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AGRICULTURE IN A TURBULENT WORLD ECONOMY

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Gower

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The Changing Structure of Agriculture and the Future of Rural Society

INTRODUCTION

Since the Second World War, rural society in most of the advanced industrial nations has been transformed by a process which is often referred to, with pardonable hyperbole, as the second agricultural revolution. Essentially this has involved the increasing application of scientific and technological principles to the pursuit of profit in the production of food. It should be emphasised that, in itself, the commercialisation of agriculture is nothing new. Farming has been organised around the principle of profit in most nations for a century or more and therefore long ago became disciplined to the exigencies of the market. All that has occurred in recent decades has been a transformation in the technology of most branches of food production, accompanied by state intervention in agriculture, which has granted farmers the conditions of production under which they could embark on a programme of increasing productivity and cost-efficiency. The most visible consequences of these changes have involved the mechanisation of agriculture and the 'drift from the land' of a large proportion of its former labour force. Elsewhere, advances in genetics have produced unprecedented increases in output from both plant and animal breeding, while the application of nutritional science has also resulted in immense benefits from the scientific application of animal feed and fertilisers. Husbandry management has also been improved by the introduction of complex forms of vaccine and pesticides. In these ways agricultural production *has* been revolutionised to the extent that any sense of technological continuity has been shattered within the lifetime of most of today's farmers. As a result agricultural entrepreneurship has followed the precepts of rationalisation apparent in other industries and farms have become bigger, more capital intensive and more specialised in their production. Farmers in turn have partaken in the gradual 'disenchantment' of agriculture – the replacement of intuition by calculation, and the progressive elimination of the mysteries of plant and animal husbandry

*Presented by John Marsh

by exposing them to scientific appraisal. Such changes have involved, to use a cliché often employed to summarise them, a move 'from agriculture to agribusiness'.

Without wishing to subscribe to any naïve form of technological determinism it is nevertheless possible to trace a chain of causality from these transformations in farming technology and management to the significant social changes which have occurred in rural society since the Second World War. It is worth noting, however, that the economic exigencies of contemporary agriculture owe little to the workings of the free market in agricultural commodities. Individual farmers may indeed act *as if* they were governed by market rationality, but over the last three decades the state has intervened decisively and continuously as the midwife of technological change and the guarantor of profitability (Newby 1979). The technological transformation of agriculture, then, is not a product of 'the hidden hand' of the market, but of quite deliberate policy decisions, consciously pursued and publicly encouraged up until the present day. In this sense, agriculture in all advanced industrial societies is deeply politicised and in many countries agricultural policy is regarded as much a branch of social policy as it is a policy concerned with the economics of a particular industry. This at least suggests why technologically determinist accounts of social change in rural society are inadequate.

The state regulation of agriculture has, therefore, profoundly altered both the structure of the industry and the day-to-day nature of life and work in the countryside. The encouragement of fewer, larger and more capital intensive farms has resulted eventually in all of the catalogue of changes which we associate with rural life today: the mechanisation of agriculture, the declining numbers of workers employed in the agricultural industry, the growth of an 'adventitious' rural population which has replaced the former agricultural inhabitants of the countryside, widespread changes in the rural landscape and other environmental aspects of change in the countryside. These changes have not been the result of some immutable natural law, but of policy decisions made by individual national governments and – increasingly – by transnational organisations such as the European Economic Community. Individual governments, for example, have promoted technological change both directly through their grants and subsidies for farm capitalisation and amalgamation, and indirectly through their complex manipulation of commodity price supports and guarantees which have protected farmers from the consequences of chronic overproduction. Most governments also provide direct assistance through various advisory services to agriculture and through the funding of research establishments. A large and complex network of institutions has thus been erected in the public sector in order to effect the technological transformation that post-war agricultural policy ordained. An adherence to the 'technological fix' in the drive towards cost-efficiency has been almost universal. We can now see, however, that these policies have been almost too successful in their principal aim –

increasing production at lower real levels of cost – so that now, in Western Europe at least, the major policy problem is how to manage a *decline* in agricultural production rather than a continuing increase. What was known in the 1950s as the ‘farm adjustment problem’ is now back on the political agenda with a vengeance.

