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CO-OPERATION BETWEEN RURAL  
SOCIOLOGY AND AGRICULTURAL  
ECONOMICS IN SOLVING  
AGRICULTURE QUESTIONS

(With special regard to conditions in C.S.S.R.)

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MY treatise needs a few words of introduction, as many members of this conference may have a feeling that co-operation between sociology and economics is self-explanatory and needs no defender; that all really scientific studies in the field of economics cannot overlook the fact that economic processes are at the same time social processes; and that, after all, not only Marxists but all economists know very well, how conditions of production and the relations of people to the means of production influence human life, cause its abundance or poverty, its culture, or decay. And yet there is a difference between accepting this idea of interdependence of sociology with economics, and the realization of this co-operation between them and other social sciences. Some economists do not accept that there already exists such a science as sociology or history, and are making far-reaching deductions from limited factors or are working on a purely dependent common sense. Such isolation is by no means 'splendid isolation' but is a dangerous practice—the more dangerous, as numerical arguments have long gained recognition and respect. On the other hand, contemplative philosophical studies of a sociological character or empirical sociology without satisfactory theoretical and scientific bases, without the language of numbers and sound arguments, might cause equal harm to society. Sociology must respect economic laws and economic conditions, if it wants to be respected as a useful science. In reality all great works from the fields of economics and sociology belong both to economists and to sociologists. These are classical works which have been influencing the thinking of all mankind for centuries. Economic or sociological phenomena do not occur in practice in an isolated way, but always in complex forms in which, of course, one aspect or another may predominate, whether it be of an economic, sociological, geographical, or technical and

biological nature. Furthermore, all phenomena are conditioned by history, and cannot be reliably evaluated or well understood if we are not familiar with preceding developments, with the physical and cultural environment, or if we have no idea of the future trend they can take.

Here we are devoting primary attention to co-operation between economics and sociology, bearing in mind the substantial influence that the biological nature of agriculture and the specific quality of its technology have on both these fields. It would surely be even more correct to take account of relationships not only in economics and sociology, but also in geography and history, but we are simplifying our study by considering sociology and economics as sciences that examine social relationships in their space and development.

Whereas economics is typical as a study of the laws of the relationships of man to the means of production, sociology is characterized by the relationships of man to man, and of man to a smaller or larger collective, and by relationships between the people within the collective. Both sciences, therefore, have a decisive effect on social events and this also determines their co-operation.

Sociology should co-operate with economics in *three ways*: (1) In investigating the general laws of development in agriculture and in forming social-political and economic theories for long-range planning (agrarian questions) on both a national and an international scale. (2) In studying the social relationships in agriculture or of the agricultural population to other classes and social strata, the relationships between town and country, between the governing bodies and agricultural enterprises, between rural areas and the agricultural enterprises—i.e. everything outside the framework of agricultural enterprises and not typical of the substance of agricultural policy and what is usually considered the particular sphere of rural sociology in the broad (but not broadest) concept of this term. (3) In organization and administration of an agricultural enterprise and its different branches. Here both theories apply: on organizing agricultural enterprises and on the sociology of the agricultural enterprise—i.e. farm workers.

In the first category we find problems such as the theory of the development of agriculture under conditions of intensifying industrialization, or the study of the social consequences of the scientific-technical revolution (which, of course, can also be properly studied from the opposite end, as a stimulus to industrialization by means of social changes and revolutions, a change in the production relations and measures taken in social structure, or as problems of the socialist transformation of agriculture), questions of expanding the

food possibilities under conditions of a rapidly growing population (the problem of hunger and undernourishment), problems of international and domestic divisions by region of agricultural production, problems of migration of the rural population, which has acquired current importance, not only between countries with sparse population and with agrarian over-population, but also in densely populated European countries toward which agricultural workers migrate from agrarian over-populated, but at the same time industrialized countries (e.g. the E.E.C.); in this category we find not only the movement of the rural population from the countryside to the town, but also the movement of technicians and specialists from the towns and industry into agriculture (which is now common in socialist countries), the former flight of young people from agriculture (a special problem in advanced countries and an extraordinarily great one in advanced socialist countries, such as Č.S.S.R. and the G.D.R.), problems of part-time farmers and women in agriculture, the position of agriculture in the national economy, problems of agricultural reforms when it is necessary to industrialize agriculture, questions of agricultural co-operatives in its many forms, particularly the socialist producers' co-operatives in agriculture, the specialization and concentration of agricultural production under conditions of capitalism and socialism, problems of state farms and of machine and tractor stations in the socialist countries, organization of agricultural schools (the urgent need to educate farmers in a period of scientific-technical revolution), trade-union organizations, associations of specialists, political organizations of farmers and mutual aid associations for farmers, research and consultative work and the whole field of educational work in agriculture, problems of social insurance for farmers, price incentives and other central stimuli for the development of agriculture and the purchase organizations. This includes also the problems and programmes of the agricultural policies of the different political parties, resulting in economic and social-political measures in agricultural production and in the interests of the rural population. Also included, of course, is the overall conception of the development of agriculture, as is the case under conditions of socialism where, on the basis of long-term and shorter-term plans, the development of agriculture is carried out within the framework of overall plans for the national economy; or the conception of development in some capitalist countries, e.g. the so-called Green Plan in the G.F.R. and various plans and measures that seek, for instance, a rationalization of agricultural production by means of buying up the inefficient small-farm enterprises, attaching them to the

larger self-sufficient enterprises; or the various preferences and advantages given to one category or another of agricultural producers, in order to overcome the lag of agricultural production behind industrial production, or for other reasons.

In the second category we find co-operation between rural sociology and economics on a much more direct level. Here are the relationships of the main classes and social strata with the farmers (under socialism it is a question of the relationships of the working class and intelligentsia toward co-operative farmers and farm workers, especially in the origin of new agricultural professions as a result of the scientific-technical revolution and the creation of large socialist agricultural enterprises which make changes in the social structure of rural areas); a tendency toward a gradual penetration by strata of agricultural intelligentsia into the farmers' co-operative organizations and vice versa (indications of this development can be observed in capitalist countries on the largest mechanized agricultural enterprises and on small farms exceptionally, as hired specialists on a co-operative basis, or as extension agents), problems of reproduction of manpower and the related problems of demography and population studies, recruitment and maintenance of manpower, especially among the young people in agriculture, in agricultural enterprises. Further, there are problems of steering agriculture by higher governmental (and in socialist countries, also, party) bodies, and the purpose and activity of mutual-aid professional and technical associations of farmers, as well as trade-union organizations and other social institutions and organizations; further, the problems of closer and closer ties between town and country, industry, and agriculture, the urgent problems of urbanization or the planning of new residential districts that arise as a result of the industrialization of agriculture, improvement of transportation and services, new requirements for education and protection of health, problems of educating the young people in agriculture, problems of socialist morals and of the persistence of outworn ideas, the social consequences of the seasonal nature of agriculture, questions of use of leisure time in rural areas, relations between different villages or between the residential district and the agricultural enterprise, relations between the different categories of the rural population, and the relations of the non-local trade organizations with the agricultural enterprise and the whole extensive sphere of the cultural development of the rural areas (in a spiritual and a material sense). Of course, it is very difficult to determine the difference between my first and second categories; many of the problems are general in nature, being objects of general

agricultural policy, but have a dominant position in concrete conditions in the villages.

