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INTERRELATIONSHIPS OF THE SOCIAL SCIENCES IN RURAL WELFARE

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FAILURE to find an approach to the interrelationships of the social sciences in rural welfare which might be of universal or even general character has driven me to a purely personal treatment of the subject, but one which has largely arisen from experiences of many kinds. So far as any universal approach may be possible it probably will be found in a practical rather than theoretical form in *Essentials of Rural Welfare*.¹ As that study runs to something like 17,000 words, it is obvious that treatment in a conference paper must be selective, and the selection must be personal.

The social sciences—perhaps more appropriately the disciplines of study of social phenomena—which it is necessary to consider are:

History: economic, social, political history; study of evolution of economic systems and of economic, social and political institutions; and of changes in economic, political and social thought.

Economics: the study of current economic systems and institutions and of economic relationships of individual, class, group and institutional character; including study of vestiges, growing points and innovations; studies both descriptive and analytical mainly by inductive methods.

Agricultural Economics: an applied science with its main bases in Economics, but with a particular field—agricultural and rural; and with particular need to use inductive methods; and, as an applied science, with special interests and obligations in respect of economic welfare.

Politics: the study of political institutions, national and local; relations between government and citizen and between government, organized groups, and citizens; relations between political institutions and political conditions and economic regression, retardation, stagnation or stability, and advancement.

International Politics: study of existing political institutions with special reference to the avoidance of economic and social wastes in international relations and the design of developments or

¹ F.A.O. Washington, U.S.A., March 1949.

innovations with that object. International economics and international politics will run close together at some points.

¹*Sociology and Rural Sociology*: study of institutions and relationships with influences of institutions and current customs on individual and group activities; interactions between economic, political and social institutions particularly respecting 'population'—increase, decrease, stability, population movements, migration and occupational transfer; causative and related conditions in numerical and structural changes and movements of population; studies mainly by inductive methods.

¹*Social Psychology*: study of individual and group behaviour, particularly as influenced by induced conditions; formation of group and public opinion.

¹*Social Anthropology*: study of social customs and cultural ways of life; adaptations of peoples to environments; adaptations of cultures and ways of life to technical, economic and political changes.

All of these, except history, have been mentioned by one or other of the speakers during the Conference. I have added also a section which has not been mentioned, namely:

Law and Jurisprudence: very often the development of law in theory and in practice follows a long way behind economic development and economic practices. Under many circumstances we need the development of legal theory and legal principles in the work which we try to do in improving economic relationships and economic institutions. Consequently, I have said that in this group of social sciences we should place law and jurisprudence, the study of property rights and institutions; legal regulation of economic relations in contracts and generally between individuals and groups; the legal basis of economic institutions and of state regulation of economic activities; influences of legal institutions on economic and social change and development and on welfare.

The list, however, does not deal fully with sciences and rural welfare. As agricultural economists we are acutely aware of the impacts of the natural sciences, in their applied forms, not only on the agricultural industry itself but on the agricultural and rural

¹ These three disciplines have been combined under the general title *Sociology*: 'Social organization and social structure; population study or social demography; social ecology or human geography; cultural or social anthropology; social psychology; social pathology.' Vide C. C. Taylor, *Farmers in a Changing World*, Washington, 1940, p. 1043.

populations in many aspects of life. The progress of private and social medicine seems likely to set some of the largest and most acute problems which technology and the social sciences may have to deal with. Two further notes seem necessary at this stage. Results of historical study will rarely lead to effective social action concerning current affairs. But historical background and perspective are necessary to effective judgement by those who would apply the sciences of current phenomena in any major proposals for change. As regards law and jurisprudence, there seems to be special need of combined study in engineering, law, and economics, in respect of water supplies and their ownership and use. For provision of water supplies, determination of property rights and uses, seem to be prospectively of as great importance in rural welfare as control of land uses. Those of you who have tried to find any guidance in respect of the economics of water supply will know how meagre is the information on this subject.

A mere indication of the fields of these social sciences demonstrates their interrelationships. It leads to the platitudes—society is at all times one and many; the family is joint and several; the group is one and either few or many (in different cases); groups are formed to serve multitudinous interests and purposes; the individual has many aspects and interests. But the governing platitudes are easily forgotten in the excitement of producing new information or ideas, even of the character of 'more and more about less and less'.