Debates on the ‘changing structure of agriculture’ have tended to follow this familiar path. When one looks back over the last 30 years or so, one is indeed struck by the increasing concentration and capital intensification of production on fewer, larger farms. In this paper I do not wish to go over this ground yet again, except to make one or two brief observations. We are now aware that while there is a general tendency towards an increasing concentration of production, this is by no means a simple unilinear process. By this I mean that, although in most countries there is a persistent tendency for an increasing proportion of agricultural production to be concentrated on a declining percentage of holdings, this has not been accompanied by the disappearance of the family farm, small farm or peasantry (depending on which kind of society we are discussing) to the extent that many commentators believed. For example, the last rites have been uttered over the disappearance of the peasantry for more than a century now and yet the peasantry persists. Even in some of the most technologically advanced agricultural societies (e.g. the United States) the number of small farms has actually increased over the last decade, rather than declined as some would have predicted. We can now see how small farmers have proved to be remarkably adaptable to changing economic circumstances. The forms of adaptation are many and varied, involving such matters as the growth of pluri-activity and part-time farming, the ability to find niches in the market which have not been or cannot be penetrated by the larger agricultural producers, the specialisation in production which is not amenable to economies of scale, the dependence upon local and/or specialised markets, etc. In many countries, therefore, we are witnessing the *slow* emergence of a dual farming economy, with the bulk of the production taking place on large-scale holdings in a highly capital intensive manner, while a large number of small farms continue to exist even though they account for only a small amount of overall production. If we look to the future then it seems to me that something like this kind of dualistic structure is likely to become more apparent. What will become an important policy issue in most advanced industrial societies will be concerned with the ways in which this dual structure is spatially allocated – i.e. the extent to which small farms are clustered into particular localities where they will present an important policy issue for those concerned with rural development and/or rural deprivation. It is certainly quite likely that the policies directed towards the large-scale capital intensive farms will be inappropriate for the small farm sector and will be unlikely to offer direct help to those areas in which they are concentrated. A greater flexibility of policy response – which takes account of the social

implications of agricultural policy as well as the economic aspects – is therefore an important necessity.

THE GROWTH OF AGRIBUSINESS

These introductory remarks provide the context for the main subject matter of this paper. I wish to draw attention to other, less well researched, ways in which the structure of agriculture is changing and to speculate on what some of the effects of this might be on the nature of rural society. For the increasingly capital intensive nature of modern agriculture has had one further effect which deserves serious attention: it has made farmers more and more dependent upon non-farm inputs (machinery, agro-chemicals, etc.) while also drawing them into the embrace of a much wider complex of industrial companies involved in food marketing, processing, distribution and retailing. Agriculture is being slowly incorporated into sectors of the engineering, chemical and food processing industries which collectively we may call 'agribusiness'. The rise of agribusiness therefore, implies not only the increasing rationalisation of agriculture, but the growth of a food production system only a small proportion of which may actually take place on farms. The 'structure of agriculture' therefore changes from a relatively simple chain of processors linking production and consumption, to a highly complex integrated system of food production which begins with the manufacture of seeds, machinery, fertilisers, pesticides, etc. and ends in a complex chain of food manufacturing, processing, wholesaling, distribution and retailing: – in sum, from seeds to fast-food outlets. Within this context formally free farmers represent merely one link in an increasingly vertically integrated chain which links seed manufacturers with super-market retailers or fast-food franchises. The implications of this for the structure of rural society have barely been explored, yet there is little doubt that in promoting a highly capitalised farming industry, recent agricultural policy has also promoted the interests of agribusiness companies in the agriculture of advanced industrial societies (and indeed in many Third World countries too).

In a paper of this length it is obviously impossible to offer a comprehensive and detailed account of the growth of vertically integrated corporate agribusiness in Europe and North America. (For the most comprehensive account, see *The Report of the United Nations Centre on Transnational Corporations, 1980.*) We should note, however, that multinational agribusiness companies are often in the vanguard of multinational organisation (the most notorious is arguably Coca Cola) and, particularly in the Third World, pose acute problems of national sovereignty and market power. Under these circumstances it becomes tempting to weave conspiracy theories around the exercise of oligarchical corporate power, but there is no need to invent the conspiracy theories in order to discern the lack of public accountability embodied in many agribusiness conglomerates. They are actively

involved in changing dietary habits, the structure of agriculture, food marketing and retailing, and wield enormous market power – and yet remain impervious to control by politicians and consumers.