In the third category we find problems of the direct organization and management of the production processes in an agricultural enterprise, questions of the form and nature of work in agriculture, relations between the management bodies and the workers (individuals and collectives), relations within the collectives, problems of a proper use of the knowledge and experience of the workers and suitable forms of remuneration. This includes also the development of the initiative of workers and competition or problems of democracy on the co-operatives, of immense significance in socialist countries, since informal participation in management and in the making of decisions compensates to a certain degree for the former property relationships and the relatively independent making of decisions. (The endeavour to acquire socialist relationships and socialist morality is reflected in the mass movement of the Brigades of Socialist Labour that have shown extraordinary activity in the field of production and in cultural and social life, in the study and introduction of scientific-technical advance, &c. This movement is a subject of study by both sociologists and economists in our country.) Furthermore, there are very complicated questions of setting up work collectives, both from the standpoint of skills and from the standpoint of social psychology, as well as from other social aspects, the question of protection, safety, and health of labour (the culture of labour), the relations between the different branches and sectors of production and their effect on the professional preparation of agriculturists, &c.

This random listing is far from exhaustive of the possibility of co-operation between sociology and economics, but even this brief survey of the problems indicates the direction this co-operation should take. We shall also try to sketch the background of the importance of problems which, of course, have varying significance in different countries and different social situations. Both social systems (the capitalist and the socialist), and therefore economics and sociology in these countries, have been faced with the inevitable problem of the industrialization of agriculture where there formerly predominated, and still does in many countries, backward production and social relationships and methods, and furthermore a low level of concentration of means of production, as compared with the relatively greater development in industry. In many countries there are latifundia, it is true, but concentration usually concerns only the extensively cultivated land and not other means of production; the organic composition of capital is low. As is generally known, the reasons for a lag

in agriculture lay in the fact that the capitalists did not invest so much in mechanizing agricultural production, which could bring only a moderate return on investment. Rapid profits were obtainable primarily from industry and trade, and therefore it was in these fields that investments were also made in research and science. Agricultural science and technique had far less support in the past and still have not reached the level they should have for the immensely complicated problems of industrializing agriculture and because of the complicated biological, technical, and social conditions that still prevail in agriculture, which are of key importance in the national economy.

In countries with a socialist system, the governments have concentrated primarily on the development of heavy industry and on sources of power, in order to catch up with advanced capitalist countries in as short a time as possible, and gradually to overtake them. Collectivization of agriculture served not only to rationalize agricultural production and to make rapid improvement in the efficiency of agriculture, but also to gain more agricultural workers for the speedily advancing industry. Of course the collectivization of agriculture also required immense investment, especially for farm buildings and extensive technical changes in the land holdings. Agricultural science and publicity in agriculture have been considerably improved in this period in the socialist countries. For example, in Czechoslovakia the number of scientific and specialized workers in agricultural science and education has increased at least fifteenfold compared with the period before World War II. And yet the huge problems that have arisen through the change in production relations and the endeavours to industrialize agriculture and put it on a more scientific basis in a short period have not been completely solved. The social consequences of collectivization and industrialization in this period, however, are being assiduously studied. Positive features are generalized; the negative ones are being gradually solved. A fight is being waged on two fronts: the forms of socialist relationships in agriculture are being improved, the organization of work, management, remuneration, &c., are advancing, and *biological* agricultural production is being industrialized. The first part of this task is being solved by Marxist economics and sociology, the second part by biological agricultural science and technique. The biological nature of agricultural production, its dispersion, the disharmony between the production and the labour process, the rapid transition of farmers to the large-scale forms of production, the shortage of skilled specialists and the lag in the technical equipment in the early years of



socialist agriculture made it difficult to industrialize at that time. Large problems have accumulated, which it was not in human power to eliminate during the first few years of socialist transformation of Czechoslovak agriculture—especially since Marxist social sciences, particularly economics and sociology, are only now acquiring and generalizing experiences, seeking the laws of socialist transformation of agriculture under conditions of well-developed countries.

Considerable problems have accumulated in the agriculture of capitalist countries as well. Small individual producers are not capable of assimilating scientific-technical progress and are kept going by various economic and social-political measures. We also know that fairly frequently the heirs to family farms leave agriculture, preferring employment in industrial production. So, even owning one's own property cannot stop the rapid increase in the migration of rural population to towns and industry. In other countries, especially where industry has not been built up, thoroughgoing land reforms acquire current importance; these split up the land, however, and it will need to be united again in a subsequent phase of development. If we add to these difficulties the unequal development of capitalism and the unequal production and natural conditions which make production in some countries considerably cheaper, so that they can flood other countries with cheaper agricultural produce at the expense of the farmers of the importing countries, we do not get a comforting picture.

Both social systems, as a result of the scientific-technical revolution and the rapid growth in population, are faced with a fundamental problem; industrialize or at least strengthen and rationalize agriculture in the shortest possible time, increase its productivity with a concomitant decrease in costs of production. Of course, industrializing agriculture also means creating equal conditions for the use of science and technique in agriculture. We should not err if we declared that this could easily be done. Not only agricultural economics, technique, and sociology, but all science is creating conditions for making socialist industrialization no mere proclamation, but a foreseeable goal. Carrying out this plan depends on a whole series of requirements, especially the most important: to maintain and increase the numbers of well-trained young people in agriculture. Even though we know this problem will be finally solved only by thorough industrialization and by the creation of cultural conditions in rural areas that are like those in towns, it is necessary to consider how, in this transition period, to compensate by means of various economic, technical, and social means for the short-comings in the nature and

organization of agricultural labour, and in the living conditions in rural areas, in order that there need not be a greater loss in active manpower, especially among the young people, than is proportionate to the present state of organization and mechanization. Even now there must be a system of production and organization of social relationships in agriculture which would assure food supplies for the population and cover the export needs of our country.

From this consideration there result the long-term and short-term tasks for rural sociology and the economics of agriculture in our country, as well as for the co-operation of rural sociology with agricultural economics. In the new situation, sociology, with the assistance of other social sciences, especially economics, should carry out an analysis of the social relationships and conditions for development of a socialist society in rural areas. This should be based primarily on a study of the social consequences of the industrialization of agriculture, which has brought with it a number of positive and negative results, not only in the social sphere, but also in production, in health conditions, &c. It should not only learn about and study, but also propose what should be done to make the social relationships and the organization of a socialist society develop in a favourable way, without making production suffer. This all applies to sociology in socialist countries. Sociology in the Western and less-developed countries has its own special tasks and aims, but there also many sociologists must co-operate with economists in studying the possibilities for development of agriculture and rural society—of course from their own class-positions and needs.