Human and social values. One condition we can never afford to forget when we deal with the social sciences—that in them we are constantly dealing with moral, social, and political *values*. In agricultural economics, as an applied science, we are always surrounded by ideas of values. Technologists, technicians offer us ideas or scales of values which on occasions we must take account of. Economics, even on the strictest of definitions, is based on presumed or accepted social values. Quite frequently we are asked to take account of, even to accept, political values—the political values of one particular nation-State or another. In addition to these, if we are economic realists, we have also to remember that we are frequently enjoined to take into account some social values, and if we look at the agricultural industry we shall not have to look far before we recognize that some general human values are important in its operation. Indeed, though the values pursued change from time to time and place to place, it is operated for human values.

Two sets of values are of particular importance to agricultural economists. The low valuation of human labour in agriculture has

moral and human bases in the family and society as well as directly in economic conditions; indeed, parts of it may still remain with improvement in associated economic conditions. In various circumstances there are endeavours to set up peculiar values under the title of 'ruralism', sometimes with assumptions or implications that 'modernism' is morally undesirable and that welfare is more closely associated with low or medium rather than high levels of material supplies. Conscious, careful examination of the values assumed or adopted is necessary in each of the social sciences and a methodical comparison and examination of the chief values inherent in the theories or principles of the individual sciences may be necessary to their effective use in making policies or plans for rural welfare. I might interject that, if you put an economist and a cultural anthropologist to consider the problems of some societies, you may very soon get a clash of value and concept.

Subjective and objective 'reality'. It may be important to recognize that in all social experience there are two levels of 'reality', one objective, which can be publicly observed and verified, and another subjective, where things seem real to the person involved, but are not immediately capable of public observation and verification. The subjective and objective need not be forever disparate for everybody in all respects, but in certain aspects of life and thought they are apt to be commonly disparate. When they are, the subjective is a solid fact to be reckoned with. The range of objective and generally accepted experience of any social scientist—any agricultural economist—is limited; practically all have areas of subjective experience in which they accept objective tests and their results only with difficulty. Sometimes they will use objective information in conscious thought and speech, but when they have to make practical judgements they will fall back on their subjective attitudes and preferences. This is apt to be particularly true when the judgements are of political character. There has never been greater necessity to examine subjective attitudes, preferences, convictions, than at the present time, when we are thinking of assisting other peoples.

Every agricultural economist, for instance, who essays to carry his specialized knowledge from one cultural environment to another must recognize that his knowledge has been gained in an environment in which certain human values are commonly accepted and that it is applicable in full only where those values are similarly accepted. Even if he does not essay to carry more than his methodology from one cultural environment to another, he may find that his methods are related to acceptance of certain human values which are

not everywhere accepted in the same form or degree. He cannot impose attitudes, preferences, convictions upon other peoples, other cultures. He has to hold his own subjective leanings in check while he learns of the subjective or even objective preferences of other people. And if he is to use effectively his knowledge or capacities, it will be on the basis of sympathetic adjustment of attitudes and appreciations.

Variations in motives and incentives. It appears that one foundation of economic studies on which more assistance of the sociological group might prove useful is that of motives and incentives, the conditioning of economic activities by cultural modes. The following quotations illustrate the point.

China. 'The real incentive to work is a striving not for material gain, but merely for subsistence. When subsistence is secured, the peasants relax and even retire from active work. They are satisfied at the level at which comfortable living is maintained, 'comfort' being defined by the absence of strenuous effort rather than by the satisfaction of numerous material wants.'¹

India. 'With us an average individual man is, to a large extent, the very antipodes of the economical man. The family and the caste are more powerful than the individual in determining his position in life. Self-interest in the shape of desire for wealth is not absent. But it is not the only nor principal motive. The pursuit of wealth is not the only ideal aimed at. There is neither the desire nor the aptitude for free and unlimited competition except within certain predetermined grooves or groups. Custom and state regulation are far more powerful than competition, and status more decisive than contract.'² (Perhaps, anticipating a little criticism, I would agree that there has been in recent years a fairly important break-down in the caste system of India, but more particularly in commercial and industrial circles and in urban environments. On the information which is obtainable the absence of the simple economic motive in the villages is as marked as ever it was.)

Africa. 'It is apparent that the basic problems of Africa's economic development are two-fold. In the areas where economic development is feasible, how is it possible to develop local industries without producing social tensions? In other areas, how is it possible to find the incentive (now lacking) which will stimulate the African to improve his own standard of production or to practise the domestic industries required by an advancing stage of society?'³

I could find a large number of quotations to indicate from record and experience that there are countless conditions in respect of

¹ H. T. Fei and C. T. Chang, *Earthbound China*, London, 1949, p. 82.

² M. G. Ranade, *Essays on Indian Economics*, Madras, 1906, pp. 10-11.

³ *Sunday Times*, July 20, 1952, p. 5.

economic incentives and economic activities not only in what we sometimes call the primitive societies or the backward communities but also in other communities.