Sociologically agribusiness corporations are of more than passing interest. Along with the state they represent one of the most important agencies involved in the restructuring of rural society. The processes involved are often incremental and indirect but are nonetheless effective and far reaching. There is, however, an increasing tendency for agricultural multinationals to work their transformation by proxy, abjuring large-scale involvement in farming itself but controlling the conditions under which farmers operate. There is therefore becoming a persistent tendency for farmers to become the ‘domestic outworkers’ of major agribusiness companies, receiving inputs from them *and*, having transformed them, supplying their output back to them. It seems likely that agribusiness influence over the structure of agriculture is likely to continue to proceed in this indirect manner with agribusiness companies seeking out highly market-oriented agribusinessmen farmers with whom to place contracts, thereby exacerbating the tendency towards a dualistic farming structure. Sufficient numbers of farmers have, indeed, proved sufficiently flexible to the needs of agribusiness companies for the latter not to feel the necessity to vertically integrate and take up farming themselves. This has enabled them to avoid the high cost and political risk of land purchase and to avoid the cost of purchasing managerial expertise in agriculture. It is, for example, surely not coincidental that agribusiness companies have been quite willing to integrate vertically overseas (principally in the ex-colonial parts of the Third World) where these conditions do not, or have not, applied. In Western Europe and North America, by contrast, contract farming has usually sufficed. In this manner agribusiness companies have accelerated the trend towards the rationalisation of agriculture and the concentration of the industry on fewer larger farms. Smaller farmers, who do not participate in such contractual arrangements, find themselves becoming increasingly marginal, while the larger farmers find their enterprise gradually transformed by the relentless ‘industrial’ logic of agribusiness. The latter are encouraged to become specialised in order to make the maximum possible use of their specialised technology and skill. As a result agriculture has become organised according to non-agricultural criteria, on the assumption that agriculture is merely a disguised form of manufacture. This has implications not only for farming entrepreneurs, but also for farm workers, the employees of food processors and ultimately all of us as consumers.

The general public is largely unaware of these trends – and, for that matter, rather uncaring. What counts primarily to the consumer is the price of food. Agribusiness companies themselves certainly believe they are performing a public service by implementing the consumer demand for cheap food. The changing pattern of consumer demand for food is also encouraging the growth of agribusiness. More of the food that we

purchase is processed food and, given current trends such as the increasing proportion of females participating in paid employment, the demand for convenience food is likely to increase, quite aside from the encouragement given by the agribusiness company's own advertising campaigns. Since the value added from processing food is much greater than that which is accrued from growing it, agribusiness domination of food production seems likely to increase in the foreseeable future. However, it is on the implications of the rise of agribusiness for the changing social structure of society that I wish to concentrate in my concluding remarks.

AGRIBUSINESS AND THE FUTURE OF RURAL SOCIETY

It is apparent that the 'changing structure of agriculture', in both of the senses in which I have used this term above, has been responsible for major transformations in the structure of rural society. The agricultural industry now forms such a small part of economic and social activity in the rural areas in Western Europe and North America that it has led to a reconsideration of what is understood by the term 'rural' in the first place. It is now apparent that the relationship between 'urban' and 'rural' society has changed so dramatically in the post-war period, and even in the last decade, that the nature and content of contemporary 'rural communities' are themselves a necessary topic for discussion. For example in many parts of Europe and North America it is now necessary to dissociate 'rural' from 'agricultural'. Only in terms of land use is rural society now an agricultural society in many countries. In all other senses – economically, occupationally, socially, culturally – rural society has already been comprehensively 'urbanised'. It also follows from this that the assumption that there is a natural tendency for economic activity to gravitate to towns and cities must also be questioned: in the last two decades many Western economies have manifested pronounced centrifugal tendencies, even though this decentralisation of economic activity has been accompanied by a continuing centralisation of decision making and control. Furthermore we have witnessed a 'population turn-around' in many areas, with a pronounced flow of population back into even some of the most remote rural areas. All these and other factors mean that many of the conventional definitions of 'rural' have been rendered obsolete. Apart from anything else this means that we cannot predict the future of rural communities on the basis of a straightforward extrapolation from the past. If we care to look at the *history* of rural communities it is clear, with a few minor qualifications, that the very far reaching social changes which have overtaken rural society in recent decades have been rooted first and foremost in changes within agriculture. Since rural society is no longer entirely, nor even predominantly, an agrarian society, however, it is very doubtful indeed whether any future changes in agriculture will have the kind of impact upon the social fabric of the countryside that they have had in the past. Harsh though it may be, agriculture now has only a residual significance in many rural areas and it

is to other forms of economic activity that we must look if we are to analyse the future of rural society in such localities. This is not to deny the importance of agriculture in other respects, but to acknowledge that its future direct contribution to such matters as, say, rural employment growth, is likely to be negligible.