Some years ago rural sociology in socialist countries had to force its findings on society instead of being asked for them. This is related to the critical attitude toward sociology which we have witnessed in our countries and which was a result of incorrect notions about the possibility of using the findings of some social sciences, especially psychology and sociology. While sociology did not usually have any concrete tasks given it by governmental bodies (this was only generally true), the same cannot be said of economics. Economic science was used much more in economic and political practice and this helped it considerably. It had a positive effect on the strengthening of its institutions and improving its forms of work. A number of diverse social problems that appeared in our life tended to change this opinion. Sociology is beginning to develop and is being given concrete tasks that are needed to be done in the development of socialist agriculture. The aim of the co-operation between economics and sociology is to have active social and production relationships

which would not only stimulate further successful production activity, but would ensure in addition that the results of the production activity led to a full development of the physical and mental forces of man.

I have tried in another place<sup>1</sup> to show that Marxist rural sociology is essentially nothing but an application of general Marxist sociology to a study of social problems of rural areas, and that for a discovery of the complicated social processes use must be made not only of Marxist philosophy, but also of economics (especially agrarian). Furthermore, the chief principles of agricultural technique and technology must be known in order to understand the social processes that are going on in an agricultural enterprise and in rural areas; also those between the countryside and town, between the two main social classes and the intelligentsia. Marxist rural sociology studies and discloses the action of general laws of development of social life in the environment of agricultural production and in rural areas to the fullest extent, with the internal relationships and with the reciprocal effect of all their aspects, relationships, and processes and the concrete forms in which they appear in this environment.

While we have said that rural sociology is the application of general sociology under rural conditions and in agriculture, and that we cannot dispense with a knowledge of economics—this applies also to the Western conception of rural sociology—or even of the techniques and technology of agriculture, we must draw yet another conclusion. This is that rural sociology as an applied science not only studies and analyses the social relations in rural areas and in agriculture, but also draws conclusions that are syntheses of findings on what the social relationships should be in this environment under contemporary conditions in the near future. Czechoslovak rural sociology in the recent past has often discussed the forms and extent of co-operation between sociology and agricultural economics, and has come to conclusions that satisfy both sociology and economics. A short questionnaire and a series of discussions have confirmed the idea that sociology must deal with problems that will at the same time enrich the theory of rural sociology and also help to solve important economic problems. An example of this would be management and organization, especially social organization, and social relationships within agricultural collectives, relationships between the higher groups and the subordinates within agricultural enterprises, &c. An example of a sociological problem that does not directly

<sup>1</sup> Jan Tauber, 'O pojmu a úkolech sociologie vesnice' (Concept and Tasks of Rural Sociology), *Zemědělska ekonomika*, 1963, no. 12.

concern agricultural economics but has enormous impact on it is the improvement of general and technical qualifications of agricultural workers. Both the level of organization of agricultural production and forms of co-operative democracy depend on a higher level of general and specialized education of leading workers in agriculture and of rank-and-file farmers; a higher education for all workers in agriculture determines the entire development of industrialized agriculture.

We have sketched what rural sociology should concern itself with primarily, in order to be of help to agricultural economics and to agriculture as a whole. We said that in the first place this is a question of improving general and specialized education and of raising the level of organization and management in agriculture. We also indicated that these two problems grew out of the process of socialist industrialization which is taking place in our country. On the basis of our questionnaire and discussions we put, in third place in regard to urgency of problems that both economics and sociology must solve, questions of manpower, problems of migration, and the higher average age of agricultural workers. In essence, this is a matter of retaining and recruiting young specialists to agriculture. In the next order of urgency we put problems of rural urbanization, i.e. the spatial organization of rural areas from the standpoint of development of social and cultural relations. Of course, this problem cannot be solved only by economists, together with sociologists and urbanists, but concerns a whole series of further sciences. With the development of technique, especially of transportation, a striking problem has arisen in regard to size of residential settlement and the level of facilities that should be included in it. Young specialists would not live there, at least in my country, if the villages did not offer them satisfactory conditions of cultural life, good communications, schooling and services of all kinds. The view that the agricultural enterprise will continue to be the dominant feature of rural residence has been corrected, but at the same time the urbanists and sociologists have realized that it is not possible to skip over stages of development.

Next come questions of democracy in co-operative enterprises, the development of initiative, competition, &c.—all important problems in socialist agriculture. Democracy in co-operatives and problems of developing initiative to the fullest extent are questions of organization of labour and management. The questionnaire also emphasizes the importance of studying forms of giving publicity to agricultural progress, which is no less a problem for the sociology of western countries, where this question has been dealt with a great

deal lately. Finally, the questionnaire and the discussions raised problems of rural culture, although these can have great specific weight wherever the fundamental problems of agricultural economics and management have been solved and people do not consider culture a superfluous matter. In some forms especially it stimulates the development of production.

During the last two years Czechoslovak rural sociologists have held a number of conferences, where the present most important tasks of sociology and other social sciences in agriculture became clear. Sociology has divided these tasks into eight groups as to theme:<sup>1</sup> (1) manpower in agriculture, (2) social and class changes in rural areas and agriculture in Czechoslovakia, (3) social and class problems of agriculture in other countries, (4) the sociological standpoint in organizing labour in agriculture, (5) completing the cultural revolution in the countryside, (6) development of material culture in rural areas and questions of living standards of the rural population, (7) the history of Czechoslovak agriculture in connexion with the current problems of the countryside, (8) drawing up a methodology and manuals for Marxist rural sociology. It is not in the power of Czechoslovak rural sociology to solve the hundreds of problems contained in these groups by itself, or even with the aid of agricultural economists and historians alone. The advisory council for social and cultural questions in agriculture, which has acted as a society for rural sociology in Czechoslovakia, has attempted to transfer many themes to various social-science places of work. The centre for rural sociology in Czechoslovakia (the Institute of Rural Sociology and History of Agriculture, Manesova 75, Praha 2), as I have already mentioned, will deal in future years primarily with the complex problem of the social consequences of socialist industrialization of agriculture or, that is to say, research in the social development of rural areas, with a special view to the period of transition to higher forms of agricultural production. Within the framework of this task it will be engaged especially with problems of management and organization of collective farms from the sociological standpoint, particular attention to be given to the problems of working collectives on co-operative farms and the problems of improving general and specialized qualifications of agricultural workers. There will also be studies made regularly from time to time of the views and attitudes of farmers on important social-political questions in agriculture in this country.