There are often two factors involved in the relatively undeveloped economies—the degree of ‘closedness’ or ‘openness’ of the community and its economy, the extent of subsistence and sale-crop production respectively. The higher degree of responsiveness to technical or economic stimuli of sale-crop producers in communities originally of subsistence character is well known. Fei and Chang say, ‘Both attitudes—contentment and acquisitiveness, have their own social contexts. Contentment is adopted in a closed economy; acquisitiveness in an expanding economy.’¹

But economists and even some other social scientists, bred and trained in a free economy and a primarily individualistic society, have had far too little appreciation of community ties, modes, rules, and standards. Most of the world’s agriculture is socially based on the village community—though the size of the ‘village’ may vary between 300 and 25,000 inhabitants. Fortunately, some change is visible, and notably in the U.S.A.

Community development programmes are the best answer to the belief, often expressed, that the most difficult part of reducing agricultural poverty is to arouse the people most directly involved. Here is a movement which calls out the leadership present in every neighbourhood. Improvement becomes a by-word and the direct benefits are so readily seen that the idea often spreads from neighbourhood to neighbourhood of its own volition.²

Again I can find a number of records of experience of similar character supporting that statement.

Social values, nutrition, and incentives. One of the fields in which presumed social values have been widely applied is that of human nutrition and nutritive values and standards of dietary. Here economists and sociologists have taken over standards from physiologists and biochemists who deal only with a very narrow range of human and social knowledge. In so far as this knowledge deals with biophysical and biological factors in human society, it must be taken into account. But while certain standards are set by experts as desirable objectives, it does not necessarily follow that they will be accepted by every family, every class, or every nation. Every human group, from the family upwards, needs to balance its satisfactions, and it is

¹ *Earthbound China*, p. 84; the under-developed communities, the sub-standard groups, are also to be found in highly industrialized nations—e.g. U.S.A., France, Great Britain.

² A. Moore, *Underemployment in American Agriculture*, Washington, 1952, p. 33.

obliged to balance them according to its means and resources. It is difficult to see any overpowering or indeed any sufficient moral reason why the standard of full nutrition should be set as the first objective.¹ It may well be put in its place amongst other social objectives and standards. While many people would agree that it is folly to sacrifice full nutrition to military power, there may be numerous occasions on which such a proposition will be rejected. And I could not agree that sacrifice of full nutrition for military power is socially desirable, or ultimately likely to prove other than economic and social waste. In the forward movement of certain societies a degree of under-nutrition may well be accepted as a necessary condition of the spread of education or even of capital accumulation. But in simpler form, few if any families or other groups are willing, or even able, to sacrifice certain standards of clothing or housing to full nutrition. They have to balance supplies to meet certain primary needs and then to serve certain social satisfactions which have become customary in their particular cultures. If we make full nutrition a first objective, we are attempting to set a new social standard which involves adjustment of other social standards. Before we start on such processes, we need to be quite sure that they will bring higher levels of social welfare and satisfactions than the existing conditions or other alternatives.

The expert nutritionist is not capable of making an impartial judgement; or at least the evidence since the Hot Springs Conference (1943) indicates that such is the case. In so far as it is true that agriculturists have a special economic interest in full nutrition of any or all populations, the agricultural expert is not capable of an impartial judgement on this matter. The agricultural economist who can free himself from assumptions of the special economic interests of agriculturists, or one who has carefully considered the conditions of economic advance of 'backward' peoples, may be able to consider objectively the relation of full nutrition to other economic and social standards. And in so far as agriculturists themselves constitute a high proportion of the undernourished people he will recognize necessities which they are under of balancing primary needs and balancing other satisfactions with the resources which they have. Where the resources of a society are equal to full nutrition, together with fairly equal

¹ It is true, of course, that under the most dire conditions of famine, or short-term shortage of food, a peasant people will sacrifice nearly everything for food supplies. While it may be possible to develop a special theory of marginal utility for food—higher nutrition being necessary to greater expenditure of effort and possibly to greater adaptability in expenditure of effort—getting such a theory, or principle, adopted in practice may present great social difficulty.

