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AGRICULTURAL ADMINISTRATION AND INSTITUTIONS†

The study of agricultural development is at present in a state of some confusion. This is at least better than neglect. The growing consensus that this is an area of high priority for economic planning, and the inexorable projections of population growth in the rural economy force upon us the question: "How is it to be done?" The answers to this question are in the "recipe" stage—Taiwan, Comilla, Anand, the Green Revolution, the Kenya Tea Development Authority, Puebla—or in the stage of theories, mainly economic, rarely sociological, so general as to give very little help to a Minister or Director of Agriculture; perhaps only in India has there been a long period of deliberate experiment, adaptation and evaluation of planning, administration, and institutions.

Within the general turmoil of writing there is one school of thought which this paper will largely neglect: the school which overtly or covertly concentrates on measures which are only applicable to, or only feasible for, the larger farmers. The facts of demography, employment, and poverty really exclude any policy which is not directly designed to improve the production and incomes of the vast majority of the farming population, which in Asia and Africa will be found among holders of 10 acres or less.

There has been a strong tendency to shy away from a direct attack on this majority situation, largely from a lack of confidence—despair would hardly be too strong a word—in the chances of success. But the reasons for this despair have changed in recent years. It is now no longer acceptable to argue that small farmers are irredeemably obstinate, conservative, noneconomic men. It is growing less acceptable to argue that nothing useful can be done with 5 acres, since biological and chemical technology are in part superseding the tractor-fixation of an earlier period. Certainly, this is mainly true of well-watered or irrigated areas; much less has been done for dryland farming, even on correspondingly larger acreages.

There is, however, a more obstinate difficulty, for which no general remedy has been offered, and on which remarkably little comparative work has been

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done: the weakness of administrative and institutional tools for implementing a policy of small-farmer development.

Let us stand back from this problem for a moment. The traditional farming and pastoral societies of Asia and Africa had learned over centuries to adapt to their environment, both physical and social. The farmer achieved this chiefly by a finely detailed observation (not a scientific knowledge) of what was possible in physical terms with the tools at his command, and by evolving social patterns, in a variety of forms, designed not for development but for survival. "Developed" civilization, now impinging on these old systems, brought a more masterful, scientific technology, and forms of social organization reaching out into much wider circles of social and commercial cooperative action than those of kinship, village, or tribe. Rural development today is no less than the attempt to help the old rural civilization to reach a new level of adaptation, both technical and social. A quite new way of looking at Nature, and a new way of working with strangers is here involved (see especially 4, p. 66). The whole level of the "survival" farm-economy has to be raised and increasingly integrated with widening circles of commerce and production. This is a major evolutionary jump.

Put in workaday terms, J. W. Mellor has well expressed the range of assistance which is needed (15, p. 368):

Sustained rapid increase in agricultural production requires a large number of highly complementary inputs. These inputs are perhaps best thought of as institutions—institutions for research, education, input supply, incentives and so on. But they also include a large quantity of physical inputs, such as fertilizer, water, and pesticides, each of which requires various complex institutional structures if it is to be supplied in the appropriate time, place and form. . . . Indeed, the magnitude of the task and the range of things to be done is consistently understated, which in turn explains the paucity of successes in agricultural development.

The fact is that where the farmer is weak in physical equipment, weak in financial resources, illiterate or semi-literate, bound by constraints of labor supply, by lack of physical investment (roads, water, storage), often by insecure or oppressive tenure, held in a social system which almost always incorporates at least some values which discourage individualist decisions—in such a case the farmer needs a great deal of external help before he can even stretch out his hand to the opportunities which modern knowledge and organization could offer him. Further, so many of the services which private enterprise actually competes to supply to the farmer in developed countries are not available to the mass of small farmers before they have the purchasing power and credit-worthiness which would attract suppliers. In consequence, the initial task falls upon public administrative action, public investment, the creation of new farmer institutions stimulated, in one way or another, by public services and persuasion.

Because agriculture is so complex, because of the consequent fragmentation of its administration among so many departments and agencies, because of the wide variations of requirement (soil, climate, access) and because requirements are time-specific (3 weeks too late may be a year too late), the task of administration has been extremely difficult; and it is especially unlucky that the heaviest burden is at the very start of the process, when new governments are weak in

administrative and extension staff. The *Asian Agricultural Survey* is full of references to administrative failures (I, pp. 53, 65):

Unless administrative reforms are made, there is little evidence that future national programs for agriculture in most countries will be conceived, implemented and operated with any greater success than past programs. . . . For one reason or another the executive arms of government are struck with impotency. . . . While the genesis of the multiplicity of government agencies concerned with agriculture may have a rational foundation, its perpetuation does not.

Most of this paper is devoted to analysis of the nature of these difficulties, followed by an attempt to suggest the framework of thinking which would make possible a more rational and coherent approach to their solution.

THE DANGERS OF GENERALIZATION

Policymakers face an extremely wide range of local or temporary conditions. There are times when the production of staple foods (grain, tubers) is important, and times when greater specialization and market-oriented farming become essential. There are places with no real potential, and others with high potential, possibly requiring major investment for its realization. There are stages of development in which the farming community needs much simple help, and others where farmers are more sophisticated and where private enterprise can profitably cater to them. There are conditions suited to large tractors, or smaller tillers, or no mechanization at all. There are certain opportunities near towns which do not arise 30 miles away. There are management systems of proven efficiency for developing and processing certain smallholder crops (tea, tobacco, sugar) which are not easily applicable to food staples for local consumption.

