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# AGRARIAN REFORM & ECONOMIC GROWTH IN DEVELOPING COUNTRIES

PAPERS FROM A SEMINAR ON  
RESEARCH PERSPECTIVES  
AND PROBLEMS

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## THE ROLE OF RESEARCH IN AGRARIAN REFORM \*

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### 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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