standards in respect of other primary needs, and certain social satisfactions of a secondary character—that is, where the condition of full nutrition is economically a problem of distribution of income—various devices can be used to lead the people to higher stages of nutrition. Even so, with greater income resources in the lower income groups, it may still be necessary to establish a new set of relations in social standards, for such lower income groups will not use all their income resources for procurement of food. Their general tendency will be to balance expenditure of new resources towards equal rise of satisfactions over the general range of their previous expenditure. This will be the case where cash income as such is made available, but it will be more or less the case where food subsidies or other devices are used. Where full nutrition and an equal level of satisfaction of other primary needs require an increase in general resources to produce the increase in necessary income, there will be great difficulty in finding the necessary incentives to increase in resources for the purpose of full nutrition. There is, indeed, evidence that amongst peasant people the possibilities of securing satisfaction of other primary needs or of social satisfactions, offer more potent incentives to greater or more effective activities than the possibilities of increased food supplies. Any proposal to make full nutrition an objective of economic or social policy must not only be fitted into an economic system, but also into a general culture. Where general cultures in respect of consumption are fluid, this may be relatively easy. Under these conditions the devices for implementing policy will be more variable than under a rigid, customary culture. Where customs of consumption are rigid, where changes are more easily made at non-customary than at customary points, the incentives to greater or more effective activity for securing higher or full nutrition are difficult to discover and bring into action.

Domestic and small-scale industries. One of the most difficult subjects in the whole field of study, thought, and activity concerned with raising the status and incomes of the people living in the lower economies is that of the place and value of 'cottage' or 'domestic' industries, of handicrafts, of small-scale individual or family production of commodities, largely for consumption, but sometimes for productive uses. So far as has been discovered, no economist has studied the place and importance of these industries in peasant communities, or, more particularly, their place and importance in change from lower to higher standards of production and living.¹

¹ There have been various descriptive studies of these industries in different environments, but little of analytical character.

On the other hand, almost wherever practical efforts have been made towards amelioration or improvements in conditions the operators have been concerned with extension or improvement of these small industries—with improvements in methods and in quality of products, improvements in marketing, with improvement in equipment of existing industries, and often with the introduction of new industries. This has been the case in India and China, but even in Scotland considerable efforts in these directions have been made in crofting and small farming areas.

The form and scale of these industries have been advocated and propagated as a preferable or preferred form of industrial organization—preferable to the more highly mechanized and powered, larger-scale, more highly organized industries. Such advocacy may have been unfortunate, being associated with concepts of welfare as arising in economies of relatively low productivity and low level of income; and of probable or even inevitable continuity of low levels in productivity and income.

Where economists have considered these industries they have usually been concerned with them *either* as supplementary occupations providing seasonal or part-time employment for under-employed labour, sometimes of men, sometimes of women; *or* as offering opportunities of using local resources in raw materials which occur only in small quantities. There are other considerations in the higher economies :

- (a) Continuity of local maintenance and repair shops, such as smiths, harness makers, wheelwrights, &c.; and securing their adaptability and progressive service,
- (b) Combination of the preference of some craftsmen for the small shop with the preference of some consumers for articles of distinctive quality and non-repetitive character,
- (c) Possibilities of producing some semi-repetitive articles of better quality or at lower cost, in smaller rather than in larger workshops, or in rural rather than in urban environments.

But the main questions concern, first, the economy of domestic and small-scale production of goods in common or almost universal demand, mainly or wholly utility goods but often with decorative aspects; goods which could be made of approximately the same quality and attractiveness by the aid of machinery and power and thus made more plentifully and cheaply—with less manual labour in the combined processes involved. Second, the place of this type

of industry and its products in plans and processes of raising the lower economies to higher levels.

It is an easy assumption that these industries with their manual processes will be supplanted in the production of common utility goods by larger-scale mechanical production as soon as capital, knowledge, and experience of industrial organization, and supply of some skilled workers become available. But perhaps there is danger in inferring that the experience of some countries indicates the prospects for others. A great deal depends on the density of employable population; efficiency of domestic workers and their equipment; their requirements in wages and standards of living; arrangements for supply of raw materials and for marketing products. Co-operative organization can do a good deal to overcome disabilities of domestic workers in respect of procurement of raw materials and marketing products as it has done in parts of India. But the fundamental condition of low productivity and low income per worker will remain. Probably larger-scale mechanical production must become very efficient, producing at low cost, before it can overcome the low cost (related to low levels of living) of manual labour in domestic organization.

Doubtless, where a number of unemployed or under-employed people can be set to work in domestic industry, there is a contribution to improvement of the economy. Whatever is earned for manual labour raises the income of the families concerned and of the community. The supply of goods for consumption is also increased. Subject to a very important *proviso* that there is no occurrence of competitive dislocation elsewhere, there is net gain. There is also net gain when the supply of raw materials or of equipment is improved, where the skill of workers and the quality of products are raised. But improved marketing for any particular group may be the cause of competitive dislocation in another group, and that net gain therefore may be reduced or become more remote. A large net gain may be achieved when improved methods spread throughout a craft or industry, consumers are served more plentifully at lower costs, and when alternative employment is found for any workers who are displaced.