There are some clear implications from this diversity. It is not only that general recipes are not, in fact, widely applicable. The diversity of circumstance and need imply a far greater delegation, at least to "district"¹ level, of discretion both in the planning of development programs and in the means of execution. It implies also far better information about the farmer's real condition, needs, and capacities. The improvement of local farming systems implies a close understanding of the rationale of those systems, and thereafter local, phased programs, leading from one amendment to another.

FAULTY POLICIES

It is fairly easy to see, by hindsight, various major lacks or faults in central policy which have contributed to the widespread despondency about smallholder agriculture. The first is perhaps too seldom mentioned. It is lack of appropriate investment. It is true that there have been some very large investments: dams and irrigation are the most obvious, followed by major settlement schemes. But anyone who has walked about fairly extensively among the most typical areas of peasant agriculture can hardly fail to be struck by the *general* poverty of

¹ This word implies the best compromise between close contact with the farmer and a level at which staff of adequate training and ability can be stationed. "Province" and "district" will, in this article, have to do duty for many other terms used in various countries (area, region, division, and so on); "province" is here defined as superior to "district."

provision for market-oriented farming, both as to physical investment and as to the condition of the administrative and extension services. Physical needs include, obviously, roads, storage provision, clearing, stumping, leveling, soil survey, hydrological survey, accurate agronomic knowledge, and water-control. Africa, in particular, is singularly backward in water-control, and resistant to suggestions of its importance. Even in Kenya it is not uncommon, when crossing some bridge over a dry watercourse, to see a government notice saying: "This river bed is dangerous."

On the administrative side the poverty of provision is equally striking. Extension staff suffer chronically from lack of transport, inadequate petrol allowances where there is transport, vacancies in the establishment strength leading to constant transfers of staff, lack of telephone communication, lack of equipment, and lack of technical information. It is extremely noticeable that, whenever a serious "project" is undertaken, almost the first step of the donor, or indeed the local government, is to increase the numbers, the mobility and the training of extension staff. Even in the post-Kericho conference "Special Rural Development Programs" in Kenya, where much emphasis has been placed on replicability of the pilot schemes by avoiding expenditures which could not be widely applied, the first detailed schemes were criticized by the Treasury as a mere demand for more staff, vehicles, petrol, and housing; yet these additions seemed to be precisely what was essential for any serious program. Some of the Tanzanian settlement schemes had 1 graduate officer to 100 or 200 farmers, against a normal ratio of 1 junior extension officer to 1,200 or 1,500 farmers. The Intensive Agricultural District Program (IADP) schemes in India doubled the number of village level workers and extension officers, added 4 "subject-matter specialists" and a project officer, and increased the investment in other ways.

This parsimonious attitude creates a vicious circle of failure and low morale. The Treasury observes that little benefit is coming from even their existing expenditure and strongly resists additions. The field services carry the blame for failure and become depressed and lackadaisical.

There is also the opposite case, of lavish investment in limited schemes, usually in a desperate endeavor to short-cut the whole process of raising and changing farming levels, to alleviate unemployment, or to occupy frustrated school-leavers and "youth."

Even heavy expenditure on technical research may prove unproductive. There is an increasing suspicion that devoted research staff may become so immersed in their material that they end up with recommendations which are at variance with the practical possibilities of local farming systems: cotton varieties which must be sown just when the vital food crop occupies the farmer's energy and labor and which require six or even more sprayings, are an example.

Perhaps most common of all the policy failings can be traced back to imperfect knowledge of the rationale of actual farming systems, and to overgeneralized campaigns and targets which the extension staff, sometimes against their better judgment, are called upon to introduce. There are three inexorable laws of innovation: the new practice must be feasible for the small farmer; it must pay him better than his present practice, and its product must be marketable. If any one of these three conditions is not fulfilled, the development of small farming systems has not failed; it has not been effectively tested.

MORE PERSISTENT DIFFICULTIES

Most of the difficulties and mistakes so far mentioned are curable, even though many are not yet cured. (I have not strayed yet beyond what is probably a consensus of opinion.) But there do remain problems which are more complex, more puzzling, more resistant to solution, and, incidentally, far less studied. I would like to take five of these thorny issues, discuss them one by one in this section and, in the succeeding section gradually move toward a combination of all five under a single framework of thinking.

The Bureaucratic System Problems of "Coordination"

The management of agricultural development, insofar as it lies within a bureaucratic administrative system, is seriously confused at all levels—the level of central departments, of district administration, and of field contact with farmers. This is largely because agricultural development is not a single subject; Sir Alexander Carr-Saunders once remarked, apropos university studies: "I have heard of physics, I have heard of chemistry, of botany and plant genetics, veterinary science, economics, hydrology, engineering: but what is agriculture?" He might have mentioned several other subjects—sociology, social psychology, and education, for example—which also enter into agricultural development. In a sense this is well known; yet in practice the implications are not clearly accepted. The inevitable departmental subdivisions of government either mean that agricultural development is spread over four or five ministries or departments,² with only partial coherence either centrally or locally, or there is a search for some super "Ministry of Rural Development" which will comprehend the whole subject.

This is not an easy problem. It is first necessary to recognize that the Ministry of Agriculture is not only an executive but *essentially* a coordinating instrument. Executively, it will normally be responsible for technical matters (research, agricultural training, and a field service of extension), with a close link with university work and with major problems of direct investment in crop or animal production. But this is only a section of the whole field; and there has to be a deliberately created coordinating mechanism which will embrace such subjects as natural resources use, the commercial side of agriculture, roads, water, fertilizer (import, production, distribution), and many other subjects.

