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# RURAL CHANGE

The Challenge for Agricultural Economists

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PROCEEDINGS

SEVENTEENTH  
INTERNATIONAL CONFERENCE  
OF AGRICULTURAL ECONOMISTS

*Held at Banff, Canada*  
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THEODOR DAMS

## *Synoptic View*

### I

This year, 1979, there have been many big international conferences, for instance, UNCTAD V (Manila in August); WCARRD (Rome in July); World Conference on Science and Technology (Vienna in August) and others. But these mammoth conferences did not compete with, and certainly did not put in the shade, our IAAE Conference. More than 730 agricultural economists from over 80 countries and areas of the world have gathered here in Banff, Canada, one of the most beautiful parts of the Canadian Rocky Mountains, to join the 17th Conference of the IAAE and to celebrate a special occasion: the fiftieth anniversary of our Association.

Before I try to give a "Synoptic View" of what I think have been the most important contributions to, and results from, this Conference, I would like first to make a few remarks about the informal, non-academic achievements of this Conference which, in my view, have proven to be necessary pre-conditions without which such free exchange of ideas would not have been possible.

1 Our Banff Conference was not the place to pass politically oriented resolutions and recommendations based on minimum consensus. "The IAAE is neither a pressure group nor an action group" (D. Britton). Our founders had in mind that an IAAE Conference should provide an excellent opportunity for exchanging and discussing agricultural economic research methods and findings exclusively on the basis of individual responsibility and obligation. "Our members are all individual members entitled to speak their own mind" (L. Elmhirst, 1929).

\* To compile an overview of the wide range of contributions is a difficult task. Many issues that I raise stem from numerous and lengthy discussions throughout the entire conference. Of the many colleagues who made valuable suggestions here at Banff, I would like to mention Professors Koester, Schinke, and v. Urf. A special tribute also goes to Mr Heyne and Mr Liem, who helped to prepare this overview, literally up to the last minute. Nevertheless, my Synoptic View is a rather personal report. Due to lack of time, I had to shorten some passages in the oral presentation.

2 A great number of papers have been presented during the past ten days, most of them elaborating on specific topics and often highly sophisticated and specialized. I believe that this is a reflection of the changing environment in which agricultural economists are now working on a day-to-day basis: the increasing differentiation over time of our discipline.

Nevertheless, many experts in our field are sometimes confronted with the danger of losing sight of the overall social and economic context of the specific problems with which we are working, that is, with the encompassing order of our field. In such case, the agricultural economist might become an "expert dilettante" or amateur.

I remember an article written by Max Weber "On Science". In it, Weber remarks that an amateur may well come up with the same path-breaking invention as the professional researcher. It is likely, however, that the former discovered it accidentally, while in the latter case, inventions are probable events within their respective overall context of interdependency of all factors and elements involved. Let us see the Banff Conference in this light, to identify *specific* subject and area matters within their *general* economic and social context.

I believe, that this 17th Conference has clearly demonstrated that our prime concern is not simply to avoid over-specialization, but to enable specialists in their respective domains to share and discuss specific problems with their colleagues so as to broaden their views, to improve research methods, to make them more widely applicable, and to develop a common terminology; in short, to understand each other better than before.

There is wide agreement now that such dialogue is absolutely necessary in view of the complex nature of the problems rural economics and sociology are confronted with today. No special discipline by itself can be expected to tackle such problems without relying on the support of other disciplines.

3 The IAAE has always emphasized the principle of individual membership, a principle which has been honoured by the Association ever since it was founded in 1929, so that members come to our conferences in their personal capacities in order to take part in free discussions for the mutual benefit of scientific work.

Therefore, I would like to extend our gratitude to the host country, to the Local Organizing Committee, and, last but not least, to our individual members, for their great efforts to live up to such high standards before and during this Conference. This was one of the basic requirements for a successful conference, and, at the same time, a challenge for the IAAE to make every endeavour to uphold this principle in the future.

4 On the occasion of the Golden Anniversary of our Association, please let me recall a statement made by our Founder President in 1929: "We really hope that you will take fullest advantage of everything that is here, and for the time being, make Dartington your home". To our Canadian friends who so efficiently and warm-heartedly prepared the

anniversary reunion in this beautiful environment, I can proudly say today, thank you for letting us make Banff our home for the 1979 Conference.

But this is only half the story of our success. The other half is, and here again I borrow from Leonard Elmhirst, thank you for “gathering (us) together as a family-party rather than a group of specialists”.