Domestic industries have one advantage which is shared by small-scale production in agriculture—they tend to even distribution of the wealth produced; provided always that the merchanting services in supply and sale are organized co-operatively so that the domestic workers are not exploited by merchant organizers on either side of the production processes. One of the practical reasons for preferring

domestic organization of industries is that the workers already have customary housing facilities. They are, or can be, employed where they live. Development of larger-scale units of production, located where fuel or power supplies are available, often creates housing difficulties or requires provision of housing facilities. Production and distribution of electrical power will change this position in respect of certain industries in some localities.

But the subject of supplies of housing, sanitation, water-supplies, and possibly of domestic and other fuel supplies, appears to be one of the less well appreciated aspects of the general problem of capital supply in the processes of advance from a lower to a higher economy.

Innovations and economic advancement. The most important problems currently before social scientists, particularly in some respects agricultural economists, are those concerning conditions and processes of advance from a lower to a higher stage of economic and social life.

The scientist as such, and alone, can rarely if ever be an innovator. Innovations depend on the discoverer or the inventor, and the adapter on the one hand, and the adaptability of the community on the other. Where there is no social adaptability the discoverer and the would-be innovator may be neglected, starved, or stoned. Adaptability in the community depends on many conditions. In an atomized society the discoverer or innovator who can attract to his cause a few people, especially those with capital, may put over his innovation by fairly well-known commercial or social processes. In a closely woven community he may have to win over the whole or a large part of it. He must sometimes win over the people with social prestige rather than those with capital, though sometimes prestige and capital are combined in the same persons.

The condition of adaptability is a condition of free minds—or of considerable areas of freedom of thought and imagination; areas of quickened perception; and areas in which free thought can become practical in the form of action. In this condition of adaptability in movements from a relatively low to a higher economy there has in many cases been a factor of inspired education; often of inspired adult education. The inspiration may come from one or more of many sources—some types of religion and ideals of religious groups; humanism or liberalism; other forms of social idealism; even from political faiths imbued with social idealism. The common feature of these sources is social idealism—practical idealism developing perception, practical imagination, faith, and endeavour. Indeed, I will add the general comment that there is practically no good activity

which is not inspired by some form of idealism, although perhaps we think that is a high-sounding word to apply.

In the more open parts of the national economies in which the relatively closed economies exist, there will be opportunities for individual, and joint-stock or corporation enterprise. And the national communities will almost certainly need to use the newer forms of public or semi-public corporations. Within the closed communities themselves, as they open up, there will also be opportunities for private enterprise. But general and rapid advancement requires the mass enterprise of those who hold and use the primary economic resources. Action by a few individuals and tardy imitation by others is unlikely to be a system equal to current and future needs of advancement in backward communities. Organized community or group action, under inspiration, with technical, economic, and social guidance, seems likely to be the main principle of advancement.

Agriculture and economic progress. There are, however, some specific conditions in respect of agriculture's contribution to economic progress in 'backward' communities—or low-level economies—which might well be discussed before an International Conference of Agricultural Economists. As treatment must be brief, these specific conditions may be stated in the form of propositions:

1. Regularity and certainty of food supplies (whatever the sources—home or external) is the very foundation of welfare. In the first instance this will have reference to customary dietaries. Improvement in regularity, rise in degree of certainty, have been among the prime necessities of economic progress.

2. In a self-sufficient or nearly self-sufficient economy, with 60 per cent. or more of its population engaged in agriculture,¹ increase in agricultural productivity is a *sine qua non* of rapid economic progress and increase in welfare.

3. Effective agricultural progress usually involves two conditions—(a) improving regularity in yield of basic crops, (b) rising yield per acre in the majority (or all) of the basic crops. Improving yields per unit or increasing outputs of total livestock must rest on increasing production of basic crops. Effective agricultural progress in a scheme of general economic progress will also require increasing production per man-year.

4. When economic progress involves transfers of labour from agriculture to other occupations, and particularly when it involves

¹ England A.D. 1700, U.S.A. 1830, Japan and Russia at the starting-points of their industrial revolutions, over 70 per cent.; India, China, &c. 70 per cent. at the present time.

some migration, increase in the sale products of agriculture will be required; increased transfers either through local markets or through markets and transport to non-agricultural areas¹—a very simple proposition but not so simple in action. One of the reasons in India for preferring the development of small-scale cottage industry is that the food can be supplied to the workers in a local market with little transport, a condition which may remain in certain parts for a very long time.

5. Increase and improvement in transport facilities is necessary to agricultural progress and to agriculture's full service to the rest of the community (cf. pp. 161-4).