It may be possible to simplify structures by avoiding separate entities for cooperatives (only one form of farmer-grouping), community development, animal husbandry. It may be wise not to attempt an advance on all fronts simultaneously. Obviously, the rural community must advance in health and education (for example) if agricultural advance is not to be partially maimed. But these are both spending services; the basic problem is to improve production and incomes in the rural area, and this can be started and will, in due course, produce the revenues on which health, education, and many other rural improvements can be based. Indian and other experience points to the danger that the very wide-front approach is apt to dissipate itself in a dozen small improvements which leave the basic economic poverty untouched. "Integrated rural development" can be a dangerous slogan.

² The record number I have seen is in Thailand, where 5 major ministries and 18 departments had a finger in the pie.

At a level intermediate between the center and the farmer many countries have tried to achieve coordination by giving overriding influence, or even power, to district or provincial commissioners, and even by adding a district development officer as a senior staff officer to the commissioner.³ These efforts do sometimes effect an improvement. But they suffer in two ways. First, the district cannot coordinate if the center is not coordinated. Second, departments insist upon having private hierarchies which run right down to the field level, naturally controlling the pay and promotion of these staff members, who, equally naturally, are careful to give their main loyalty not to the district but to the department. There may well be a case for cutting off the lower echelons of the hierarchies below the point of intermediate coordination so that all staff below this point have an undivided loyalty to the (district or provincial) center, and to development rather than to department.⁴

Indeed, the engineering or "organization chart" approach, with long vertical chains of authority, dotted lateral lines for consultation, square boxes for committees, is not only largely unworkable at field level but neglects a vital point—the sovereignty of the farmer on his own farm. Ten thousand farmers are not like ten thousand factory operatives, for whom precise instructions can be handed down through a complex chain of command. The farmer himself has to decide, for the welfare and perhaps survival of his family, whether he will or will not change his farming pattern.⁵ Insofar as he needs help (technical advice, credit, a source of supply, etc.), he needs it quickly, from a minimum number of different sources, if possible from a single center, and help which fits the totality of his situation. Such help is almost impossible to achieve through the multiple hierarchies, and quite impossible to achieve quickly. Moreover, these hierarchies are often both too expensive and too complex for the administrative skills available. There are many implications here, certainly as to broader training of field extension staff, and possibly as to the creation of more integrated farmer service centers.⁶

Politics and Bureaucracy

Very closely related to problems of coordination is the whole subject variously referred to as politics, representation, participation, mobilization, local democracy, and local government. For example, the cut-off of hierarchies at district level could in theory be achieved (as it is in British education) by giving full powers and local government staff to a district council. I will return to this issue in the

³ There are many variants in Indian states. The Indian State of Andhra Pradesh even courageously delegated powers of the Director of Agriculture, the Registrar of Cooperatives, and some other departments to the Commissioner (see also 12).

⁴ Cf. Colin Leys: "the essence of bureaucratic administration is to have highly specialized and defined areas of jurisdiction, within which the bureaucrat can apply the rules . . . appropriate to that area. But the essence of development is the need to secure interrelated changes in a wide range of sectors of life simultaneously; for this, the breakdown of the whole problem of development in any area into rigidly separated jurisdictions is an obstacle, not an advantage" (13). I am grateful to Dr. J. Nellis for view of a Staff Paper (16) in which a number of useful references have been brought together on this subject.

⁵ V. M. Dandekar has pointed out the absurdity of planning and giving "targets" to extension staff where subjects are covered which the planners do not control and where success depends wholly on the voluntary decision of the farmer (5).

⁶ See, e.g., resolutions of the Food and Agriculture Organization (FAO)/Swedish International Development Authority (SIDA) Symposium on Agricultural Institutions for Integrated Rural Development (7). Obviously, nondepartmental field staff below the cut-off point should have a broad common training before they specialize.

next section. But to clear the ground, the various terms used do have somewhat distinct shades of meaning. "Participation" and "mobilization" are most real and meaningful at village level, where local people are actually engaged in doing things for their own good. "Representation," far less direct, carries the concept to higher levels (even to central parliaments), and in doing so alters it. The gap between representative and villager widens very fast, and representatives (laymen) become involved in policies and objectives rather than in doing. "Politics" and "democracy" emphasize the creation of a political system, often as a good in itself, and justified as a step in political education of the mass of citizens: its principal objectives are much further away from efficient development. "Local government" more often refers to more or less routine execution of functions delegated from central government (sanitation, markets, primary schools, minor health matters, local roads). There is obviously a common thread running through all these terms: the idea that the citizen's voice should be heard in matters, both small and great, which affect him. But the various ways in which this aim is institutionalized can have a very different emphasis and effect.

It is, however, of urgent importance to have some basis of judgment as to which, if any, vital parts of a package of development should be entrusted to democratic institutions, and to distinguish between the quality and results of various democratic forms.⁷ I will return to this issue in the next section, in the context of the growth of society as a whole.

Agriculture and Commerce

If rural incomes are to rise, survival systems must gradually become market systems; and the commercial aspect of agriculture (mainly credit, supply, and marketing) sits uneasily in ministries of agriculture with their traditional production and technical orientation. Indeed, there are many instances, especially on the marketing side, where the commercial component expands to assume a managerial role over a wide range of activities, assuming responsibility for technical advice and quality control, seed and fertilizer inputs, credit, marketing, and development. From the Sudan Gezira Scheme to modern marketing boards, crop "development authorities" and some major cooperatives, this system has many successes to record. Its advantages over bureaucratic systems lie in two main elements: unified commercial and technical management, often including its own services of transport, storage and processing; and a firm grasp on the economies of the entire undertaking.