I have not said much about how the co-operation of economics

<sup>1</sup> Cf. *Zemědělska ekonomika*, op. cit.

with sociology is actually done. In our case we share team-work and planned co-ordination—we step over the borders of our two sciences in order to see problems from different points of view. In studying the impact of science on the industrialization of agriculture, not only co-operation between Czechoslovak sociologists and economists will be relied on, but also that between sociologists and economists from other socialist and capitalist countries. This problem will be studied and co-ordinated by the recently established Co-ordination Centre of U.N.E.S.C.O. for Social Sciences in Vienna, and a comparison of the results of this work will surely benefit both sociologists and economists.

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I find myself in some difficulty in deciding on my function as the opener of this discussion. I have a number of choices. Shall I restrict my task to suggesting some topics for discussion, selecting them from those touched upon by Dr. Tauber, or should I not rather attempt to bring to your attention the topics which Dr. Tauber has overlooked; or finally should I not pick up those of Dr. Tauber's statements with which I find myself in disagreement or which I believe need clarification? Should I not, by selecting this third course of action, run the risk of becoming involved in too many issues, perhaps of interest to this audience but probably outside the terms of reference of the subject? The temptation to take this latter course is great because, as I see it, Dr. Tauber, in an attempt to present a broad view of the place and function of sociology in his own country, has indulged in a description of problems of agricultural development in the C.S.S.R., a socialist country where state and co-operative farms together account for 90 per cent. of the agricultural land. He has emphasized the points which in his view differentiate that agriculture from the agriculture of capitalist countries. As a result his paper gives us a very comprehensive list of agricultural problems needing investigation in the two sets of countries, but tells us little about the actual collaboration between sociologists and economists. There are passing references here and there, and statements on the need and justification for co-operation, but they remain isolated from the main content of the paper, and are often too hasty to be convincing. An example of these unconvincing arguments is the statement that economics and sociology have a great influence on social events and should therefore collaborate.

With a view to complementing Dr. Tauber's paper I have decided to put before you my own interpretation of the reasons for, and the mode of, collaboration between economists and sociologists. I am aware that by doing so I may appear, and probably am, presumptuous. I shall, nevertheless, be satisfied, and excused by you, I hope, if what I am going to say helps to enrich the discussion. A further note may be in order. Dr. Tauber, as a sociologist, has heavily weighted his paper with sociological considerations; I shall lean in the opposite direction.

My first general comment is that the problems which confront agriculture throughout the world are so complex and the expected changes so far-reaching that undoubtedly there is scope for many forms of inter-disciplinary research; there is even room for collaborating with the sociologists. And I say this keeping in mind the recent statement of a prominent food scientist at a meeting on vocational teaching in agriculture. 'The situation', he said, 'is confused enough, but when the sociologist comes in the confusion is greatest.' He might have had his reasons for saying so. Probably his personal experience with sociologists had not been very happy and the blame could well have been on the sociologists' side, but here one finds a significant example of the prejudices of which there are still too many and which, together with problems of terminology, tend to make the collaboration difficult.

My second set of remarks will refer to the development of inter-disciplinary research in general and of collaboration between economics and sociology in particular. From an historical point of view it seems to me that inter-disciplinary research is: (a) the logical reaction to the trend toward greater specialization which is typical of all fields of science; as well as (b) the natural consequence of the increasing involvement of various scientists in the design of public plans and programmes. When the economist studies the agricultural problems of a given country or region, with a view to suggesting possible lines of development and relevant measures, or the industrialization of agriculture (following Dr. Tauber's terminology), he is bound sooner or later, to come to grips with problems he cannot easily handle alone, at least not with his own tools. Even when the full range of specializations within economics is present in one way or another, the economist realizes that economic development involves changes; that changes are made by persons who in turn must be sufficiently stimulated by their own sets of values or by the acceptance of new ones; that persons act within and are conditioned by organizations, either formal or informal, at different levels, which

also change or need to be changed in order to make development possible or sufficiently rapid; that there are interactions not only between persons, as producers, consumers, and members of communities, but also between institutions; and that suggested lines of development which look good on paper, and could lead to substantial increases in production and welfare, will never become a reality, even with the backing of political power, if they are not sufficiently close to the existing economic and social situation, and likely to be recognized as necessary steps by the people themselves. The complexity of these problems, but above all the basic understanding that people, culture, and institutions have a fundamental role in development explains why there are important schools of economics with strong institutional trends, why various agricultural economists have turned sociologists, or at least have taken up the study of problems which are recognized today as the legitimate field of interest of rural sociologists, and even why economists have felt the need to peep into other disciplines, such as philosophy and history, not as a hobby but in order to increase their power of analysis and to overcome the traditional limits of the profession. What has happened to agricultural economists, or to economists without adjectives, has happened as well to other professions. In Europe, for example, architects working in city and country planning have worked on the relations between the individual units and the territory, and have endeavoured to foresee better combinations, through space, of centres of living and of economic and social activities, and in so doing have discovered economics and sociology. I am sure that the list of examples from other disciplines (demography, geography, history), could easily be enriched by others with experiences richer than mine.

Discovering that for a full understanding of the actual world and for the planning of change a synthesis of various approaches is necessary, and that a combination of concepts proper to various disciplines (as traditionally understood) is highly desirable, does not automatically lead to co-operation between the followers of different disciplines. Discovering the usefulness of other approaches and other theories may in fact lead one into the temptation of developing one's own 'economics' and one's own 'sociology'. Naivety and prejudice are often responsible for this reaction—prejudice that recognized economists or sociologists will not understand, or will not be modest enough to listen to the other's points of view, not objective enough for genuine co-operation.

The limited experience I have shows that true co-operation can take place only when there is a minimum common denominator



among the interested scientists and professionals. I would like to term this common denominator cultural affinity, by which I mean: (a) a common or similar conception of the role of science in the understanding of social events and of its contributions towards the building up of a modern society; (b) an objective attitude to the developmental trends in the goals and structure of society in the sense that what matters above all is to understand the reasons, and only afterwards to estimate the probable alternative lines of development, subject to selected assumptions; (c) a realization that nothing is absolute, that one cannot master more than a given amount at one time, and that the search for explanations and solutions is endless. One problem calls up another problem, otherwise there would be no place for science and for scientists.

