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TYPES OF RESEARCH NEEDED AS A BASIS FOR LAND-USE PLANNING

by

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Whether we think it wise or unwise, whether we are ready or unready to undertake the task, the fact remains that this nation, along with many others, has launched a program which involves planning on a considerable scale. This development presents a significant challenge to researchers in a great many fields, and seems likely to provide a stimulus for realistic and purposeful work in the social sciences not unlike that which was given to certain of the natural sciences during the World War. Hundreds of phases of chemical and physical research which had formerly been of only academic interest became almost over night vital aspects of a life and death struggle. Under this intense stimulus great and rapid strides were made, at least in applying the results of previous advances in pure science, and to some extent in the advancement of pure science as such. Such a development very evidently calls for a taking of stock by the various research agencies to see whether their programs and procedures are well adapted for making the most effective contributions under these changed conditions. The brief remarks contained in this paper are intended mainly to be suggestive for further and more informal discussion and make no claim to completeness or balance.

While the research needed in land-use planning is largely in the social sciences, many problems which involve the natural sciences will also need further study and orientation. On the whole, the studies in these latter fields are probably more nearly adequate to the needs of the present program than are those in the social sciences. There is, however, a real need for them to be more definitely focused on the problems before us and for better coordination of the work of researchers in these fields. But it is in the social science fields that demands for new types of study and for enlarged activity seem most urgent. During the war period the major problem was not "what do we want to do?" but rather "how can we do it?" Under these conditions the student in technical fields was in his element. It is his business to find out how to do things, and usually the objective to be attained is relatively simple and easily defined. On the other hand, when our task is that of national and regional planning, a very important phase of the problem is that of finding out what we want to do. To be sure, the problems concerned in deciding how to do it are by no means simple. Yet they are less perplexing and intangible than those of determining what to do. Most of the so-called "New Deal" agencies present both of these types of problems on a scale never previously approached in this country. In neither type is there an adequate body of research or a well-developed methodology adequate to present day needs.

In order to provide a needed background for the later discussion, it seems necessary to digress a little even at the risk of infringing upon subject matter

d to the following paper. This risk is minimized, however, by the fact e subject is so large and so little discussed that no two people are o approach it in the same way.

and-use planning is, of course, merely a phase of planning in general, be undertaken intelligently only in some orderly relation to a larger a more effectively organized society. We have been doing some planning ng time, and the concept of a wholly planless economy with entire for the interplay of individual incentives has never been a reality in times. The constitution of the United States was a bold and courageous in planning. Later developments in the national government of this the have added step by step to the kinds and extent of planning; the acts of/ s have built flesh upon the bony framework of the constitution; the have interpreted and clarified these laws; the semilegislative, semi-tive activities of such bodies as the Interstate Commerce Commission and eral Trade Commission have tended to define certain national objectives devise methods for attaining them.

What then has been brought into the picture by the much heralded "New gencies that was not there before, except the speeding up of an evolution-cess that had long been under way? To answer this question in a rather way: it would seem that the main difference lies in a change from a de- to an offensive campaign, and in a more comprehensive attack along the front. Most of the earlier planning (except the launching of the consti-, the building of the highways, and some aspects of the forestry program) t been in the nature of sorties for the attainment of definite goals but of efforts to prevent encroachment on positions already held.

To carry our military simile further, we may say that a campaign of of-e implies certain goals to be attained rather than the holding of existing ory. It also implies, if it is to be of any considerable extent, a very ate line and staff organization, the staff being responsible for the selec- of suitable objectives and the methods of attaining them. It is here that search agencies come clearly into the picture on a functional basis.

Since time is limited, I shall narrow the discussion to a consideration of ricultural aspects of planning, and within that field chiefly to the ems of land-ed agriculture implies some fundamental and well-considered concept of the which agriculture plays in a plan for the nation as a whole. Thus a planned ulture can be only a restricted, possibly a partisan, concept until such is a more adequate and more widely accepted national plan can be devised. lack of such a comprehensive approach lies at the heart of many of the ems of the National Recovery Administration and of the Agricultural Adjust- administration, and, to a lesser extent, of certain of the other "New Deal" ies. It would be interesting to follow these lines of thought further. are fundamental and the lack of such an adequate basis for dealing with the ems now before us constitutes one of the major weaknesses of the program of present administration. Except as a consistent body of national objectives e developed, the activities of certain agencies inevitably constitute a ing cross fire on the advances by others. This inconsistency has been con-

cuously significant in the relationship of the program of the National Industrial Recovery Administration to that of the Agricultural Adjustment Administration.