5 My dear friends and colleagues, a great number of young agricultural economists attended this Conference. Thank you very much for coming. In terms of genealogy, they represent the “fourth generation” of agricultural economists starting from our Founder President and his colleagues S.F. Warren, Carl Ladd, M. Sering and their fellow scholars. I believe that, after 50 years of existence of the IAAE, Elmhirst’s remark is equally as accurate today as it was then: We are an “institutional fraternity” of agricultural economists, who, in open discussion, endeavour to overcome the problems facing the rural economy. And I hope that we bridged the gap (which may exist) between the younger and the elder generation. We can only continue through time when our capable younger colleagues feel themselves integrated, “at home”, in our Association.

All of you who participated in this Conference contributed toward creating an atmosphere in which such aspirations can materialize, guided and supported by the liberal criticism so many of you felt free to exert. I believe that we should always use this capacity to express ourselves in *positive* terms.

## II

### *A difficult task*

The scope of our Conference was truly impressive: 730 participants from some 80 countries contributed, in one form or another, to the success of this symposium, 480 of whom were involved in official duties. In trying to give an overview of the discussions of well over 120 papers, it is almost impossible to give every contribution the consideration it deserves.

I therefore ask you to please excuse the imperfection and incompleteness with which I attempt to review some of the main issues that have been discussed here.

The *structure* of the Conference was the following: On the one hand, the *main topic*, *Rural Change: The Challenge for Agricultural Economists*, and on the other hand, the *different levels* on which agricultural economists are faced with specific problems.

Between these two *sides* of the “Conference Sandwich”, quite a lot of *slices* of different characters, sizes, tastes and flavours have been filled in.

My starting point to deliver the Synoptic View is first to analyse the “mixture” between the two sides of the “Conference Sandwich”, then to classify the different elements in relation to sub-topics in the framework of the overall Conference theme, and to make an effort to file the results

of the plenary and invited paper level topics under these sub-themes. I have to admit that the selection of these sub-topics has been done by my normative eyes! The result of the classification, divided into “Subjects” and “Methods/Methodology” is the following:

*Subjects*

Rural poverty  
 Marketing agricultural products  
 Using quantitative methods  
 Decision making/planning  
 Energy, ecology  
 Teaching/training agricultural economists  
 International co-operation

*Methods/Methodology*

Relation between “politics” and research  
 Interdisciplinary approach

### III

*Rural poverty: the great challenge for us*

In the Elmhirst Memorial Lecture presented by Sir Arthur Lewis: “Along the fringes of the African and Asian deserts, there we have the largest concentration of human poverty – 500 millions of people”, as well as in the Presidential Address by Denis Britton: “Landlessness is increasing, about 500 millions of people have less than the critical minimum energy intake, and their number is increasing”, we were given evidence of the first challenge for us at this Conference.

In tackling this, one of the greatest problems of our times, we, as IAAE members, are doing it in line with the relevant history of our Association: “It seems to me one of the first duties of the agricultural economists is to see that the farmer is assured a reasonable standard of living with stability” (Elmhirst, 1930, Cornell). And we should not forget that Elmhirst undertook “one of the earliest attempts at community development in the villages in West Bengal, India, in 1921, which soon dispelled any doubts that disease and lack of technical knowledge leading to poverty, lay at the root of the decay of rural life” (J.R. Currie, 1964). And after World War II, Elmhirst “Went to Bengal as agricultural advisor to try to alleviate the famine conditions there”.

Sir Arthur Lewis gave us a clear picture of why in the LDCs food production has failed to keep pace with demand. Taking into account the population growth in the near future (2.2 per cent per year), this would create a market demand in the LDCs one-third greater in 1985 than in 1972/74 merely to maintain consumption per caput (FAO, 1979: increasing food gap of cereals from 72 million tons in 1977/78 to 94 million in 1985). But, and this is the crucial problem, there will still remain a substantial calorie gap, roughly estimated by FAO to add about 25 to 30

million tons to the potential import requirements. "If account is taken of the need to offset inequalities in distribution, the additional requirements for meeting the calorie gap would be almost doubled". And the main problem with which agricultural economists are confronted: "This increased deficit would be felt most in MSAC (Most Seriously Affected Countries) and in low income deficit countries" (FAO), particularly in rural regions.

The following points have been covered on this topic by papers presented here in Banff:

1 The analysis of the levels of absolute poverty and the preconditions for their alleviation in general terms (authors already mentioned) or in case studies (Nepal, Philippines, Tunisia, India, Sri Lanka, Tanzania, Brazil, Korea), very often linked with strategies of how to overcome poverty.

2 The concepts of how to integrate the small farmer, the subsistence households, the landless people, into the overall economy – which is necessary, particularly in the framework of so-called "integrated rural development", in order to combine the different measures taken outside and inside agriculture into a "package-approach". (See: credit schemes, fertilizer programmes, marketing facilities, extension service, etc., and employment facilities outside agriculture.) Many impressive results have been achieved in this respect during this Conference.