It has also two major disadvantages. First, the dangers of monopoly, resulting in low prices to farmers, as overheads rise and reserves are accumulated, often appropriated by governments as a heaven-sent source of revenue. Second, most of these organizations deal with a single crop or product, usually of high value (to cover overheads of management) and often, though not always, an export crop. In consequence, such corporations tend to be uninterested in the other crops which most farmers grow. The concept of farm management, as a means of maximizing total income by an optimum use of land, labor and other resources, is lost to view. A whole set of powerful, vertically organized, single-commodity organizations is very hard for either a ministry of agriculture or a farmer to deal with.

⁷ The 18 Indian state governments have at least 18 variations in the degree and the level in which power is exercised by commissioners or by elected panchayats.

Whether formally a monopoly or not, such organizations have seldom dealt successfully with crops which enter into local consumption without skilled processing, particularly staple grains, tubers, and the like; an exception may be needed for fresh milk, although it does require skilled handling and distribution. Yet these crops, partly used for subsistence and partly sold, represent a vital element in present-day small-scale farming. Cooperatives have seldom competed effectively with private traders in this area, and even major monopoly boards suffer the indignity of black-marketing and smuggling to merchants who offer better prices or more convenient arrangements to the farmer.

The same is often true of official credit schemes. To this day, despite lower rates of interest in official schemes, many farmers find merchant, moneylender, or relative a more convenient lender.

Finally, this whole area of policy is one riddled with ideologies and mythologies. "Cooperatives" is a magic word—even FAO is mesmerized by it, as well as many socialist governments. Yet an objective assessment of their rate of failure, either in pure commercial terms or in terms of their real democratic or egalitarian effect (see 18) would point to a need for far more hard-headed analysis of just those situations in which their success, in either or both respects, has a better than even chance—far fewer situations than those for which their use is recommended. Credit is also surrounded by mythologies: there is not only much experience of expensive failure—failure, that is, to product credit-worthy farmers—but some detailed evidence that, in many situations, a feasible, profitable, and marketable innovation will be grasped by farmers without the need for subsidized official credit.⁸

The difficulties in this field may be easier to overcome if they are more carefully analyzed.

Part of the subject is the concern to provide certain commercial and managerial services to farmers who are unable to secure them in a satisfactory form for themselves, for several reasons. One is their inexperience of the commercial world and of managing; one is their weak bargaining power, as individuals; and one is the poverty of commercial services available in the economic environment. Crop boards and such do provide these services, but usually for a single crop. One can ask whether government could provide them, through local farmers' centers, on a whole-farm basis.

A second part of the subject is the need to group farmers, either for receiving these services through a single channel, or for actually organizing them. Much of the pressure to create cooperatives springs from this need; often the capacity to organize is wanting.

A third part of the subject lies in attitudes to the private trader. Again, co-operatives are often created for a mixture of two motives: a suspicion of capitalism and an allegation that private traders are an inefficient mechanism. But the "inefficiency" may be not so much a characteristic of traders as a reflection of the high costs of small turnover in remote places, and of the general lack of investment in marketing and communications infrastructure.

The balance of these various factors in particular places and times, and for

⁸ Cf. John de Wilde's observations on the expansion of African coffee production in Kenya (6) and studies by the University of Nottingham research team in Zambia. Large numbers of tubewells were privately installed in North India and Pakistan before official credit had expanded.

particular types of farm output, could lead to more rational policies; this leads to a consideration of the total situation, which will be discussed in the following section.

The Choice of Technology

Here again the situation is confused by emotion, by Western prejudices, and by distortions of the price system. The farmer's life is hard—and has been for centuries.⁹ It will not ultimately be made less hard by encouraging him to use uneconomic machinery, or machinery only economic because exchange rates and prices have been artificially rigged to cheapen capital-intensive imports. There is a huge range of factors (farm acreage, value of crop, prices of labor, intensity of production, interest rates, and so on) affecting the economics of many different types of mechanization or of chemical technology. Very accurate economic analysis, or possibly simply a price system reflecting opportunity costs more closely, would be needed to clarify the appropriate technology for particular areas at particular stages.

Poverty

Poverty itself runs through the whole story—poverty of trained personnel, of investment, of revenue, of roads and stores, of shops and distribution, of maintenance, of savings, of electric power, and the petty dishonesty which accompanies poverty and the red tape which tries to prevent it, poverty of schools and literacy, of health, of experience of a commercial system—all this clogs and frustrates the drive for development. This is not altogether a circular argument (poverty is what we try to cure; poverty prevents us curing). It implies that, even in administration and institutions, only those choices can be effective which accept the facts of poverty and work within its gradually lessening limitations.

TOWARD A GENERAL COMPARATIVE APPROACH

Poverty gives a hint of a basic weakness of development thinking. We have lacked a general theory of organic growth¹⁰ of less developed societies, a theory in which the interconnections of economic, social, and political growth are not only admitted in passing but form a central part of the theory itself. Insofar as development theory has been dominated by the partial abstractions of economists, it has been visibly tripped up by neglect of social, administrative, and political factors, especially in handling employment and unemployment. In separate compartments, political scientists have noted the difficulty of jumping straight from tribal or feudal to democratic systems; other critics have seen the misfit between capital-intensive technologies, or Western-type universities, or Rochdale cooperatives, and the poor and differently structured societies into which they are introduced. But these separate observations have not been chemically combined into a concept of the interacting, sequential processes of growth and of the type of

⁹ It was somewhat disturbing to see the farmer's life described as "repellent" and "repulsive" in a recent report of a Nigerian official committee. It may seem so to white-collar Nigerians; if they persuade the farmer to take the same view, Heaven help Nigeria.