While the strictly agricultural approach is not adequate in itself, the gram of planning for agriculture is in some respects on sounder ground than of the other programs now under way. There are several reasons for this. the first place, the problem itself is somewhat simpler and more clear-cut an are some of the others. If we disregard international trade, there is a ewhat definite amount of foodstuffs and fibers needed to supply the nation's nts. To maintain a production vastly in excess of that needed to supply this mparatively inelastic demand is demonstrably an unwise use of resources, cept as foreign outlets can be found. For most industrial and service activies the problem of establishing criteria on which to base planned production otas is much more complex because of the greater elasticity of demand. There s been rather general agreement that agricultural prices of the past decade re too low to be in accord with the best interests of the nation and too low provide a market for the volume of industrial production which is needed for rosperity in other fields. Opinions differ as to how far agricultural prices ould be raised or other prices lowered, but there has been no widespread fference of opinion as to the general direction of the adjustment needed.

A second factor which simplifies the agricultural problem is that for some ifteen years or more there has been in that field an extensive program of athering statistics and making economic analyses, the approach being from a roup point of view; sometimes even from a definitely national point of view. n industry and commerce the emphasis in research has been more largely on echnical problems of production or, if economic, on the problems of the entrepreneur rather than on those of the industry as a whole. The agencies now seeking to deal with these problems from an industry point of view find themselves ith an inadequate body of analytical work on which to base the many hurried ecisions they are forced to make.

If these general propositions be granted, we are warranted in making some ssumptions concerning the ends to be sought in a land-planning program. But even so the ends which must be sought are by no means all clearly before us. One purpose in such a program is evidently that of retiring from production considerable acreages of land which in its present uses or forms of organization annot compete with other lands at present price levels. In other situations the eed is to find means of developing less intensive types of agricultural operation. Heretofore, with our highly individualistic approach to problems of agricultural improvement, we have tended to overemphasize the merits of intensive forms of cultivation, unconsciously assuming that progress lay in the direction of greater intensification. There is for each set of conditions and level of prices and costs some optimum degree of intensity which is probably desirable for the nation as well as for the individual, if we could assume complete fluidity of productive resources. But productive resources are not highly fluid. Farms are relatively fixed in given sizes and tenures, people have certain types of experience and certain locality preferences. All of these provide incentives for types and intensities of production which may not be in harmony with the interests of the larger groups concerned. Here then we are confronted with a wide range of

roblems for the specialist in farm management which demand a new approach and gnificant changes in method. Up to the present, the researcher in farm management has tended to look at the farm about as it is and to confine his attention argely to the problems lying within its fence lines. But if we are to adjust urselves to something which approaches self-sufficiency as a nation, many changes ill have to be made on the farms which continue in operation as well as in those reas where planned changes in major land uses are brought about by government ction. This points to an area approach and to a complex array of problems for he specialist in farm management. His help will likewise be invaluable in deeloping methods for identifying submarginality in lands. Costs as well as reurns must be considered in such identification, and it is essential that the cost pproach be a realistic one rather than a stereotyped procedure which may overlook ighly significant relationships.

Such studies, in addition to pointing the way to methods of operating farms, hould seek to show the relative productivities of given areas of land for each of he types of production for which they might conceivably be used. They will require an effective joint approach by specialists in soils, in plant science, in nimal science, and in economics. There will be need, however, for some modification in the methods used in these fields as well as for those in farm management. hese modifications will look in the main to carrying such studies further beyond he stage of description and classification. This is particularly true of studies n soils and meteorology. It will be necessary to develop more information about he quantitative relationships between given soil types and given meteorological onditions and the quantities and qualities of given crops which can be grown. appings of potential production areas are highly important in any program of estrictive control. The geographical limits within which given products are now rown may not have resulted from natural conditions but from competition with ther crops. A change in the competitive situation may thus alter materially the icture presented by a mapping of present land uses. Hence the need for well-eveloped mapping of potential production areas in terms of their relative productivities for given crops.

Studies should, in so far as possible, look to measurement of the net rent roducible with given types of crop or livestock production. This after all is he basic consideration, from a strictly economic viewpoint, in classifying land both as to use or nonuse and as to type of use. Other considerations may, however, modify the conclusions which would be drawn on this basis. Some of these considerations will be pointed out below.

Studies will be needed which will picture clearly any measurable trends hat will indicate probable future productivities of given areas for given crops; for example, significant changes in water level, pest encroachments, changes in alkalinity, changes in types of product demanded, etc. Here again there is need for effective cooperation by a number of specialists with their activities focused on some jointly formulated answer to given problems, rather than for a series of studies carried out independently.