6. If economic progress is to cover the whole of an economy, agriculturists cannot be allowed to consume the whole of any increase in their physical production. With increasing productivity, in total or per man, and possibility of rising incomes, agriculturists cannot be allowed to retain all the increase and consume it. Part of the increase in productivity and income in agriculture must go into capital saving² or, as I personally would prefer to say, capital creation and savings. Economists keep on using this term 'savings' although they know perfectly well that the bulk of modern capital is never saved in any moral sense at all. It is put aside by directors of public companies and corporations, and the shareholders know little about it.

7. There are various methods of securing this position, namely that agriculturists do not get the benefit of all the increase in their productivity—taxation; exploitation by landlords, or by employers, and investment of surpluses; saving and investment by the larger peasants; transfer to other occupations of workers, or of entrepreneurs and some professional people reared in agricultural families, the latter two groups carrying capital with them. The method or methods adopted will depend on the economic structure of the agricultural system and on the economic and political structure of the nation concerned. But if you think that in these processes of developing an economy exploitation by landlords or employers is all bad, perhaps you had better think again because if, in establishing a peasant proprietary group, you redistribute income it is far less easy to collect taxes from such a group than it is from people at higher income levels. I am not making any moral defence of this situation.

¹ As in the case of housing, local industrial development may be preferred because of easier movement of agricultural produce between producers and consumers.

² It has always so gone, and almost certainly must so go; e.g. the low wages in English agriculture during part of the Industrial Revolution, low peasants' incomes in Japan and Russia during their industrial revolutions.

I am simply pointing out what has been economic and political experience.

8. Against this position it is necessary to offer material incentives to agriculturists and therefore to offer them increasing amounts of the products of other industries and occupations. Incentives and aids to improving agriculture require two sets of external supplies—(a) consumption goods, (b) short-term and some longer-term capital goods. Note that I put consumption goods first. In a peasant system, not subject to radical change in organization, the demand for capital goods will be small and demand for consumption goods is likely to be much larger. On the other hand, of course, if into a peasant system you introduce mechanical power aid, you begin to set up radical changes, and then, of course, there is a change in respect of capital needs and also in respect of the adaptability of this type of economy to changes in the commercial world.

9. Large-scale and long-range industrial developments, wholly or mainly for production of power or capital goods, do not provide general incentives for agriculturists. There is a special case here which should be mentioned. In the case of long-range, large-scale power development, where flood control or supply of irrigation water may be involved, they do of course affect the agricultural group immediately concerned. Apart from this, their results are too remote. They affect agriculture mainly by attracting labour and by creating demand for more sale products. If agriculturists respond, and thus raise their cash incomes, they will make demands for small capital goods, but larger demands for more consumption goods, and if these demands are not met, they will cease to sell. Therefore, the provision of adequate material incentives will require considerable development of 'light' industries concurrently with progress in agriculture and the development of large-scale enterprises in power and 'heavy' industries.

10. Thus there are considerations of adjustments and balances between rising efficiency and incomes in agriculture: the need of transferring part of any increase in agricultural incomes to capital saving for investment inside and (or) outside the industry; the need of continuing economic incentives to agricultural activity; and the need of the general economy for long-range and often large-scale investments.

11. From these considerations arise many others concerning the role of capital in economic progress, particularly with reference to agriculture and rural social life. There is a tendency to emphasize the importance of finance capital in general economic progress, and to

pay far too little attention to local saving and creation, particularly in relation to rural needs and possibilities. The characteristic method of obtaining capital for agriculture and rural services in the early period of developments has been that of creation in material forms rather than saving in the financial forms. External supplies of capital as by international loans, commercial or political, may set free more capital for local enterprises, by increasing the general supply and in particular by reducing the need of taxation. And more local capital may be freed for and attracted to local light industries. But the need for local community effort in creation will still remain. There is much creative work of a capital character which can be done by community effort which will not be done at any early stage if it must await public finance. There is, indeed, much evidence that community efforts have been very effective, particularly in the provision of service institutions. Community plans to meet recognized needs and community efforts under skilled guidance can go a long way towards improving conditions of rural life and raising the efficiency of agriculture and the satisfactions arising from it.

Fertility in resource and imaginative enterprise lie at the root of material progress. Where these qualities are present in a population and are given opportunities of exercise, obstacles to progress are readily overcome.

E. C. YOUNG, *Purdue University, La Fayette, Indiana, U.S.A.*

Professor Ashby has been associated with the International Conference of Agricultural Economists since its inception in 1929. He has contributed largely to the success of the Conference throughout its history, both by giving it his loyal support through thick and thin, and, especially, through his contributions in a series of outstanding papers. In my opinion the present paper is the finest in the series.