3 The *national* planning approach to secure that the "development from below" (the movement of the people) will be efficiently supported by the "decision-making from above". A number of papers have been presented to close the gap between these two levels.

4 The need to achieve national and world food security for assuring stable supplies of food at all times at reasonable prices and the role of international schemes in this context.

5 Further investment needs in LDCs to solve the problems faced.

It seems almost impossible to analyse all the papers and to combine the data presented here. Only a few can be taken into consideration. Let me first examine the level of absolute poverty as elaborated by the World Bank, and the projected decline in the near future in relation to certain assumptions about high economic growth rates in the developing countries and very strong redistributive policies in these nations. There is no doubt that absolute poverty is not likely to be eliminated by the year 2000 (Table 1). World Bank Report I, 1978, (Base Scenario): 600 million people would be living in absolute poverty at the end of the century if growth in developing countries continues at the rates envisaged in the Base Scenario: a decline by one-half in the low income countries and by three-quarters in the middle income countries. The poorest 60 per cent receive 18 to 20 per cent of the increases in income. World Bank Report II, 1979: Low Scenario indicates that there would be 710 million people living in absolute poverty by the year 2000, assuming lower growth rates, and 470 million in the case of higher growth rates and very strong

TABLE 1 *Levels of absolute poverty under alternative scenarios, 1975—2000*

	Simulated Result in 2000 <sup>b)</sup>							
	1975 <sup>a)</sup>		Base Scenario <sup>c)</sup>		High Scenario		Low Scenario	
	Percentage of Population	Millions of Absolute Poor	Percentage of Population	Millions of Absolute Poor	Percentage of Population	Millions of Absolute Poor	Percentage of Population	Millions of Absolute Poor
Low income countries	52	630	22 (27)	440 (540)	17	340	26	520
Middle income countries	16	140	10 (4)	160 (60)	8	130	12	190
All developing countries	37	770	17	600	13	470	20	710

Sources: a) World Bank Report 1978

b) World Bank Report 1979

c) Figures in brackets are estimates taken from (a)



redistributive policies in developing countries.

The fact-finding and the projected decline with respect to the levels of absolute poverty not only have an impact on the design of economic policies, but must also be seen as a challenge in the sense of an ethical-moral responsibility for all of us. And, with great satisfaction, we can confirm that the papers presented and the contributions to the discussions demonstrated explicitly or implicitly a great responsibility in this concern. Thank you all for this engagement!

Taking into account (a) the declaration of principles and programme of action (WCARRD, July 1979) and (b) the recommendation of the so-called "crash-programme" for the LLDs in the next three years and for the next decade (UNCTAD V, May 1979), I would like to make the proposal to evaluate the papers and contribution of our 17th Conference and to present the results to international organizations and national governments. That could be an important contribution in bridging the gap between political recommendations and applied research. Also, a new procedure for monitoring agrarian reform and rural development will have to be developed, and the IAAE could make considerable contributions in this field, for example, (1) in discovering the realities of rural poverty, (2) in developing indicators of rural development in order to monitor progress toward respective national targets, (3) in considering ecological balances and environmental preservation.

Such a response to the challenge of rural poverty has to consider the following points:

- 1 Integrated rural development has to take into account three fundamental elements: poverty, basic needs and grass-roots participation. There are some very important empirical studies along these lines which have been discussed in Banff.

- 2 Little is known about the interactions of economic and social structures with development policies, interactions which produce particular patterns of economic growth with differential effects on the poor in rural areas. We have to make tremendous efforts through an interdisciplinary approach to close the gap.

- 3 Participation by people in the institutions and systems which govern their lives is a basic human right and is essential for social and economic development.

In our research, we should focus on the distribution of power as the basis for realizing the full potential of the rural poor through their active involvement. Sometimes the role of NGOs is neglected, but we know that nothing is viable when it is not supported from below. The old question of Arthur Mosher, ADC, has to be reconsidered: How can we get agriculture moving? Let us go this way. The small farmer has always been called the "backbone" of agricultural development. No doubt, then, the solution of the world food problem can only be found when the participation and the integration of the rural poor can be realized.