¹⁰ It is unfortunate that "growth" has been associated with "growth of GNP" and "development" with a wider content. I prefer to think of "growth" as endogenous and organic and "development" as the largely exogenous efforts made in the last two decades.

assistance which is timely at any one stage of this process in particular environments.¹¹

Social and economic change can be portrayed as a process of transition along a time scale. We take as the starting point a small "traditional" community, in a survival system; as an end point the type of rural society which might be a medium-term aim—a society founded upon cultivators farming for the market, handling money and credit with confidence, using modern technologies with some understanding, linked with much wider organizations: suppliers, a cooperative union, banks, some form of local self-government, and perhaps organized in a farmers' association rather than under a chief, lineage-head or emir. Multiple changes must take place along the line of transition, not all at the same speed. Some ways of behavior may yield very quickly to modernizing influences; others, more central to the society's conception of itself, very slowly. Simultaneously, the outer environment will be changing. More outside influences will penetrate into the village; and higher production at village level will, in return, stimulate the growth of commercial and productive services in the larger environment.

We can describe the direction of this transition under various aspects—economic, social, political, religious—corresponding to factors and attitudes in the total pattern and "rules of behavior" of the society. It will normally be a movement from isolation to wider contact, from subsistence to commercial farming, from social and political dependence to more independent institutions and collectivities, from extreme forms of familial organization to more individualism, toward sharper distinctions between religious and secular elements of behavior—and so on.

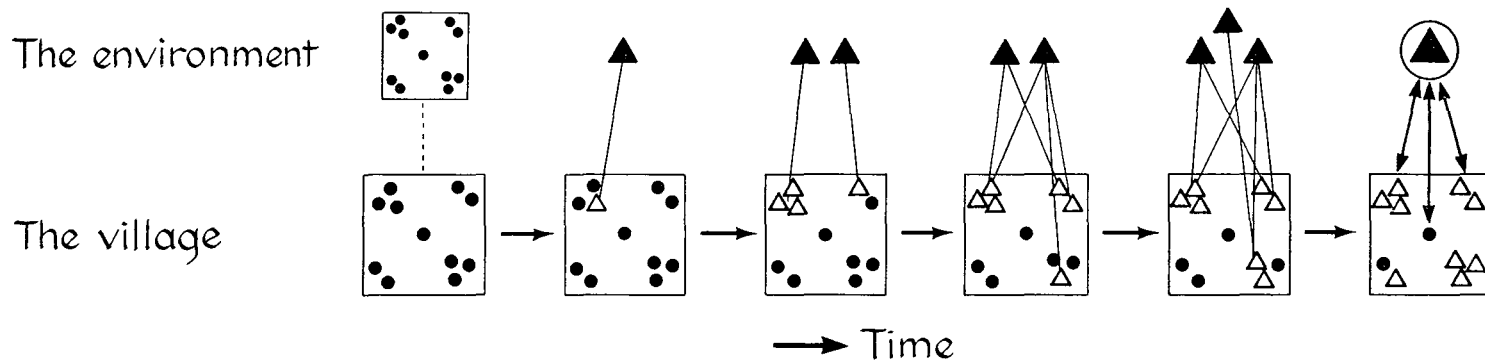
The oversimplified diagram shows the history of a village community over a time span, the dots showing attitudes and institutions of the tradition, the triangles showing a change in one of these into a form responding to modernizing influences—let us say, belief in the efficacy of planting at the new moon gives way to extension advice, or the institution of a village committee assists a new type of leadership, outside the tradition, to organize itself. Social anthropologists have recorded a similar transitional process for small societies studied in detail (see, e.g., F. C. Bailey in 2 or Kingsley Garbett, 9).

The diagram, expanded, would show the environment of the village also changing; it would at first consist simply of other traditional squares (villages), with very limited interaction. At a later stage, a modernizing influence in the environment would affect one or more of the traditional elements in the village. Later still, strong pressures and temptations in the environment (say, the growth of a market center, or an irrigation scheme) would accelerate this process, while, simultaneously, changes within the village would also induce change in the environment; for example, higher purchasing power among farmers might induce a bank or a fertilizer company to open a branch for a cluster of villages. Simultaneously, the walls¹² around the village begin to break down; there is far more contact with external organizations and towns; and institutions within the village

¹¹ Interestingly, J. Nellis (*supra*) quotes from F. T. Bent (3), saying "Present administrative practices are the result of contemporary social and cultural conditions in Turkey." It is not "Turkishness" which is blamed by Bent but the *present conditions* of Turkey.

¹² Used in the metaphorical sense of the Wisers' Indian study, *Behind Mud Walls* (19).

DIAGRAMMATIC REPRESENTATION OF CHANGES IN ATTITUDES AND INSTITUTIONS
OF A VILLAGE COMMUNITY WITH THE PASSAGE OF TIME



□ = Community

- Traditional attitude or institution
- △ Modern attitude or institution
- ▲ Modernizing influence
- ⊙ Modernizing influence centered in a town or administration

may be enlarged to an area level (e.g., the village cooperative to a cooperative union).

The whole process of transition will be marked by internal tensions between traditionalists and modernizers; some traditional attitudes (e.g., the extended or joint family system) may prove flexible enough, and of sufficient psychological importance and social utility to persist into a "modern" situation; traditional structures may apparently persist, in name, but alter their content or mode of working; or, on the contrary, "modern" structures, brought in from outside, may be captured by traditional values and power groups and used to serve traditional ends.

If we now ask what is the relevance of this process to the choice of administrative and institutional methods for planned agricultural development, we can see it as constituting one of three major types of criterion: technical, administrative, and social.