Basically, the conditions which favour successful collaboration between economists and sociologists, seem to me, *mutatis mutandis*, not very different from those which make for solid and genuine co-operation among farmers: reciprocal trust, good will, consciousness of one's own limitations, appreciation of the benefits to be derived through co-operation. If this analogy with agricultural co-operation holds true, then it must be true also that lasting collaboration among research workers can survive and prosper only on fertile ground prepared through formal education as well as through action. Much can be done in the formulation of university curricula by enlarging the theoretical background, as well as by familiarizing the student with a variety of methodological approaches which help to bring forth the limitations of each discipline and the advantages of inter-disciplinary research. While formal instruction may yield good results for those students who will be involved at an early stage in actual operational activities, and therefore will not as a rule become research workers, it will not by itself lead to co-ordination of economic and sociological research. For teachers at the university level, and research workers, collaboration will continue to be an accidental fact rather than a common and accepted practice unless a serious effort is made to break down barriers due to prejudices, heterogeneity of symbols, and refusal to assimilate, or at least to understand, concepts that constitute the theoretical framework of other social disciplines. More needs to be done also to institutionalize co-ordination, for instance, by establishing inter-disciplinary research centres (of which already there are examples in many countries) at the regional and/or national level, to study development problems, and to help in the formulation of objectives and in the design of programmes. The closer these centres are located to real problems the greater is the probability of

successful collaboration between different disciplines, partly out of necessity (it is difficult to escape one's own responsibilities) and partly because it is easier to perceive the complex nature of the problems. However, institutionalization should not be confined to the mere pooling into the same place of students of various disciplines recognized as important for certain goals, for this still carries with it the danger that each one will concentrate only on some problems, probably of common interest, and pursue his own objectives quite independently. Truly, an arrangement of this sort is better than no arrangement at all, but are the results likely to be satisfactory? Are they worth more than the additional cost and effort? Maybe, separate research bulletins, or articles, or even chapters of the same publication, will be written on the economic aspects and on the social aspects of the problems under consideration, but what usually will be missing is a third bulletin or article or chapter bridging them, integrating them.

If we are striving for something better (and this seems to be within our capabilities), arrangements should be sought by which economists and sociologists jointly select the problems to study, jointly decide on priorities, and formulate their respective research projects in close collaboration. Projects carried out by sociologists need not be unduly restricted to sociological considerations, or vice versa. To avoid a costly rediscovering of theories and methods already available, it seems highly desirable to have joint participation in the implementation of projects. Different approaches obviously need to be used, that is to say, those approaches must be used which are the most appropriate to the analysis of the single elements of any given problem. But again, plans of work should be so scheduled as to permit a periodical exchange of results, discussion of assumptions, and revision of hypotheses. It may well be that integration of partial results is necessary at the conclusion of one phase, prior to tackling the succeeding phases of a joint project or even of separate projects with deeper insight and a final gain of efficiency.

The essence is to identify the real problems, to understand their causes, to foresee their outcome, and to reach conclusions. Some of these are likely to have mainly an economic content, others mainly a sociological content, but their inter-relationships need to be further examined, until an integrated analysis is obtained. It does not make much difference whether this integrated analysis aims at the development of concepts, at setting the basis for further research work, or at suggesting solutions to action agencies which will translate them into operational terms. If any distinction needs to be made, then I

would suggest drawing a line between, so-called, applied research to which I have mainly referred so far, and pure research. The latter, having the objective of developing theories and research tools, should enjoy a much greater amount of freedom. It may be sufficient then to ensure, through a feed-back process, that those working mainly in pure research are aware of the actual problems, as they appear and develop, and consequently are cognizant of the contributions demanded of them.

M. CÉPÈDE, *Institut National Agronomique, Paris, France*

In February 1946, the Farm Foundation brought together in Chicago both American economists and rural sociologists, and some fortunate foreigners who took part in an attempt at co-ordination between the two disciplines, with the object of resolving a particular problem. This was the Land Tenure Conference which produced a very remarkable volume, *Family Farm Policy*, the editors of which were Dr. Ackerman, and Dr. Marshall Harris. In the course of this meeting, during a fairly spontaneous discussion, we saw two groups emerge. An economist declared that the sociologists had no idea what was meant by income, and a sociologist replied that an economist could not know what the concept of well-being was. In haste to take part in this debate, I had to admit that in France we had not reached a sufficient degree of specialization, and that in the study of rural conditions we retained a general approach to the whole man who, at one and the same time, has the economic desire for greatest gain and the sociological aspiration to greatest well-being. But the dialectic of science imposes itself upon us. If we wish to learn more on any subject we must specialize, while for the resolution of concrete problems, we know well enough that an inter-disciplinary approach is necessary. Even in France, where we attempt to provide rural economists and sociologists with a basis of technical knowledge, the rudiments of sociology to both economists and agronomists, and some idea of economics to the agronomists and the sociologists, it must be admitted that research at least demands specialization. A young school of rural economists specializes in 'greatest gain', a young school of rural sociologists in 'greatest well-being'. The application of their work requires their co-operation, their co-ordination. On the national level it is not yet very marked. Indeed, our Société Française d'Economie Rurale, from its beginning, intended to keep the term rural economy in its widest sense. And it is only this year, to avoid any confusion in our readers, that on the cover of our

review, *Economie Rurale*, we have stated 'French review of rural economy and sociology'.

Dr. Tauber has mentioned a number of subjects which make co-operation necessary. Dr. Barbero has added some more, and I think that we need to bear in mind much of what has been said. Besides, if I merely wished to list the sociological problems discussed in the preceding sittings of this twelfth Conference, I should run over my speaking time. Do not think that I wish to apply to our economist friends the remark of Apelles to the shoemaker: 'Shoemaker, stick to your last', 'Ne sutor ultra crepidam'. On the contrary, I am delighted by these preoccupations which prove that they have not specialized to the point of becoming quite inhuman, and that they do not confuse man and society with models of extreme simplification.

On the international level, the International Committee for Co-operation in Rural Sociology, as you know, decided that its first world congress should take place, not only in the same year, but even in the same place—it was to have been at Reims—as your twelfth Conference. We did not go so far from Reims as you have; we only went as far as Dijon, but we did keep to our intention of having our first World Congress there in the week which has preceded this twelfth Conference. In that congress of sociologists far more than half the participants were rural economists who had changed over to sociology, and I must add that about forty of them have remained faithful enough to rural economics to be here, after Dijon, at the twelfth Conference of Agricultural Economists. I think that this proves that on our side there is a desire for co-operation, a desire, in spite of the need for specialization, to get back to a total conception which will require the co-operation of our two disciplines.

K. U. PIHKALA, *Institute of Agricultural Policy, University of Helsinki, Finland*

I am not yet sure how well research in rural sociology can help practical policy, but certainly there are questions which cannot be answered by economic research alone. I regard the future of small-scale, or family, farming as one of the more important problems. I still believe in family farms and claim that, even from an economic point of view, they are not so weak as has often been said. I admit that small family farms can be efficient only if their co-operation with other farms of the same type is well developed. In such co-operation the family farmer has to take some risks, because he cannot always be sure, for example, that the machine which is used in common is

available when it is most urgently needed. The agricultural economist can help to estimate the improved economic results which are obtainable only if co-operation is possible and timely. He may say that if there are three sharing a machine, the saving in costs is such and such, and that if there are ten, it is such and such. But he cannot predict what will happen in reality. This depends on whether or not the sociological and psychological conditions for co-operation exist. Take another example. It may be calculated by an economist that a collective farm of given size would produce a given product at certain costs lower than those of a small owner-occupied farm in similar conditions. Such calculations are fully realistic only if we can eliminate the human factor. For example, if we could imagine perfect automation of operations, then we would need only the running speed of machines for our calculations. If there are men, we know that they need incentives, which often have a decisive influence on the efficiency, not only of the labour, but also of the management. But the economist in this case, too, is unable to make predictions.