Professor Ashby has the peculiar ability to take a refractory subject and by cold logic, tempered by imagination and idealism, open it up for understanding. In the present paper he has followed a careful analytical procedure, first defining and explaining the disciplines and then showing how they relate to each other and how they may be brought to bear on the problems of rural welfare. He then lays before us the general problems of rural welfare, displaying the full range within which the problems lie throughout the world from the almost closed economies of Asia to the almost open economies of the West, and discusses the critical points at which these problems may be attacked. He has a most thought-provoking discussion of innovations and their impact on open and closed economies and the relationship

of innovations to economic advancement. He closes his paper with a summary of specific conditions in respect to agriculture's contributions to economic progress in 'backward' communities or low level economies.

In the short space of time allowed to me I can hope only to provide a few footnotes.

The social sciences, as well as the physical sciences, have their pure and applied aspects. The fundamental position of the pure social scientist scarcely needs comment. He must be insulated from the compulsions and pressures and necessity for compromise always present in action programmes. Only within limits is it possible for him to join in co-operative studies which require a co-ordinated attack on specific problems. Historically, he has been inclined to confine himself to the comparatively narrow boundaries of his own discipline. Nevertheless, he is always subject to the accepted values in the political, social, and economic environment in which he finds himself.

The applied social scientist, on the other hand, finds himself always faced with the complex and specific problems of an action programme and he must deal with, and compromise with, the political, social, and economic pressures which are always present when such a programme is under study. Social scientists have learned something about co-operation in the solution of problems, but it is my impression that we have not been so successful as the physical scientists have been in organizing research teams.

The role of the social scientist is an unusually difficult one when he undertakes the study of agricultural problems in those economies which Professor Ashby describes as closed, economies in which institutional and cultural barriers against change are encountered. The support of the people in such economies must be gained before satisfactory programmes of action can be carried through, but these people are likely to find difficulty in accepting or understanding proposed solutions since their educational outlook is restricted and they accept a scale of values totally different from those implicit in the proposed changes.

The social scientist who attempts to contribute to innovations and betterments in society can play either one of two roles. First, he can propose solutions, then stand aside and allow the practical politician to develop and carry through the action programmes. Second, he may take an active role, join hands with the politician and attempt to carry his ideas into action. In such a situation he may find himself embarrassed, since political expediency is likely to result in excesses.

This danger is not absent even in the open economies where more freedom of thought and action prevail and in which the inhibiting forces of reaction against change are at a minimum. The political and economic action programmes in the United States are a good illustration. Agricultural policies and action programmes which originated in the minds of social scientists and which in the early stages were directed by applied social scientists have deteriorated with the passage of time to the point where political expediency and political excesses prevail.

Social scientists may approach the problems of agricultural welfare from a totally different point of view. For lack of a better name we call this the farm management approach. In recent years it has not been too popular with social scientists because results come slowly and it involves tedious, careful, detailed analysis of small problems primarily in the organization of individual farms and the economic education of the individual members of the farm community so that they may more effectively organize their resources. In my opinion the only positive check to political excess engendered by action programmes initiated from the top and implemented through government action has been the good sense and understanding of substantial numbers of the farm population. In the United States this is the result of many years of careful methodical work by the colleges, experiment stations, and extension services which have given farmers new techniques, new technologies, and created in them the ability to organize and administer their resources to better advantage.

In the long run the betterment of agriculture and the improvement in the welfare of farm people must have its origin in the laboratories and in the management programmes which make it possible to carry these innovations through. Too often people in the field of farm management have been content to rake over the ashes of past experience in an effort to find ways of improving the organization and management of farms. My plea is for a dynamic approach to farm management in which the economist joins forces with the physical and biological scientists to carry innovations through the difficult processes which are prerequisite to efficient production. He needs to turn his eyes forward instead of backward. This constitutes the most productive and challenging area in the field of farm management. And this same principle, I believe, holds true for the other sciences. In order to complete the programme we need to join forces with the other sciences and bring this joint effort to bear on the specific problems of the individual farmers. Perhaps the best method

for penetrating a backward agrarian culture is to expose it at the urban margin to trade, communication, and industrial development. Then, by means of evolutionary processes, the institutional barriers to change will begin to soften and finally yield.