*Marketing agricultural products*

The income situation and the standard of living are closely connected with the efficiency of marketing agricultural products. More than in other fields of our profession, agricultural economics is faced with rapid change and a changing framework which will have tremendous impact on the adjustment process of agriculture. Just as in other areas, we first have to review the “relevant” history of this discipline (Abbott), in order to discover the determining factors of different economic levels of development and of decision-making. All countries, without regard to the different economic and political systems they have, are confronted with similar situations in the field of marketing agricultural products. Let me briefly make the following observations in reference to the presented papers:

(a) In market economies, the agro-business and the concentration in processing and retailing are important factors for the adaptation of agriculture. The fact that agriculture is embedded in our interdependent world (foreign trade as well as foreign private investment) has a great impact on the decision-making process at all levels. Vertical integration has, on the one hand, the advantage that it can better link production and marketing. On the other hand, however, the old traditional ideal, that the farmer is “master of his own situation”, has almost completely vanished. Some of the papers have questioned the possibility of countervailing the market-power on the processing and retailing stages by organizations of the farmers themselves.

(b) In Russia and in other CMEA countries, the national agro-industrial-complexes are one of the major research problems attracting the attention of agricultural economists (Nazarenko). There is, in the context of another type of decision-making, a great need for providing the industrialized agricultural production with food and supply industries.

(c) Modernizing China’s agriculture has to take into account that production, as well as processing of agricultural goods and the establishment of input-industries, could be best handled by commune and brigade-run enterprises, supplying them with the necessary equipment and techniques (Wu Zhan). The vertical integration or incorporation of these entities will be covered by signing contracts with the state. Mr Zhan has pointed out, that this adjustment will change the economic structure of the commune and strengthen its collective economy.

(d) Last but not least, there is the concept of useful strategies for LDCs to improve food marketing systems (H.J. Mittendorf) and the analysis of factors or constraints influencing the effectiveness of rural marketing systems. We have to be very grateful to the authors Fox, Weber, Kamenidis and others for the empirical work they presented here.

Nevertheless, in my opinion, we need more research on how to integrate small farmers and the rural poor into marketing systems. Still, there are many gaps in empirical research work on how to achieve this, how to gain the confidence of the poor. Some decades ago, some of us had in mind that the concept of rapid industrialization would solve the problem

of the development of agriculture automatically. In so far as this strategy is concerned, development policy has failed.

Nowadays, however, and I had this impression here at the Conference as well, some of us analysing that strategy argue that the establishment of physical infrastructures, of farmers' marketing co-operatives, and the co-ordination of vertically organized production-processing-marketing schemes, as well as the building up of rural markets, etc., are sufficient preconditions for aiding the small farmers to step into the modern marketing channels.

These conditions are necessary, but not sufficient to integrate the rural poor and the small farmers. As Ted Schultz has ascertained in his famous book, *Transforming Traditional Agriculture* (1958), a poor farmer is rational, a very poor farmer is even more rational. But this rationality is not always linked with the objective to maximize income and to look for the highest marginal returns of capital investment. A poor farmer involuntarily integrated into an old-fashioned land tenure system and who is in the hands of middle men or money lenders, maximizes the security of his daily subsistence, and income maximization may be one element of it. In this context, I call your attention to Medici's paper presented thirty years ago at the 1949 IAAE Conference in Stresa, Italy, entitled, "Diagnosis and Pathology of Peasant Farming", which still today has its value for our discussion.

It may have been these missing points during the Conference, elaborated in the comments to A.T. Birowo's "Marketing is an essential activity to accelerate the transition from subsistence economy to commercialization of the agricultural economy", that brought together some sixty people, after a long working day, to meet until midnight. This and other spontaneous meetings sponsored by individual members of FAO, were excellent examples of how an "international fraternity of economists" works, and that in addition to a very tight schedule!

#### *Using quantitative methods/tools*

You have certainly observed during this Conference that a great number of papers, especially the invited and contributed papers, presented research results by using well established quantitative methods (mathematical programming, simulation, etc.). Of the many examples, I will only mention a few here: C. Csaki developed a simulation model to describe the Hungarian food and agriculture sector; J.M. Connor explained, with a regression model, the penetration of foreign firms in the US food and tobacco industry; C.Y. Ahn, I. Singh, and Lyn Squire, integrated simulation and linear programming models to analyse the firm-household interactions, and so on.

For many years, such quantitative methods have allowed analysts to process and apply more data on more variables and to simulate decision-making at national, as well as at firm, levels.

The papers presented in the last ten days show how familiar we agricultural economists are with the set of quantitative methods, techniques,

classified on a systematic and chronological basis by J. Sebestyen.

Using these quantitative methods, techniques, to develop models, we are aware of their limitations in analysis and application. Many critical questions and comments on quantitative methods used or on models developed, which were raised by participants in different discussion sessions, proved once again that, and allow me to quote a phrase from E. Heady, "what is important is that the array of theoretical and quantitative tools available be applied in the context of 'here is a relevant real world problem, what is the most efficient tool for its solution?', rather than to ask 'here is a shiny tool, where is a problem to which I can apply it?'".