Co-operation with rural sociologists, if it is successful, may give the needed answer. I do not know sociological methods well enough to be sure of it. I have some doubts, for example, about the usefulness of the interview method in such situations. It is only in action that men express their real opinions, especially when they must take risks and responsibilities and when they have two or more choices before them. But sociological science can work with experimental methods also, and I have more confidence in these.

In Dr. Tauber's list of study themes there are no propositions relating to comparative studies of family farms and collective farms. In some socialistic countries, especially Poland and Yugoslavia, there would be very good opportunities to make such comparisons, and Israel would provide very interesting material, too. What is important in these countries is that both systems of farming exist simultaneously. If full freedom of choice and equal opportunities also exist, the popularity of the respective systems may appear in the extent of movements from one system to another.

J. J. SCULLY, *Dept. of Agriculture, Dublin, Ireland*

There are several points in this paper which I feel inclined to comment upon, but to save time I shall take issue with the speaker on one point only. Dr. Tauber states that as a result of the scientific-technical revolution and the rapid growth in population, both the socialist and the capitalist social systems face a fundamental problem, namely, to industrialize or at least to strengthen and rationalize agri-

culture in the shortest possible time, and so to increase its productivity with a concomitant decrease in production costs. He further states that one of the more important requirements in the carrying out of this plan is that the numbers of young people in agriculture must not only be maintained but actually increased. There appears to be a high degree of conflict between these two statements. By the industrialization of agriculture, I am sure he means that farm holdings must be made larger so that mechanization on a fairly comprehensive scale may become economically feasible, and the rewards to other factors, notably management and labour, may be correspondingly increased. We must recognize, of course, that labour and machinery are substitute resources in farming. At the level of the individual farm, therefore, mechanization in any degree or form is economically sound, at any given level of production, only if the addition to current machinery costs is less than the cost of the labour which it displaces, or if the increase in the combined costs of labour and machinery are less than the additional farm output which is generated. In terms of the national economy as a whole, unless the labour displaced from agriculture is economically absorbed into the other sectors without any loss in real wages, total welfare will be reduced. This fact is of paramount importance to countries in the initial stages of development where, as yet, there is a large proportion of the native population in farming, and where the degree of industrial development necessary to absorb the surplus farming population has not been achieved. The technological development of agriculture, as we know it in the Western World, means among other things that a progressively smaller number of workers is needed to produce any given quantity of food and fibre. As the real incomes of consumers increase with general economic development, a smaller proportion of these incomes is spent on food. Consequently, one of the great problems facing agricultural policy makers is to seek ways and means of reconciling the rapid progress in farm technology with the relatively low-income elasticity of demand for food. It is precisely because of this problem that agricultural incomes can be maintained at a satisfactory level only if the number of agricultural workers declines during the process of economic development. There is a great need, therefore, to increase the rate of labour mobility to the non-agricultural sectors of the economy. Furthermore, it is important that those who remain in farming be sufficiently trained to avail themselves of all that modern farm technology has to offer. In the final analysis, the architects of agricultural policy should aim at achieving equality of real income between farm and non-farm

occupations. Economists, rural sociologists and, among others, those whose responsibility it is to develop and co-ordinate educational programmes for rural areas, have an important part to play in this. The reduction in agricultural manpower can be achieved in two ways. First, by ensuring that the members of farm families who have no real future in agriculture, are educated and trained for other occupations at an early age. Secondly, by providing incentives for redundant farm workers, and for farmers whose holdings are not potentially viable, to seek other occupations. The education of farm youth does not present any major problems in the majority of cases. To a very large extent it can be achieved through the provision of vocational training courses in rural schools. The case of adult farmers and farm workers is far more complex. If they are to obtain something other than unskilled occupations elsewhere, they too must be provided with vocational training, possibly through the medium of adult education courses or specialized advisory services. Furthermore, they will need some concrete information on the alternative employment opportunities which are available. If the social structure of the rural community is to be preserved, the location of rural industries in areas of surplus agricultural population may be a worth-while venture. This would be specially desirable for those in the older age groups, so that they could continue to live in their present homes and so avoid the necessity of changing their whole way of life and the social maladjustments which this would entail. The education and training of those who remain in agriculture is equally important. The farm youth who aspires to become the farmer of the future, should receive a basic agricultural training at an early age, preferably before he has left the primary school. The establishment of farm youth groups of an educational nature, such as 4-H or Young Farmers' Clubs, should be fostered and encouraged whenever and wherever possible, and farmers' sons and daughters prevailed upon to take part in these activities. The education of adult farmers is the primary responsibility of the extension services. Many farmers do not easily accept information about modern farming practices. Some continue to practise out-dated methods and are influenced more by old customs, and traditions than by the more up-to-date technology of modern society. There is wide scope for co-operation between extension workers, economists, and rural sociologists in the breaking down of this communicational barrier. Many farmers are too old to bother with modern practices. It is to be assumed that any schemes designed to encourage them to retire from farming and to transfer their farm property to their heirs should have beneficial effects.

Lastly, the location of industry in rural areas, which I have already mentioned, will provide extra income for those who wish to continue farming on a part-time basis. In addition, this should help to keep the young and more active people in the countryside. Thus it will help to create a more balanced age structure in the population, and at the same time, facilitate the provision of public services in rural areas. For this reason among others it is one of the important items to be considered by economists, sociologists, and others who are concerned with rural development. If there are no possibilities for the development of rural industries, it may be better to approach the problems of depressed areas from a social rather than an economic point of view. In other words, it may be well to consider the administration of welfare schemes designed to keep these people in rural areas, where they are producing something, however small it may be, rather than move them to urban areas where, if they are not equipped to undertake some worth-while occupations, they will probably finish up on welfare assistance. At the same time, educational programmes for such rural areas should be stepped up. This would ensure that future generations would not be condemned to live in the same sort of depressed conditions, but rather that they would be fully equipped to avail themselves of the alternative employment opportunities which the non-agricultural sectors of the economy have to offer them.

H. DARIN-DRABKIN, *Ministere de l'Habitat, Hakyria, Israel*

I should like to formulate some suggestions on the co-ordination of sociological and economic research in the realm of rural economics and sociology. Sociological research in the rural field has a special importance, because if the relations between man and man are the field of sociology, and the means of production are the domain of economics, then we must bear in mind that in rural economies the means of production called the land is very closely linked to man. This being so, the relations between man and the land are of the greatest importance in rural economics, like those of man and different industries in all realms of economic activity. The great diversity of rural economy determines that the human element is also important to the economic result. And if we discuss the problem of family farms and large farms, the discussion has an economic significance. If we seek to make a study in depth, we shall see that there is no solution for everyone. Without thorough sociological research we should not get the true results.



