Malguzari Abolition in Madhya Pradesh.

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\* Works marked with \* have recently been republished in India and are probably currently available.



WORLD TENURE SEMINAR

Personnel in Attendance

A. Aandahl	University of Nebraska
Joseph Ackerman	Farm Foundation
Julian H. Atkinson	Purdue University
Raleigh Barlowe	Michigan State University
John H. Bondurant	University of Kentucky
Willard L. Boyd	State University of Iowa
Thomas F. Carroll	Inter-American Development Bank
R. P. Christensen	ERS, U.S. Department of Agriculture
Noble Clark	University of Wisconsin
Marvin S. Cohen	Solicitor's Office, Department of Interior
Byron Denny	BLM, Department of Interior
Howard G. Diesslin	Farm Foundation
Peter Dorner	University of Wisconsin
Folke Dovring	University of Illinois
Loyd Glover	South Dakota State College
Glenn Greenwood	American Bar Foundation
Lloyd Halvorson	CSESS, U.S. Department of Agriculture
Marshall Harris	ERS, U.S. Department of Agriculture (Iowa)
William Henneberry	Michigan State University
E. B. Hill	Michigan State University
Howard L. Hill	ERS, U.S. Department of Agriculture
W. David Hopper	University of Chicago
Virgil Hurlburt	ERS, U.S. Department of Agriculture (Iowa)
Don Kanel	University of Nebraska
N. G. P. Krausz	University of Illinois
Karl Landstrom	BLM, Department of Interior
Laurel D. Loftsgard	North Dakota State University
Fred Mann	University of Missouri
Frank Miller	University of Missouri
T. W. Moomaw	Agricultural Missions, Inc.
Arthur T. Mosher	Council on Economic and Cultural Affairs
Walter C. Neale	University of Texas
Howard Ottoson	University of Nebraska
Kenneth H. Parsons	University of Wisconsin
William Pendleton	ERS, U.S. Department of Agriculture
Raymond J. Penn	University of Wisconsin
Wilfred H. Pine	Kansas State University
Philip M. Raup	University of Minnesota
Robert M. Reeser	University of Ohio
Franklin J. Reiss	University of Illinois
W. Shrader	Iowa State University
William Scofield	ERS, U.S. Department of Agriculture
Erik Thorbecke	Iowa State University
Gerald Wibberley	University of Illinois (University of London)
Gene Wunderlich	ERS, U.S. Department of Agriculture
Paul E. Yver	University of Chicago (Chile)

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