Technical Factors

Quite apart from the nature of the society into which development is to be introduced, there are certain technical factors which may predispose toward certain choices of organization. Similar patterns will tend to be adopted for crops requiring major local processing (tea, sugar, tobacco). Canal irrigation may impose certain organizational imperatives. Export markets or crops requiring very sophisticated agronomic control may require exceptionally strict supervision. It may be noted here that some of these special situations, which are not uncommon and may be economically important, tend to lead to mono-crop boards with a danger of neglect to the other crops grown by a farmer; hence the constant possibility of conflict between the vertical, mono-crop approach and the "farm management" approach.

Factors Relating to the Agency of Change

It is useless to recommend organizational structures which are beyond the capacity (trained manpower, budgetary resources, administrative skills) of the agency introducing developmental change. In countries short of manpower and skills, simplifying chains of command and coordination may be an essential step, even at the cost of occasional technical mistakes. The balance between *speed of decision* (usually involving a delegated, authoritarian structure) and *quality of decision* (involving coordination of many specialists and interests) must always be related to resources.

Social, Economic, and Political Factors

This third category includes the process of transition sketched above. Individual factors within this heading would include:

- a) Strength of the traditional hierarchy: degree of emergence of "new men."
- b) Stage of national political development.
- c) Managerial capacity—the ability to manage money and commercial institutions.

- d) Education and experience of the outside world (cosmopolitanness, etc.).¹³
- e) Attitudes to security, risk, strangers, and related values.
- f) Levels of effective purchasing power, and levels of development of a commercial economy in the immediate neighborhood.
- g) Structure of tenure and farm operation: special cases of very high density, very low density, nomadic tradition.

It may appear that too many factors have to be considered, and moreover that some of them could only be assessed by detailed and expensive research. It might even seem that no general criteria could ever be evolved, so many are the possible variations in local conditions and in the possible permutations of variables.¹⁴ But this would be to confuse the necessities of academic research with the necessities of executive action. Policies, and the administrative tools to carry them out, have to be in some degree rough and ready, dealing with substantial areas and population groups and therefore, inevitably, neglecting exceptional circumstances; "hard cases make bad law." The point of this analysis is not to make a blueprint of a perfect administration, but to reduce the number of really gross mistakes. Research at the academic level will always be able to point to further refinements, but the first step is to chalk out some broad principles. This has not been done in any methodical way so that a fashion for cooperatives, or for the use of commercial banks for credit, or for marketing boards is adopted for whole countries, despite enormous variation in technical and social factors. It is not, in fact, too difficult for a district commissioner or district agricultural officer to ask himself the three kinds of questions here suggested: (1) what are the technical factors; (2) what are the manpower and skill constraints; and (3) what is the social situation—am I dealing with Punjabi farmers or a forest tribe? Indeed, they are subconsciously asked, but without either very clear definition or the power to vary centralized policies to meet local conditions.

Moreover, it would be a fatal mistake to be hunting for either complete or permanent "solutions." As to completeness, experience suggests that a single, remunerative innovation is likely to be a first step in the breakthrough toward modernization; success gives the needed confidence for further advances and refinements. As to permanency, the whole thrust of this argument is that change comes as a series of small, sequential changes, through time, and the organization and institutions need to follow this contour, adapting to each substantial transition.

Two major propositions emerge. First, that administrative and institutional action has to be adapted to situations in a development area *which change through time*; second, that there is a *general direction* of transition, in which the (analytically)¹⁵ separable economic, social, political, educational factors move in parallel, though not necessarily at the same speed. Agricultural development policies en-

¹³ Although I do not subscribe to the school of Professor Everett Rogers in putting numerical values on "cosmopolitanness" or "empathy," these factors are real and sometimes count for more than formal education.

¹⁴ J. L. Joy appears to take this view, though he admits the utility of attempting some rough generalizations based on case studies (see 11).

¹⁵ They are not, of course, really separate, since these analytical concepts refer to closely interacting elements of a society which is at all times a whole.

counter local communities at various points along this line of transition. Cross-sectionally, Kikuyu farmers differ from West Pakot farmers; through time, Kikuyu farmers in 1950 respond differently from Kikuyu farmers in 1970. Some illustrations will be helpful.

Some Practical Examples

Extension.—In the earliest stages, extension will need to gain the confidence of a suspicious traditional community, with high risk-aversion, by a single, sure-fire improvement, possibly through a “community development” type of approach, possibly supported by some type of insurance or guarantee. Quite simply-trained staff may be adequate. As farmers gain both confidence and more technical interest, rather more specialized and professional extension advice may be needed; later, university specialists may be needed to strengthen the technical side. Later still, specialist supply firms (chemicals, equipment) may take over part of the university work.¹⁶

Credit.—Short-term cash credit is extremely difficult to give to communities in the very earliest stages. If it is essential—and this should be questioned, since significant advances have been achieved without it where the innovation is simple and profitable—government action will be needed. At a stage when both a simple farmer organization and some cash savings from improved production are possible, various forms of supervised credit become easier. At a late stage, banks and commercial suppliers are able to take over the burden.

Cooperatives.—If we now take the use of cooperatives as a third example, questions of their social impact and of their economic efficiency will arise. The Uppsala Seminar (*supra*) and the Institute of Development Studies (Sussex) Seminar argued convincingly that the introduction of cooperatives into societies where vertical relationships dominate (clansmen to lineage-head, tenant to landlord, client to patron), the result will be to reinforce domination-dependence and defeat democracy (18, 20). Quite a long period of the transition needs to have elapsed before men of sturdy independence (such as the cooperators of northwestern Europe in the nineteenth century) have emerged in the community and are able to forge the horizontal relationships which formal cooperation assumes.