I am here as the representative of a country which is not classed as socialist, nor is it purely capitalist. Israel is a country of mixed economy and society, and for us there is a very important problem. In agriculture we have 70 per cent. of production organized in collective and co-operative farms, and 30 per cent. in ordinary villages with family farms with only certain co-operative services. So for us research to establish the greatest efficiency of the different types is of great importance. It is especially important that modern agricultural techniques should be introduced into the social milieu, as yet insufficiently developed, of the people who have come from the countries of Asia and Africa. We have seen that the human elements are of primordial importance, because the organization of the village, the behaviour of the leaders of the village, the attitude with regard to traditional authority, the human elements who are responsible for the introduction of agricultural techniques, determine much. We cannot break the spell. We have to adapt ourselves. We cannot introduce modern methods by the means used in developed countries. We have found that, if one hopes to achieve maximum results in agriculture with a minimum of existing means, it is necessary to take the human element into consideration. Above all, in developing countries it is necessary to take tradition and custom into account. Tradition is sometimes an obstacle to the introduction of modern techniques, but there is also a tradition of a community which facilitates the introduction of the modern co-operative. The factors of tradition and custom are stronger in agriculture than in any other economic field. This is why the co-ordination of economic and sociological research to economize capital and human effort should accelerate the process of adaptation of modern techniques to the traditional social structures of the ordinary villages, especially in developing nations.

R. BIČANIČ, *Zagreb, Yugoslavia*

Professor Tauber has given us quite a list of difficulties in his country which shows that socialism is not heaven on earth but that there are serious problems which sociologists try to solve. I appreciate his rational and scientific approach to the problems. Today we are witnessing a revival of rural sociology in countries of Eastern Europe. We have papers from Hungary, Poland, Yugoslavia, and Czechoslovakia, and I believe that a re-edition of the works of Tschayanov is being prepared in the U.S.S.R. All these phenomena are in a way a part of a process of re-examination of values of industrial society. If I say industrial, I mean industrial in both

capitalist and socialist countries, and countries in the process of development which expect too much from this kind of society. The works of numerous authors, from R. Aron to Galbraith himself, the attempts at neo-Ghandism in India, the papal encyclical *Mater et Magistra*, the search for new economic systems in socialist countries, all these phenomena represent efforts to escape from the frustrations of the 'Affluent Society'. A week ago at the World Rural Sociological Congress we discussed this problem of the relationship between sociology and economics, and the agenda of that Congress could be almost exchanged with the agenda of this Congress. We could say that there were two different approaches; the integrationists and the segregationists. The integrationist group said that all problems were economic or that all were sociological. The segregationist acted in such a way that all the problems which the sociologists could not solve they shifted on to the economists, and the economists did the same for the sociologists. In the field of comparative advantage which we discussed recently, the lack of co-operation was felt and, in connexion with this, I would make a suggestion to our academic organizers, that the problem of social gains and costs be placed on the agenda of our next meeting. What I am thinking about is sometimes called the external economies and dis-economies, uncompensated costs, concealed benefits, indirect costs, or social gains and losses. This is a wide field where private costs and returns frequently get blurred. To the rock-bottom agricultural economists 'who stick to hard cash' I would say that it is sometimes possible to be penny wise and pound foolish. While they exert themselves to make money on a micro-economic scale, they might be losing millions in the macro-economic activities of others. It has always been a policy of our Association to break out of the rather narrow scope of agricultural economics and to get away from the isolation which has always been a danger. I would suggest that we follow the same rule, and try again to widen the field and study more closely the social gains and costs in connexion with agriculture. This is a great challenge, but I am sure that our Association can meet it.

G. A. MARSELLI, *University of Naples, Italy*

We have to thank Dr. Tauber for giving us a picture from the 'East-side', so that we can better understand how co-operation between rural sociologists and agricultural economists is accepted in Eastern Europe. But I have the impression that the situation in those countries is not much different from that in our Western countries,

with the sole exception of the United States of America. From my personal point of view—and now I do not know if I am speaking as a sociologist or as an agricultural economist; I am interested in both disciplines—I would have valued it more if Dr. Tauber had underlined the necessity, particularly in this period of rapid and profound changes in every rural society, of asking rural sociologists for help in solving the problems of the rural sections of our communities. This help should be independent of political considerations. We cannot forget, of course, that rural society as such, being always a section of a larger society, has to be studied according to its historical and political components. It is only if we agree on this point that we can hope that rural sociology will be accepted and, better, will be asked to contribute to the improvement of the agriculture and of the way of living in our countries. It is clear that everywhere, with the exception as I said of the U.S.A., there are still many prejudices against rural sociology, although social researchers are consulted, especially by policy-makers. We cannot deceive ourselves into thinking that we can solve our problems only with a technical or economic approach; the human factor, its culture or *Weltanschauung*, its attitude and behaviour are very important and cannot be neglected any longer. In this respect we have to adopt a more scientific approach if we wish to reach our goals.

I am afraid that the three ways indicated by Dr. Tauber for co-operation between these two disciplines are somewhat general and undefined. Rural sociology can contribute in many more at the present time, regardless of the type of society. We, and now I am speaking more as a sociologist, have a duty to be more exact in explaining how we think we can stimulate this co-operation. For this reason I believe it is advisable for the majority of rural sociologists to be trained in agricultural economics; in this way they can be a good *trait d'union* and make it easier for our discipline to be accepted. On the other hand, we must refrain from using a sort of jargon when illustrating our methods and offering to co-operate with other disciplines. It seems to me much too dangerous to entrust this co-operation to the three ways indicated by Dr. Tauber.

Above all there is rural society with its problems, its culture or *Weltanschauung*, its communities, and there are many socio-cultural changes in it, brought about by different agents of change which merit our attention. We have to convince our colleagues that every technical or economic decision is the result of a very complicated process in which the socio-cultural components have their influence, especially on the individual farmer. I would say that our contribu-

tion has to start from the farm, and progress through the small community, the region, and, finally, to the nation.

To conclude, I would like to confirm my agreement with Dr. Tauber's paper, but at the same time to open as wide a discussion as possible with our economist colleagues with a view to reaching these goals: (1) To show what we can do to help solve the present problems of our rural societies. (2) To make it evident that we are going in the same direction and, I hope, on the same path, knowing both the starting-point and the goal. (3) To affirm the importance of certain aspects of rural societies, such as their ability to adopt new technologies, in changing and improving themselves with a low social cost. These are decisive for assuring a proper development not only of the agricultural sector but also of the whole economy of a country. (4) To lay a bridge between rural sociology and agricultural economics in order to stop the kind of misunderstandings which are no longer to be tolerated.