C. VON DIETZE, *Freiburg University, Germany*

In his paper Professor Ashby said that in a peasant system, not subject to radical change in organization, the demand for capital goods would be small and the demand for consumption goods likely to be much larger. I am not going to lay stress on the distinction between capital goods and consumption goods—although, so far as I know, not only in my country but also in England and in this country, consumption goods are regarded as a part of capital by a good many economists. The point more worthy of discussion is the meaning of the term 'peasant system'. As to this point, no doubt, the inter-relationship of the social sciences is most important. I am not sure whether Professor Ashby was prepared to say that the peasant system would never be subject to radical changes in organization, or whether under certain circumstances it might be and under other circumstances it might not. Anyhow, in our continental European understanding of the word peasant or, as we say in German, *Bauer*, we should acknowledge that a peasant system can bring about very substantial changes in organization of farming without giving up its character as a peasant system, as a *Bauernwirtschaft*. And if so, peasants are able to develop a considerable demand for capital goods, which is very important for innovations and economic advancement. In case I have not understood Professor Ashby correctly, I would like this remark to be regarded more as a question than as a comment.

J. D. BLACK, *Harvard University, U.S.A.*

I happen to be one of those who were called upon to review Professor Ashby's paper at the 1930 Cornell meeting under the title 'Agricultural Economics as Applied Economics'. The general theme of that paper and today's is much the same. He described agricultural economics on the first occasion as 'applied' in the sense that it based conclusions as to agricultural policy and programmes on the integration of economics and the other social sciences. His paper today takes up at about the point where the earlier one stopped.

If I do not misconceive what we have just heard, there has been, however, a definite shift in Professor Ashby's position since 1930. At that time he committed agricultural economists to weighing different ends against each other and making a choice among them, of

'making value judgements', to use the more familiar terminology of today. I made the point at that time that economics *could be* a highly useful science if only it took ends as given, and confined itself to analysing means to ends, and that 'value judgements' of economists were likely to be highly biased toward utilitarianism. (I remember the occasion distinctly because I got scolded for it by George Soule in *The New Republic* a few weeks later.) In his paper today Professor Ashby says that economics 'is based on presumed or accepted social values', and so with the other social sciences, and that making policies and plans for rural welfare calls for methodical comparison and examination of the values inherent in the principles of these sciences, but he carefully refrains from committing the economist to making value judgements. This is a subject of wide current interest and is due for much discussion in the next few years. It has much importance in connexion with agricultural extension work in public affairs.

Professor Ashby has chosen nutrition to illustrate the need of combining other satisfactions with biological ones. I merely wish to point out that the biological needs of nutrition are by no means as definite as some of his statements seem to imply. The Food and Nutrition Board of the National Research Council of the U.S.A. is careful to call its standards allowances and not requirements. If the term requirement had been used it would have been necessary to specify what level of activity was intended and over how long a span of life, and to distinguish between different concepts of adequacy ranging from freedom from clinical symptoms to various hypothetical 'superman' optimums. There are those who will insist that health is in a class by itself in the balancing of values, that it is a *sine qua non* of all other satisfactions. It is true that many of us at times sacrifice health for other objects in life. But do we do it knowingly? Good nutrition is not the only requirement for health, of course, but except for what is loosely called sanitation, what else is so essential?

A. W. ASHBY (*in reply*)

Professor Black has mentioned my 1930 paper,¹ but the only thing I have to say about it is that I am sorry so few agricultural economists seem to have read it.

Professor von Dietze and I are not far apart on the question of interpretation of the term 'capital'. In the context of this statement capital goods means production capital. Consumption capital may mean goods for temporary consumption, continually changing con-

¹ 'Agricultural Economics as Applied Economics', *Proceedings of Second Conference, C.A.E.*, 1930, pp. 307-20.

sumption, like foods; it may mean carpets or furniture which are of the nature of consumption capital. But current consumption and consumption capital goods are likely to be the first line of demand in any advancing agricultural community which is increasing its productivity, which in particular is increasing its sale surplus and its money income. The second movement will be towards production capital goods. And when I was using the term 'peasant economy' in this paper, it was in the main, perhaps almost entirely, with reference to what we have been calling the lower economies of backward communities. I would not think of applying the same term to Germany where a different situation exists. When I used the term 'peasant' towards the end of this paper, I was thinking of people working on a very small scale, in essentially closed communities, with low incomes, at a low stage of technical development. I am prepared to accept Professor Black's statement about nutrition standards; I would accept the proposition that health is a fundamental condition of rural welfare, or indeed, of any human welfare. What I have to say is that food and nutrition constitute only one element in the establishment of the possibilities of health. While preparing this paper, I found a number of statements about the necessity of housing, a necessary minimum of housing under different climatic conditions, and about other things, such as water supplies and in some circumstances sanitation and water supplies. Housing, water supplies, sanitation, require capital creation or saving. All these factors are important in the establishment of the conditions of health and we cannot put nutrition in a position where it may unduly restrict supplies of the other factors in the health and welfare situation.