#### *Decision-making/planning procedures and agriculture*

The Nairobi Conference three years ago was held under this main topic. The reason for choosing this theme was the following one: in the past, economists viewed objectives and targets as basically set and only searched for the instruments necessary to reach efficiently the aims and goals. Some time ago, economists and political scientists began to analyse the political decision-making process as linked with the setting-up of objectives. Our Banff Conference has continued this line of research work which began in Nairobi.

First of all, it seems very important to exchange information so far as different economic and political systems are concerned. Therefore, we appreciate that after an absence of a quarter of a century we had the opportunity to get first hand information from China (presented by Dr Wu Zhan). Furthermore, information given during conferences in the past, has been supplemented for socialist countries of Eastern Europe by V. Nazarenko, Popov, Sebestyen, Fekete, Schieck, and others. For market economies, new items have been brought into the programme, for example the decision-making process in multi-national firms, in parastatal organizations, and in state trading agencies. I believe, that here in Banff we achieved considerable progress in this research field as a whole.

In centrally planned economies, decision-making at the micro level (optimum size and production structure, investment plans, etc.) is largely determined by the production goals set by government administrations. Planning models for such decisions (H. Schieck and V. Nazarenko) are therefore mainly used to find optimum factor combinations in agriculture, given a certain size and structure of production in the agricultural sector. This specific interrelationship between micro and macro targets also determines the scope for rural change in socialist economies. There is a large fund of experience with the application of agricultural planning models from which both Western countries and developing nations can benefit. For this, more information is needed about (a) the relationship between local, regional and central planning and administration, and (b) about the incorporation of different interests of the target groups involved in, and affected by, the planning process.

For the decision-making process concerning the location of agricultural and connected industrial production, transportation costs play an impor-

tant role in socialist countries (see the model presented by Schieck, GDR).

Understandably, most advances in our discipline have occurred in relation to the micro analysis of large farmers in the developed world where we are in a position to rely on the well established principles of neoclassical theory and statistical and mathematical methods. In this respect, owing to Professor Heady, I have learned a new word, "economic clones".

In recent years, along with drastically increasing degrees of specialization, industrialization and mechanization in agriculture, the analysis and its policy application of micro-level decision-making for large industrial farms in capitalist as well as in socialist countries, has clearly been centred on the dissemination of improved quantitative methods and computerization in production economics and farm management (E.O. Heady). This process was aided by high levels of standardized education and training for both farmers and agricultural economists. While the rapid application of such highly sophisticated models for analysis and decision-making is topical for large-scale developed agriculture, the situation of the small farmers in the same group of countries leaves much more scope for further activities which, by the way, may well be very similar in many aspects to the problems of small farmers in developing countries.

It has frequently been asserted that we as agricultural economists, though highly concerned about small farmers in the Third World, still appear, by the methods and concepts we use, better equipped to deal with big farms in the industrialized world. The very nature of the problems facing small farmers in the developed countries shows that there is a wide scope for improving our approaches to both groups. And it also shows that what we are advocating abroad, and disputing here at this Conference in terms of rural development, has not been solved for the developed countries either. This is the new old link between the activities of agricultural economists working in industrial and developing countries. And I think that this Conference had much to offer in relation to a clarification of the difficulties we encounter in this area.

There is a tendency to concentrate on small farmers, also in developed countries, for purposes of analysis and guidance. While the analytical problems involved here are similar to those of rural development in the Third World, policy guidance immediately confronts us with the macro issues of agricultural policy in the industrial world.

So far as market economies are concerned, a great number of papers with new approaches have been presented. L.P. Schertz pointed out that "the profession over many years has given substantial attention to equity between the farm and other sectors. Only limited attention has been given to equity within the farm sector and to the distribution problems of those who left agriculture." Various aspects of the question of income policy versus price policy give evidence of the many problems still unsolved. In addition to this, other political considerations have superseded purely agricultural considerations, as in the case of regional integration,

particularly with the EEC.

Progress in agriculture has also led to larger disparities between large and small farmers. While the adjustment pressure on small farmers increased steadily, the rest of the economy proved not prosperous enough to facilitate structural change to the extent necessary for supporting out-migration without major frictions. We have been observing a further differentiation within the agricultural sector which was not counterbalanced by faster structural change. As the Conference has shown, this continues to be a major obstacle for developed agriculture and the agricultural policy related to this problem.

Denis Britton's Presidential Address has underlined that the objective of "efficiency of the production factors" received a higher priority than equity in income distribution. Furthermore, low-priority objectives have been neglected in order to minimize costs. In some areas (for example the EC) the political decision makers are confronted with a surplus of agricultural products on the one hand and income disparities for agriculture on the other. In addition, there is a heavy financial burden for the taxpayer. All together, an unsatisfactory situation! First attempts to develop alternatives have been undertaken, some proposals (Schmidt, v. Witzke) have been presented and criticized here in Banff.