I am glad to remind you that there has been a European Society for Rural Sociology since 1957, which has organized four congresses so far (1958 at Louvain, Belgium; 1960 at Vollebeck, Norway; 1962 at St. Wolfgang, Austria; and the last one at Dijon, which was also the First World Congress of Rural Sociology in collaboration with the American Rural Sociological Society). Since 1958 the F.A.O. has established an *ad hoc* Working Party on Rural Sociological Problems for Europe, which is now a part of the European Commission for Agriculture. Also, since 1958-9 two national Rural Sociological Societies have been established, one in Norway and the other in Italy. If you would be so kind as to accept our invitation to attend the meetings of all these societies, it would help us to a better understanding of each other.

M. BANDINI, *Rome, Italy*

Dr. Tauber, drawing his inspiration from Marxist theory, sees economics and sociology as a function of evolution. One may agree on the importance, although not an exclusive importance, of this concept, but not without critical consideration. According to Dr. Tauber in both the economic and the sociological frame of reference, this concept then becomes 'normative' with regard to agrarian policy. I do not myself greatly care for 'normative' systems, especially in their most redoubtable form, represented by long-term planning. The discussion could be carried to great lengths, but unfortunately all I can do is to offer a simple list of objections.

Dr. Tauber opposes capitalism and socialism in dialectical fashion. But is the agriculture of Western Europe and North America really capitalist? If by this term we understand a social and economic system in which capital is the *grand seigneur* or the big boss, nothing is less true. Capital is simply an instrument of production and a servant of enterprise. What characterizes the situation in Western Europe and the U.S.A. is free activity. It is the capacity for intellectual and manual work which counts. If we give capital its role of an instrument, considering it in its technical forms (machines, fertilizers, irrigation works, buildings, livestock, &c.) it becomes clear that it is in Western Europe and the U.S.A. that capital-as-servant is most employed in agriculture. The organic composition of capital, as Marxist terminology has it, is certainly not in decline in our agriculture, as Doctor Tauber seems to think. The increase in technical capital has permitted the maintenance of high-production levels even with the decrease in rural population.

What is equivocally called the industrialization of agriculture does not imply the creation of large farms, more-or-less collective (to me the word collective is synonymous with economic inefficiency and social depression). To industrialize agriculture means to have, surrounding a core of free family agricultural enterprises, a network of agricultural industries (also based on the co-operatives) which complement and, in certain sectors, reinforce the economic efficiency of the individual free enterprises. But all these enterprises separated from the farm, whether co-operative in form or not, must be at the service of agriculture, not vice versa. I am very much afraid that in this particular form of collectivized agriculture, which leaves a certain role to the family farm, it is in reality the co-operatives which give the orders and choose what is to be grown, decide the long-term planning, the use of machines and technical methods, and compulsorily sell the products. Free enterprise is then an illusion.

Marxist theory has always been in favour of large-scale enterprises. Karl Marx's contempt for family farms is well known—'destroyers of soil and labour'. Lenin wrote violently against family enterprises. But the whole historical evolution of Western Europe and the U.S.A. has shown that things have gone very differently from Marxist evolutionary theory. One cannot agree with Dr. Tauber when he says that individual producers are not capable of assimilating progress. On the contrary, it is to them that we owe it. They do not destroy soil or labour, quite the contrary. The Marxist theory on the subject of 'absolute' income from land (*Das Kapital*, Book III, revised by Engels) does not stand up to criticism. And we must recall that a

strong socialist tradition (Jaurès, David, Vandervelde, and also Kautsky) after the well-known polemics, chose family enterprise as the type corresponding to the principles of Western socialism. We must recognize the validity of this orientation, not as an absolute and unique form (I cannot accept the absolutism of a certain variety of opinion, for example, that of Professor W. Röpke) but as the prevalent form.

Allow me, finally, to restate my conviction that agricultural efficiency is bound up with a structure characterized by freedom of enterprise based on manual work and modern technical direction. State intervention—always in a flexible sense—should not modify either the free labour force, or the free functioning of the markets.

A. SCHMID, *Michigan State College, U.S.A.*

In my opinion we have given too much emphasis to the connexion between social relationships and the production of food commodities, and not enough to the relationship between social arrangements and one of the most important outputs of economic activity, namely the quality of the people themselves. Changes in the characteristics and personalities of farm people which take place in connexion with economic activity deserve greater attention. Alternative social organizations of farm production produce different kinds of people as well as different amounts of commodities. We need to know the relationships between alternative social relationships, such as collective systems or private property systems, and such personal characteristics as mental and physical health, use of leisure time, creative abilities, and meaningful human interaction which produce well rounded personalities and not automatons. The time is upon us when we will need to supplement measures of Gross National Product with measures of these factors. They cannot be obtained merely by providing cultural activities and education in rural areas, but are involved in everyday relationships such as those between workers and managers, landlords and tenants, buyers and sellers, and those who lend and borrow. To elucidate these relationships we shall probably have to combine economics not only with sociology and history but also with other social sciences such as psychology, law, and political science.

JAN TAUBER (*in reply*)

I was particularly pleased to find that all those who took the speakers part in this discussion agreed with the view that the

economic problems of farming can be neither understood nor solved without a solid knowledge of social conditions and the relations under which agricultural workers live and work. Farming is an application of all possible sciences, specially those of biological, technical, and social character.

If there is not harmony among the factors which create the conditions of agricultural production, the results of farming are poor. Biological, technical and even economic factors are already well advanced; but knowledge of social and psychological conditions of work is more or less a new sphere of imagination and only the first steps towards a scientific approach have yet been made. The structure of agriculture is weak, because one of the pillars has not been built on a solid enough basis. The further advance of agriculture depends on solving the social problems of farmers and farm workers, which in turn depends on sound knowledge of the conditions under which they work, on their education and intellectual and cultural standards, on the skill of management, planning and leadership, on the ability to apply science and the contents of our storehouse of knowledge. Rural sociology, together with social psychology of the farm population have become important sciences and their co-operation with agricultural economics and farm management is an urgent need, especially in big farms of an industrial character, where improvisations in organization of work and in human relations is not possible. This is the case for all big farms, no matter whether they are working under socialist or capitalist conditions. The results of sociological studies of farm management of big industrially conducted farms should therefore be of great interest for both Marxist and non-Marxist sociologists (Czechoslovak sociologists have started to study these problems). The reporting of such problems should not be taken as Marxist propaganda, as Professor Bandini supposes, but as a useful exchange of scientific views and experiences. However, all the other speakers were in favour not only of the co-operation of rural sociology with agricultural economics but also of exchange of experiences. Without this the progress of science would be frustrated at the expense of further development of agriculture and the peaceful coexistence and co-operation between nations.