Secondly, the assumption, in early stages, that much larger cooperative unions and federations can muster the managerial ability to do better than private enterprise is, in the very definition of the early stage, unlikely to be justified; and the record shows this. In contrast, at a later stage, with substantial flows of produce and farmers more able to look after themselves, the choice between private trading, cooperatives, boards, and the like will become one largely of political philosophy, possibly modified by expediency; for by this time more managerial skill will be available for any type of institution.

Politics.—Closely similar arguments will apply to politics and bureaucracy. It is quite a late stage of sophistication when elected bodies are able to hold a balance between political objectives and technical efficiency. If, in fact, important development functions are entrusted to a political body at a much earlier stage, the institution will be used as the staging-ground for a political career, for political patron-

¹⁶ S. S. Johl (Ludhiana) pointed this out to me in Delhi.

age, for Party recruitment, and its effect on development will be subordinated to these aims. In Africa particularly, where an independent political system is so new, it will take time to establish a tradition of subordination of personal or Party aims to the national good, a tradition hard enough to establish in countries with a much longer history of national unity and democratic forms. Statesmanship at the top and a reasonably devoted and effective civil service will have to carry this banner for some time. If their effort can be matched by genuine, very direct and local participation, it might be better to postpone giving major development responsibilities to intermediate political organizations. At least some rational weighing of the gains and losses, short-term and long-term, between political education and development achievement is needed. At early stages it has often been necessary, in history, for a small elite to carry huge responsibilities. The only way to use an elite is to delegate very large powers. It may well be necessary, in Africa at least, to take some heroic decisions in simplifying administration, reducing the cat's cradle of coordination, emphasizing local participation, and institutionalizing political education in ways which put less strain on the development process.

Commerce.—One of the great difficulties in the earliest stages of agricultural development is the absence of a private commercial sector which can take care of the buying and selling and transport of farm outputs and inputs. This absence is entirely natural. Where farmers have very low purchasing power, low productivity, and tiny surpluses to be collected from relatively inaccessible farms, the traders who do exist need very high margins. Often, these margins are attacked as exploitation, but a cooperative or marketing board will also quickly discover to its cost that high costs and risks mean high margins.¹⁷ At a late stage, with better roads, storage, high production, and merchant competition, these difficulties will largely vanish. The gap has to be bridged. While simple farmer groupings (not necessarily full cooperatives) and improved infrastructure will certainly improve this situation, the tendency to fly straight to imposed cooperatives or major marketing boards needs far more caution; in too many cases the costs of those organizations and the low prices they give to farmers may be economically less attractive, especially to farmers, than even the merchant service. It may well be better to supply infrastructure and to license traders with adequate, but not extortionate margins.¹⁸

Technology.—The technical situation has been confused by the availability, on too cheap terms, of tempting and prestigious technologies suited to the late stage of external civilizations. But if we look back to earlier stages of those very civilizations, we shall find a parallel development of technology and total growth. Keith Marsden points out (14, p. 484):

It is significant that, during the historical growth of the now advanced countries, a close harmony was maintained in the development of one sector and another, and between capital intensity and income levels. In the United States, for example, average capital intensity per worker in industry was

¹⁷ The Lake Victoria Cotton Cooperative at one time attempted to take over, with lorry transport, the purchase of hedge-sisal, previously collected by Indian traders on bicycles. The Cooperative suffered heavy losses and hastily abandoned this activity.

¹⁸ See work on traders' margins for fertilizer by L. D. Smith and T. J. Aldington, Institute of Development Studies, University of Nairobi, and work in India by Uma Lele and others.

equivalent to only 1.7 times the average net output of the entire labour force (all sectors) in 1880. In 1948 it was 1.8 times. Variations from one industry to another were relatively small (mostly within a range of 3:1). In other words, industrial investment never 'ran ahead' of the society's ability to save out of past and current incomes.

He adds (p. 487):

The scale of organisation and the kind of technology which goes with it should match the economic and social characteristics of a country. Artisan workshops and small factories using simple equipment may be the most suitable first stage of industrialisation in a subsistence economy with low purchasing power and little monetary exchange, with bad communications and a predominantly peasant population, where authority is vested in tribal chiefs or large landowners. In more advanced societies with a developed exchange economy, a more homogeneous, mobile population and a basic infrastructure, more highly mechanised small and medium factories will take the lead. In the process of time, some of these will grow into large-scale enterprises as they acquire experience, as markets expand, as the level of education and scientific skills rises and as a professional managerial cadre can be developed.

Much the same argument would apply to agricultural development.

Synthesis

From these very brief examples, it is possible to suggest certain broader sequences.

Over the period of transition, government starts with a large innovative, educative, and managerial role. This will diminish steadily toward the later stages and may eventually be confined to general economic policy and influence upon prices. This diminution takes place because other less cumbersome or more specialized agencies—private enterprise, universities, and special suppliers—can gradually enter the field effectively.

In almost symmetrical contrast, the role of the private commercial and supply sector, small at first, grows steadily larger in the later stages; the "modern" farmer will be able to borrow from a bank, get credit from suppliers, read technical journals, listen to radio programs, and largely make his own decisions.

While in the first phase, government action may have to be widely diffused, with fairly simple staff and a simple chain of command; in later stages, staff, possibly fewer in numbers, will have to be more specialized and organization more complex. Such a transition corresponds both to the needs of farmers and to the capacity of government which, as time goes on, will command a higher level of personnel and may also bring an agricultural university into the picture.