In Britain, for example, the great majority of villages today, in both upland and lowland areas, are no longer agricultural communities. Except in a few very remote areas the village and agricultural settlement has been transformed by the twin assaults of the drift from the land of agricultural labour and creeping urbanisation. As the rural working population moved to the towns in search of jobs, so they have been replaced by an urban, overwhelmingly middle class, professional and managerial population which was attracted by a combination of cheaper housing (until the late 1960s) and by an idealised view of rural life, which the ownership of a car at last allowed them to indulge. Since the railways allowed a commuting population to inhabit the rural parts on the outskirts of London since before the First World War, the transformation of rural villages into non-agricultural settlements has taken place in a series of ways out along the lines of transportation from the major urban centres. By the end of the 1960s a network of motorways and electrified railways had linked up most of the commuting areas between the major conurbations and the infilling of commuter villages between such road or transport routes had virtually been completed. Only a few rural areas, isolated by bad roads or non-existent railways, remained relatively untouched; but even these, by virtue of their isolation were often gobbled up by the equally voracious demand for holiday homes and weekend cottages. Rural Britain, which was once agricultural Britain, had now become middle-class Britain. Similar patterns can be observed elsewhere in Western Europe and North America, although clearly the precise nature of these changes varies considerably according to local and economic circumstances.

If we superimpose on to these social changes the kind of changes in the organisation of agriculture to which I have alluded, what do we find? Rural areas have long been familiar with the notion of 'jobless growth' through the experience of technological innovation in agriculture, whereby massive increases in output and productivity have been accompanied by an equally dramatic fall in employment opportunities. It is doubtful if we can look to agriculture, including forestry, to provide anything other than marginal prospects for employment growth in a few localities. Indeed continuing technological change in agriculture is likely to create further downward pressure in employment, not merely through the further economies of scale which can be gained from amalgamation and further mechanisation, but for the potentially much more extensive effects of new innovations in biotechnology. To deal with these fully would require another paper and would be more than a little speculative, but among those just over the horizons include such factors as genetically engineered protein for human, but more especially for animal consumption which could lead to a good deal of the production of animal

feedstuffs, which now takes place on farms, being moved to industrial processing plants using technologies somewhat similar to gas and oil production. One could continue with further examples, some more speculative than others, but in any case there is little to suggest that those concerned with rural economic development will be looking to agriculture to provide employment growth in the countryside of the future. On the contrary, it seems that an increasing proportion of food production will take place off the farm and a great deal will depend, as far as the future of rural society is concerned, on where this production will be located.

The second agricultural revolution, then, is far from complete. The increasing concentration and vertical integration of agricultural production is not going to fade away. None of this is to suggest an apocalyptic vision of the future of agriculture, for the changes which will occur will largely be the extrapolation of existing trends. Farmers are likely to retain their nominal independence, but their share of retail food prices seems destined to decline further and they will find themselves even more vulnerable to the agribusiness company's marketing policies. So the countryside of the future will contain fewer farms, fewer people occupied in agriculture, a more industrialised system of production, and a rural social structure – and even a rural landscape – which takes all of these factors into account. Since, however, the social significance of agriculture in rural areas is likely to decline still further then some fundamental rethinking is required over the links between agricultural policy and rural development policy. There is, however, little sign yet that such fundamental rethinking is taking place.

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 United Nations Centre on Transnational Corporations, *Transnational Corporations in Food and Beverage Processing*, United Nations, New York, 1980.

DISCUSSION OPENING – ALAN MATTHEWS

Arising from Professor Newby's paper I would like to distinguish three themes for the discussion: changing agricultural structures, changing structures in rural societies, and changing interest structures in rural areas. The first two themes are treated in the paper, and I feel the third might also profitably be considered in the discussion.

Professor Newby discusses the changing structure of agriculture in the first part of his paper and highlights three trends: the growing commercialisation of farming and its increasing integration with the rest of the economy; the changing size distribution of farms and the concentration of production on the larger farms; and the growing complexity of the food chain and marketing system. Each issue suggests a question for current research or policy.

First, the growing dependence of agricultural production on purchased

inputs has substantially eroded a fundamental justification for government intervention in agricultural product markets, namely, to promote stability in farmers' expectations of their future returns. In the past, input markets were relatively stable, and purchased inputs were anyway a small proportion of total input, so that the stabilisation of product prices could be defended as a way of stabilising expectations of future returns. This is no longer the case. During the 1970s input markets, including those for fertilizer, energy products and credit, have been very unstable. Furthermore, purchased inputs are now a much more important item in farmers' budgets, so contributing significantly to the destabilisation of their incomes and expectations. Agricultural price policy as traditionally conceived makes less and less contribution to the stability goal.