The specific relationship between central and local planning agencies promoting agricultural development in developing countries has also been discussed extensively at the Conference. Some of them I already mentioned in relation to the problem of rural poverty. Lizardo de las Casas' paper demonstrated the importance of (central) planning and national policies for local rural development programmes; and Werner Kiene, as discussion opener, has shown the dilemma of planners to find the data basis needed and suggested a positive co-ordination approach of the relevant policies. A.S.P. Brandão presented alternative agricultural models commonly advocated in Latin America, the neoclassical model, a Marxist model, the structuralist model. These different concepts can be compared against the results of project evaluation of rural development.

Judith Heyer forcefully argued the case for a serious re-orientation in our efforts as she warned us that too little has been learned from failures in the past which are still being repeated. Though basically agreeing, many delegates felt this view was too pessimistic and pointed out that, indeed, we can report many positive aspects of improvement projects providing a basis for future tasks.

This Conference drew our attention to a careful analysis of the real conflicts on the local level over what is good for some groups within one locality and not good for others. Thus, the resistance of some groups toward rural development programmes really should be seen as an implicit vote in favour of an alternative strategy. We are called upon to investigate further the complex nature of such phenomena within their full terms of reference.

We have to face the fact that in most developing countries, rural societies are more differentiated than the researcher or project manager

would like and that we cannot work on the homogeneity assumption on which many of our models are based. In particular, I refer to the appropriateness and effectiveness of the analytical tools we use in trying to understand and improve (and I word this carefully now) the systems within which small farmers operate. "Within their small, individual allocative domain, they are fine tuning entrepreneurs, tuning so subtly that many experts fail to see how efficient they are." These remarks by T.W. Schultz in 1978 are already classic. Let me elaborate on this point. We agricultural economists demanded adjustment, but sometimes we remained immobile ourselves. And we are, in comparison to the rapid agricultural change, hesitant to adopt the tools and methods necessary fully to comprehend the social and economic structures underlying the decisions of small farmers as they were not apparent at first glance. This conference, dear colleagues, I think has speeded up the rate of adjustment of agricultural economists. Maybe it took us too long to realize that there is indeed efficient adjustment at the small farm level, particularly in developing countries, even if it is not in a way many had wanted or expected it to be. Small farmers have fewer alternatives to choose from, less information, and more constraints than big farmers. Within their respective frames of reference, however, they demonstrate highly flexible and innovative adjustment patterns.

On this "bread and butter" level, as M. Collinson puts it, or this "dirty boots" level, as L. Hardin calls it, there is much scope for direct contribution from the profession. Important steps forward are to be expected, among others, from farming system research so extensively discussed here in Banff.

*A new dimension of research: energy analysis of agriculture*

For the first time, an IAAE Conference intensively discussed the necessity of having an energy analysis of agriculture. Ulf Renborg familiarized us with his survey on issues commonly discussed among biologists and economists. M. Adamowicz for Eastern Europe, R.I. Adams and W. Rask for Brazil, and W.E. Tyner for Brazil, India and the USA, have presented papers with further details. Based on U. Renborg's paper and the discussions which followed, I came to the following conclusions:

(a) There is a great need for more applied research in this field, and IAAE members should attempt to meet this challenge.

(b) But there is also a great danger that ecologists and economists will be in opposition to each other, and that the national resource economist will be caught in the middle. More than in other fields, we need close co-operation here between the different disciplines, and the IAAE could play a catalytic role in this regard.

(c) Problems related to ecology, energy, environment, etc., will challenge the political decision makers to search for a new orientation for economic policy as a whole.

(d) A revised concept of agricultural policy, deduced from this reorien-

tation, will have a tremendous impact on growth, income and equity in agriculture.

This is still an "unfinished problem", and I am sure that the stimulating papers which I mentioned will provide the basis for further research and for discussion in the 1982 conference.

*Regional and international integration and co-operation (supra-national level)*

There is no doubt that international co-operation, international agencies and supranational integration are great challenges for our profession. Recalling the papers and comments presented last Saturday, I shall only add some short remarks:

1 First of all, we need a typology of international organizations and co-operation based on the quite different goals involved and the specific legal basis which has been accepted by member states. What I mean has been put forward by V. Nazarenko: COMECON is a type of international co-operation while the EC is a type of supra-national integration.