In parallel to this transition from simple to more complex, from more to less bureaucratic, will run the adaptation of institutions. For both social and managerial reasons, farmer groupings may well be best to start in very simple form, possibly associated with common use of a facility (water, a cattle dip, threshing machine). More ambitious full-scale cooperation is more likely to succeed when "new men" are strong enough to combine horizontally (cutting across hierarchical control) and when some managerial capacity has been developed. At a late stage, members

may outgrow the cooperative itself, and find more scope and incentive by using commercial channels on their own.

Again in parallel, the twin needs for stronger farmers' organizations and for political development need to be seen in relation to a time sequence, as a more modern rural society moves toward maturity. Three interests are involved—the farmers, the officials and experts of a development administration, and the party political leadership. In the early stages of political enfranchisement, and particularly where politics is inclined to follow ethnic or factional divisions rather than socioeconomic policies, a strong farmers' club may have more to gain by collaboration with the bureaucracy, as farmers, whatever political activities they may pursue as citizens, and it may well be premature and anti-developmental to politicize the farmer groups by making them, in effect, party cells. But later, farmers' leaders are certain to be recruited into party cadres, and political pressure will be needed, at all levels, to keep the bureaucracy on its toes, and to give a first foundation for local self-government. Only at a very late stage is it probable that a complex balance between farmer organizations—and possibly farm-worker organizations—and elected local councils with their own local bureaucracy can mature; and, indeed, farming as an industry will always have interests which go beyond local government to national economic policy and national political influence. Attempts to anticipate this stage, before a substantial layer of "yeoman" farmers is established, both economically and politically, will probably result in capture of local organization by traditional magnates and a landlord lobby in the central parliament; or, alternatively, in a corrupt and economically disastrous party exploitation of the Ghana Convention People's Party (CPP) type. The stage of evolution both of farming leadership and of rural politicization will be an essential criterion in the choice of institutional methods—cooperatives, panchayats, Ujamaa villages, village development committees, farmers' associations, and the like.

Finally, the choice of technical recommendations also requires intelligent timing. The "package" philosophy, combined with very advanced plant breeding and agronomic research, has contributed not a little to increased polarization between rich/educated and poor/ill-educated farmers. For by demanding expensive inputs, both of fertilizer and chemical spray, accurate agronomy, higher labor inputs (or mechanization in lieu), programs such as the IADP may put the hurdles too high for small subsistence farmers, small tenants and sharecroppers. There is much Indian evidence that many small men risked only half the recommended inputs, or chose an improved, but less demanding and less dramatic seed variety, such as Kanpur 60 instead of the highest yielding Mexican wheats. It is interesting that the Puebla Project did not insist upon a dramatic seed innovation but merely on improved practices and services for a maize of proven performance.

SOME CONCLUSIONS

It is perhaps worth pointing, however tentatively, to a few converging conclusions which arise from this paper and from the general conception of growth which I have outlined.

The first is the need for far more accurate knowledge of the rationale of existing farming systems, far more generous investment in physical infrastructure and personnel, and for closer adaptation of research to the real state of farming systems.

The second, perhaps the most critical, is the need for delegation of local policy-making to a local level. It is impossible either to use the knowledge of farm systems or to adapt to the needs of a particular phase of growth unless this is done locally.

The third is to cut off departmental hierarchies at the same level and substitute a field service wholly responsible to this level, concerned not with partial interests but with development. Simplification of the development structure at field level may be critical to success.

The fourth, closely related, is to pick out, from the whole complex of political and democratic possibilities, an emphasis on practical participation at the most direct and local level. The costs and benefits, short-term and long-term, of using the development program as a means of political education need careful weighing, in relation to the experience and resources of each country concerned.

The fifth is a far closer analysis of the probable results of using the various possible commercial institutions, closely related both to the phase of growth and to technical issues.

The sixth is a revision of the pricing and fiscal systems affecting modern technological imports and inputs, so that the technology in fact used corresponds far more accurately to the economic realities of a farming system.

Finally, I have suggested that most of these recommendations fall into a more general framework. There is, I suggest, a range of human situations, moving along a line from traditional society to a modernized agricultural economy. There is a range of technical solutions which have to be fitted to this changing local scene, both as to costs and benefits and as to the availability of skills. There is also a range of administrative methods to choose from; and, again, these must be fitted to the attitudes and capacities of the farming community, to the quality of the surrounding economy, and also to the capacity of the administering authority. Recommendations on bureaucracy and politics, on commercial or cooperative systems, on technology, are interdependent, with a common relationship to the general style and achievement of a society at a given time. Nations have achieved a modest prosperity long before our era.

Herbert Frankel said, nearly twenty years ago (8):

The problem is not to wipe the slate clear in underdeveloped countries, and to write our economic and technical equations on it, but to recognise that different countries have a different language of social action; and possess, and, indeed, have long exercised, peculiar aptitudes for solving the problems of their own time and place; aptitudes which must be further developed in the historic setting of their own past to meet the exigencies of the present and the future.

Harry Johnson, speaking of the inadequacy of gross national product as a criterion (10, p. 642), has described the essence of the development process as

. . . a process of social transformation . . . which can only be effected by a myriad of micro-economic changes, not simply by macro-economic additions of domestic and foreign resources. These changes have to be effected largely—almost exclusively—by the governments and citizens of developing countries themselves, and primarily by the private enterprise (in a very

broad sense) of private citizens—operating of course in an environment set by governmental policies.¹⁹

We are concerned with mobilizing the still under-used resources of land and of human energy. To do so, structures and institutions, the openings and channels, must be at first in a form through which the myriad energies of poor people in a poor country can flow. Only thus will they solve "the problems of their own time and place."

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¹⁹ See also Josef Pajestka's study (17) for a very strong emphasis on the proposition that development, as social and economic change, is by definition endogenous, and can only take place in a style and at a pace which the local society is capable of maintaining.