Second, Professor Newby points out that despite the growing concentration of production on large farms in industrialised countries, small farms survive and indeed their number in some of these countries is increasing. We thus witness the slow emergence of a dual farming economy. The apparent contradiction is explained largely by the possibility on smaller farms of combining part-time farming with off-farm employment. Often average total household income on smaller farms is greater than that on commercial farms for this reason. Thus to focus on farm labour income alone to identify areas of rural disadvantage in industrialised countries, as suggested by Newby, can be quite misleading – Bavaria in southern Germany provides an example of this point. Newby's conclusion that the way in which the dualistic farm structure is spatially allocated has important policy implications must be severely qualified on this ground.

The third identified structural change is the growing complexity of the food system. In the 1970s this led some researchers and institutions to talk of the need for a food policy rather than just an agricultural policy to ensure consistency in decisions taken at various points along the chain. It is my impression, however, that this notion of a food policy has made little practical impact. If this is the case, I want to raise the question whether this reflects a failure at a theoretical level by agricultural economists to establish that there are real gains to be had by thinking in food policy rather than just agricultural policy terms, and/or to provide a satisfactory theoretical framework within which such a food policy might be articulated.

I now turn to the second theme in the second half of Professor Newby's paper, the changing structure of rural societies. Here he draws attention to two main points. The first is the influence of agribusiness on changing agricultural structures. The second is that rural society is no longer an agrarian society, and that some fundamental rethinking is required on the links between agricultural policy and rural development policy. In my view both points as developed in the paper are overstated.

The discussion of the influence of agribusiness provides a most illuminating example of methodological differences between sociologists and economists in addressing a similar problem issue. It might be more correct to make the distinction between sociologists and institutional

economists, on the one hand, and neoclassical economists on the other. The sociological account, quite legitimately, focuses on the actors, whether institutions, political parties or interest groups, in any situation. But occasionally there is a tendency, observable in places in Professor Newby's paper, to lapse into what I will call a sociological determinism. By this I mean ascribing causal influence and motivations to these agencies where economists (with perhaps an equal determinism) would see them as merely vectors for more fundamental forces.

For example, we know that agribusiness companies are involved in the delivery of fertiliser to farms. From that the jump is sometimes made by the sociological or institutional determinist that the increase in fertiliser consumption is explained by the marketing activities of these companies. To the economist, however, (more precisely, the neoclassical economist), the increase in fertilizer consumption is to be explained by a favourable movement in relative prices, while the marketing activities of the fertilizer companies may alter their market shares or at most have a transitory influence on overall demand. Examples of such sociological determinism in Professor Newby's paper include the suggestion that changing dietary habits are brought about by the marketing activities of agribusiness firms (where economists would explain them in terms of the changing relative value of time within the household), and the suggestion that agribusiness has accelerated the trend towards the rationalisation of agriculture and the concentration of the industry on fewer larger farms through its contracting activities (where economists would explain this in terms of economies of scale and the changing returns to resources in on-farm and off-farm uses).

Now I know I have drawn an exaggerated dichotomy here. Nonetheless, I hold that there is an important difference of substance which can be summarised crudely in the slogan 'For sociologists actors matter, while for economists they don't'. To avoid misunderstanding let me make it clear that I know economists would fully accept that institutions can affect the structure of incentives and thus the pattern of resource allocation in both the short and long run. But this is different from suggesting that actors have the power to create their own environment, which is the essence of what I have called sociological determinism. I also recognise that political actors are in a special category and do have this ability, at least in the short run, to rig the market environment.

The question is, does it matter that we have different models of explanation. I think it matters profoundly. The purpose of an explanation is to provide an ordered sense of how the world works. If the explanation is a good one, we can use this knowledge to avoid unpleasant outcomes and to achieve more desired ones. Sociological determinism provides explanations which are 'voluntaristic' in character. That is, it stimulates political activism by offering the tempting possibility of one or many alternative scenarios if only the influence of malignant actors can be removed. Economics leads to a political passivity with its message that eliminating unpopular actors will do nothing to alter the impersonal and inexorable movements in relative costs and returns which underlie their

behaviour. The implications for the discussion of the influence of agribusiness on agricultural structure should be clear. In general, it would be worth pursuing the possibility of a methodological exchange between agricultural economists and rural sociologists at some future conference.