2 This task is always closely linked with the legal basis. For example, the Treaty of Rome (EEC, 1957) contains the basic principles for the economic integration, including agriculture. In relation to the decision-making process, agricultural economists are working with the same treaty in the relatively different framework of the Council of Ministers, of the Commission, etc. On the other hand, agricultural economists working in research institutes, inside and outside the Common Market, are heavily criticizing the irrational common agricultural policy, and are exploring efficient alternatives.

This opens a new dimension for discussion, and we here in Banff have "detected" some of this terrain; not enough, but, in my opinion, a fruitful first attempt.

The wide range of these problems of international impact is shown, for example, in the paper about floating exchange rates (G.E. Schuh). In the late '70s, world agriculture is integrated into the international division of labour more than ever before. Hence, in the years ahead, rural change greatly depends on the mechanisms which link national to international agriculture. The differential impact of alternative international monetary systems on agricultural stability received much attention at the Conference.

A comparison between the situation before and after 1969, did not give conclusive evidence as to how agriculture is affected by different exchange rate regimes. This lack of evidence was attributed to structural changes in the economic environment of the two periods. Today, theoretical evaluations on the international monetary system always have to take account of the high degree of mobility in the international capital markets. The international interdependency of agricultural prices arises either from exchange rate variations in a floating system or via an equal-



ization of national inflation rates in a system of fixed exchange rates. More theoretical and empirical work is needed in order to fully understand the impact of alternative exchange rate regimes on world agriculture (G.E. Schuh).

#### *Teaching/training agricultural economists*

With reference to the role of agricultural economists in different sectors (public/private) and different levels (national/international), I come now to the teaching and training of agricultural economists "to serve the needs of the changing world" (D.F. Fienup and H.M. Riley). H.U. Thimm analysed clearly the historical development of teaching agricultural economists in Western European countries. In view of the fact that the accomplishments cannot be measured exactly, they can only be indirectly assumed through looking at the number of graduate students finding suitable employment. Nevertheless, with regard to those students who come from developing countries, questions were raised whether the subjects they studied in Europe or in the United States really derive from, or focus upon, the needs which exist in their home countries. According to Fienup and Riley, there is some concern about the lack of focus and application to LDCs' problems (poverty and unemployment, equity and growth, power struggle, etc.). In this sense, Marxist-Socialist ideology/economics should be given more attention (Fienup and Riley), and it seemed to M. Petit that teaching Marxist economics could make students aware of the limits and shortcomings of neoclassical theory, as well as its strengths in analysis (Michel Blanc: using the class struggle to study rural economy).

Another aspect of teaching and training agricultural economists is the promotion of post-graduate studies, in general, as well as in special subjects like marketing in developing countries. Despite the fact that in Asia, Africa, and Latin America, many improvements at the university level in respect to quantity and quality of the subjects in agricultural economics have been reported, there are still many problems and faculty resource constraints (Fienup and Riley, D.A.G. Green) to overcome.

Now, what about the teacher? While teaching agricultural economists "(he) has to learn as much as his students" (H.U. Thimm), and in the field of research, for instance, many teachers could be brought "in close contact with reality" (H. Mittendorf). In this sense, many of us teachers in agricultural economics should be well prepared to face a set of new challenges in the future, on the macro as well as on the micro level, some of which were quoted in H.U. Thimm in his paper presented yesterday in the plenary session.

#### IV

It seems almost impossible to view "synoptically" the wide range of contributions to this conference. Therefore, I will change my viewpoint

and go from “subjects” to “methods”. Only a few remarks:

### 1 *The relationship between politics and research*

In market economies, this problem is heavily discussed. Of course, “today agricultural economics are brought into consultation by governments at every turn, and this wealth of new opportunities and of new responsibility offers its reward in giving new status to the profession”. But it also has its risks and uncertainties. In 1947, L.K. Elmhirst asked how, under such considerations, could the professional economist best retain his professional integrity. Heinrich Niehaus, a well known agricultural economist from my area, borrowing from the philosopher Ortega y Gasset, once wrote about the “Glamour and Misery of Agricultural Economics”. He was referring to the dilemma in our profession to strive for both practical application of theoretical work and political independence from decision-makers at the same time. This dilemma became apparent also at the Conference, most forcibly presented by Michel Petit, who scrutinized the possibility of drawing a line between thinking and doing, between theory and policy, between understanding the world and trying to change it. Well, we will have to live with this dilemma, and I think we can live with it if we observe certain rules of our profession based on the clear confession of whether we are working in the field of positive or normative economics.