Much better studies than we now have of the comparative advantages of different areas for given lines of production will be needed if land planning is to be on a safe basis. These will need to present in one comprehensive picture, for a given product, the areas of production, the trends of production in these,

easons for such trends, probable modifying influences, potential areas not oped, and the probable conditions of demand. Classifications of land and ions as to types of land use which do not take adequate account of these area competitive relationships are likely either to break down or to be lly undesirable.

Studies of this type are especially vital where the establishment of some ndustry or form of land use is involved. Seldom do the promoters of such res have in mind the many factors which need to be considered. The American ryside is dotted with the decaying walls of small factories which were pro- by local enthusiasts to whom the developments appeared entirely logical. ul study would reveal numerous situations in which the causes of present lization are artificial rather than natural. Particularly is this true of of the freight-rate structures. In most cases, however, there are rather mental reasons for the existing localization of industry and extremely care- study should precede any attempt to establish industries by public action e they have not arisen through private initiative. Usually the presence of aterials, of skilled labor, of special markets, or of rate advantages has tributed to the existing localization. Any of these coupled with going con- values is almost certain to upset a new venture launched on the basis of l desirability, no matter how evident the latter may seem to the local com- ity. Studies of this type should usually not be undertaken by the land ner directly. He should rather seek to stimulate other specialists to under- e such studies if plans contemplate industrial development. The economist e major interest is in industry or in transportation will ordinarily be in best position to do dependable work on problems of this kind.

Not least among the evident needs is that for a series of sociological dies which will dig deeply into a field as yet scarcely touched. These should k to classify in some rather rough way the alternative opportunities of given ups of people. They will usually make their most significant contributions undertaken as joint studies by sociologists and economists. Investigations ich reveal a relatively low average income in a given area may not provide an quate reason for zoning that area out. It is necessary to determine, at least a rough way, whether the situation is due to the qualities of the people them- ves rather than to the qualities of the land, and whether these same people uld not be in as bad or a worse situation if intermingled with people having gher incomes. These people may very possibly be unequipped to undertake any rk other than farming, and their only alternative opportunity may be in some e of subsistence farming elsewhere. This raises a whole series of problems the broadest scope, even including the question of national ideals with respect the distribution of population.

In still other situations certain intangible factors compensate for incomes t are low in terms of money and products as, for example, a willingness to live less when compensated by the beauties of surrounding and climate to be found a New England or a southern California. These factors are a mixture of psy- ology, sociology, and economics, and are most difficult to attack in any effec- ve way. Yet they must be dealt with on the basis of the fullest possible sdom and knowledge if we are to understand and deal with the varied elevations, pressions, and plains in what has been called human topography. We shall need o study what people want to do as well as what we think they ought to want to do.

There will be need for further studies in government, particularly in government. Here the array of problems is particularly significant. mental institutions have perhaps tended to be undesirably uniform when ap- to greatly varied local conditions. Major areas such as the old south and gland have distinctive governmental types which have grown out of their rent historical backgrounds, but over the intensive farm lands of the corn and the sparsely settled areas of the great plains there is a tendency to p rather uniform types of local institutions. Whether this is desirable, er it is a contributing factor in submarginality, is a problem warranting er study. It is complicated by the rapidly changing conditions which are ing under scrutiny as to their adequacy and desirability all of the local rnmental institutions whether in marginal areas or not. Zoning and large eases of land by the federal government are certain to bring into the fore- nd many problems and to force many adjustments in local institutions for the s affected. Some of these will call for study of private ventures such as es and other service agencies, but most of them will have to do with problems aintaining schools, sizes of governmental units, etc.

This listing of research problems makes no claim to completeness. Nor, on other hand, is there any intention to imply that activity in land planning uld wait upon the full completion of such studies. On the contrary, the land- ning agencies should serve as coordinators and stimulators of research such that indicated. They should lead the way in pointing out the kinds of studies eded. But in the meantime an effective beginning can be made. We know enough w about some areas to warrant undertaking action programs concerning them. In er areas a moderate amount of reconnaissance work would provide such infor- tion as is needed. As the program progresses further it will need more and more turn to the finer distinctions developed by the students of the natural iences, by the economists, the sociologists and the psychologists, and by the udents of government. Such action programs as are undertaken must be along mparatively rough lines. There is some tendency for studies concerning them to e reduced to refinements which are more minute than the significant differences on which programs must be based. It is highly important that relative values nd differences be recognized and that research be so directed as to give signifi- nt direction to action programs rather than meticulous detail which may be of ly academic interest.