Returning to the paper proper, Newby argues that the agrarian basis of rural society has been eroded to the extent that some fundamental rethinking of the relationship between agricultural policy and rural development policy is now required. Newby, of course, is talking about the United Kingdom, where the proportion of the labour force employed in primary agriculture is only round 2 per cent, and for other countries even in Western Europe his remarks may represent more an indication of a likely future state than present reality. Even for the UK, however, I wonder if there is not a methodological flaw in his reasoning which leads him to understate the continuing importance of agriculture.

The relevance of agriculture to rural development policy does not depend on a counting of heads but on its economic significance. Now the economic significance of primary agriculture can best be measured using economic base methodology. This approach distinguishes between those activities whose levels are exogenously determined by export demand, and those activities whose levels are derived from the export of basic activities. Basic activities in rural areas have become more diversified, and now include rural industry, tourism, and the sale of labour services by urban commuters living in rural areas as well as agriculture itself. The economic importance of agriculture is measured by taking its size and the size of its induced multiplier effects relative to the size of other basic activities and the size of their induced multiplier effects. Because of the greater linkages between agriculture and the local economy, this measure will suggest that primary agriculture remains considerably more important for rural development even in the UK than the author suggests.

Nonetheless, his point that the trends in the structure of agriculture are inevitably diminishing the social significance of agriculture in rural areas can be granted. This may well require some rethinking of the appropriate instruments for rural development in particular areas, but it is unclear to me why this should necessarily imply the rethinking of agricultural policy, the rhetorical flourish on which the author ends his paper. Is it Professor Newby's intention to suggest that we should be trying to reverse current structural trends in primary agriculture in order to facilitate rural development, for example, by emphasising employment rather than production growth within the sector? Without a clearer indication of what might be required the suggestion remains a rather empty one.

The points contained in the Newby paper, finally, might usefully be complemented by considering the changing structure of interests in rural areas. Until recently, land was seen primarily as a rural resource for the production of food and timber. But urban interests are increasingly demanding that the role of land as an input in the production of values such as visual amenity and recreational services of interest mainly to them should be recognised. The creation of national parks, the designation of areas of outstanding beauty where planning controls are applied more

strictly, the opening of national trails and walkways, and the formulation of a countryside code, are some of the ways in which society is responding to this conflict. Environmental interests are also becoming more vocal. Resolution of these matters is fundamentally a question of recognising and affirming a particular set of property rights with respect to land and other natural resources, and the conference might wish to consider what such solutions might look like in the future.

GENERAL DISCUSSION – RAPPORTEUR: VILJO RYYNÄNEN

The discussion concentrated mainly on three topics: the changing agricultural structure, the changing structure in rural societies, and the methodological differences between sociologists and economists. Discussion concerning the first two topics followed loosely the contents of Professor Newby's paper, either accepting his model of rural development or disputing it as a misunderstanding caused by methodological differences between sociologists and economists.

Some of the participants considered the development of vertical integration between farms and agribusiness as a threat to independent agriculture and even rural societies, though opposite opinions were presented. The increase in the number of large farms connected with the changing structure of land use and the establishment of new industries may cause big structural and environmental problems in certain societies. Multidisciplinary rural policy making and planning were recommended, because the rural societies in industrialised countries are no longer agrarian societies.

The discussion touched also on the prevailing agricultural crisis, the rise in the cost of farm credit and consequences for agricultural and rural structures. Some participants saw the only way to understand the role of both agricultural and economic policies was to have a clear macroeconomic understanding, because no agricultural or economic policies would be able to change the trends of society.

The discussion dealt with differences between the development of rural societies in the North (industrialised countries) and those in the South (developing countries). Terms of trade, restrictions on trade, competition from overproduction and changing consumption patterns of agricultural products were seen by some participants as partial reasons for the decline of agricultural and rural societies in various parts of the world. Policies should be devised to remove the restrictions and to promote the harmonic development of agricultural and rural areas.

The Discussion Opener, A. Matthews, drew attention to the contradiction between sociological determinism and neoclassical economic explanation. This emphasises the importance of interdisciplinary dialogue and importance of opportunities provided by Conferences such as those of the IAEE.

Participants in the discussion included J. Berthelot, R. D. Bollman, F. de Casabianca, L. Drake, E. K. Ireri, H. S. Kehal, A. B. Lewis, T. Palaskas, D. Roldan and J. T. Scully.