### 2 *The challenge for interdisciplinary work*

As at earlier conferences, so here in Banff, we have observed a great need for interdisciplinary research. There is a long tradition in the IAAE of discussing the necessities, the possibilities and the limits of such co-operation. Elmhirst, in 1938 at McDonald College, Canada, remarked that “this challenge to attempt a better synthesis with the sociologists, to adopt gentler, broader, more scientific, more sensitive, more psychological attitudes in relating our economic programmes to rural society, is one that we cannot refuse to accept for much longer.”

In relation to the disillusionment which some of us may have experienced in the past, I will only make a short comment:

1 The first challenge for us should be to integrate the wide spread of our own sub-disciplines into the framework of agricultural economics. Banff was a success in this respect.

2 So far as interdisciplinary research is concerned, we have to start with very concrete problems and with clear-cut definitions and goals. Otherwise, we will enter into a struggle absorbing our professional capacity for nothing. What I mean has been put forward by R.W. Herdt in relation to the interdisciplinary work of biologists and social scientists. “Potential Productivity of Modern Rice Technology: The potential productivity has to be realized under the real conditions of a farm taking into account the main constraints.” I believe that a similar approach could be found for the interdisciplinary approach to ecologists, economists and natural resource scientists. But caution, everyone of them has his own (second) Bible!

3 In some cases, it seems necessary to me first to gather our specialists around a specific problem, to formulate the objectives, the strategies and then to put "some intelligent questions" to other disciplines.

The interdisciplinary approach is and will be a great challenge for us. It is the common problem with which we are all faced, with no difference in relation to the particular political and economic system.

## V

Now, I would like to draw your attention to one important aspect of international co-operation. Many of our colleagues from the developing nations explained to us the difficulties they face communicating the research they are undertaking in their own countries to fellow researchers on other continents and sometimes even within one continent. It is sometimes the case, they argue, that international publishers accept such works only if endorsed and sponsored by scholars and institutions from industrial countries. I think that we can help to overcome this deficiency in two-way communication of research in a double sense: (a) developed countries should accept more responsibility in ensuring that research contributions originating from developing countries be made available for international discussion more readily than still is the case today; (b) Third World countries are called upon to undertake more serious efforts in establishing their own means of research exchange and discussion.

A related problem of international research co-operation has also been raised at this Conference. Agricultural economists from the developing world sometimes find it difficult to gain access to, and to use for their own work, background information on important studies (feasibility, evaluation, etc.) that have been undertaken in their countries by donor governments and institutions. On this account, I appeal to agricultural economists working in such donor institutions to consider the possibility of less formal exchanges of information, not based on an institutional level, with their colleagues from developing countries working on similar problems but with less back-up facilities.

This is, in my view, where the IAAE can support a New International Information Order which is currently being advocated within the UN-system.

## VI

Let me come to my closing remarks at the end of our Conference, I think I can say now that Banff was a "mile-stone" for strengthening our IAAE. All of us have co-operated, and we succeeded very well. Thanks to Murray Hawkins and his "Heroes and Honies", who so efficiently supported all of us throughout the Conference, so that these positive results could be reached.

There is a tradition, and who would take the liberty not to observe it on the fiftieth anniversary, to conclude the synoptic view with some words of a famous man, usually a poet. If I am right, our President quoted Shakespeare (United Kingdom!) last time in Nairobi (1976). For a better balance, then, this time I was looking for a German poet, who for me must be Goethe! But, fortunately 'or not, that has already been done by my colleague from Eastern Europe, Professor Fekete. He quoted Goethe: "Who has the case at heart should take a stand for it – otherwise he does not merit to exert any influence anywhere".

Looking at this quotation, I was obliged to turn to another famous man, but now with a change in both discipline, and area. I found a sentence expressed by the outstanding British economist John Maynard Keynes: "A man never realizes how wrong he can be, when sitting alone and thinking by himself".

In closing, all of us here in Banff have "thought together" in tolerance, in "amiable disagreement", in "group thinking". Let me bridge the early times of our Association with today, to tell you that the Nestor of the American economists, Henry C. Taylor, made a statement in 1952, at East Lansing, Michigan, that he had learned this "group thinking" at seminars in Berlin organized by Max Sering, the first Vice-President of our Association.

I hope that all of us will and can "survive" in his profession by observing the principles which I mentioned: tolerance, amiable disagreement, group thinking. This is the last day of the 17th Conference of our Association. It is the "milestone" with the inscription "Fiftieth Anniversary". It is the crossroad from the first into the second half-century of our Association. Let me express my best wishes for a successful future of the Association in the following way:

the IAAE shall live, flourish and grow  
for many years to come!  
Longue vie à l'Association Internationale des  
Economistes Ruraux!

And last, but not least, in Latin:

Societas internationalis oeconomis agriculturæ  
Vivat, crescat, floreat ad multos annos.

Thank you, good-bye and a safe journey home!