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AGRICULTURE IN A TURBULENT WORLD ECONOMY

PROCEEDINGS OF THE NINETEENTH INTERNATIONAL CONFERENCE OF AGRICULTURAL ECONOMISTS

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Gower

MICHEL PETIT PRESIDENT-ELECT

The Status and the State of Agricultural Economics

At the end of this Nineteenth Conference of our International Association, opened by a Presidential Address reflecting on the scope of agricultural economics.¹ it is on the status and on the state of our discipline which I would like you to reflect. First of all, I must emphasise that the expression 'Agricultural Economics' is used here exactly with the same meaning as 'Economia Agraria' in Spanish, 'Economie Rurale' in French. This hesitation of the vocabulary reflects the nature of our discipline. Actually, none of these three expressions is strictly correct. This is precisely the problem which led Malassis, in another reflection on the object of our discipline presented to the European Association of Agricultural Economists to speak in terms of agricultural, agribusiness, and rural economics.² Let us stress that the difference of vocabulary does not correspond here to a difference of viewpoints on our discipline. It illustrates a problem of status: the field of agricultural economics is not defined only in terms of a scientific discipline. We shall come back later to this crucial question, but first I must specify what I mean by the state of agricultural economics. Our specialisation being defined by the use of concepts, hypotheses and methods of economics to the analysis of problems faced by agriculture in the broadest sense of this term, may one speak of the state of this utilisation in the world? Is this possible when account is taken of our extreme diversity?

It is obvious that the professional projects of our members, that is the objectives and the criteria used to judge the quality of our works, are extremely varied. Some mainly wish to make original contributions to the elaboration of economics as science; others want to find solutions to such major problems as hunger in the world or the conservation of natural resources; others still would like to participate in the solution of problems faced by the political authorities of their country or their region. Some of us, I am sure, believe that the ultimate test of the interest of our works is to know whether or not we bring something useful to farmers. The diversity of our professional projects also illustrates the diversity of the institutions we work in (universities, research organisations, government agencies, farm organisations, firms, etc.) and the diversity of the role

given to scientists and technicians in the various societies, cultures and civilisations from which we come.

But beyond these diversities we have something in common; as illustrated for instance by the fact that we belong to the same international organisation. What we have in common, of course, is that we are agricultural economists. Thus, to discuss the state of our common project, i.e. the use of economics in agriculture, seems appropriate.

I have organised my presentation around three questions: where do we come from?, where are we now?; where do we go from here? The last question will permit us to reflect on our objectives and on our criteria of professional excellence. I shall use our work during this conference as illustrations. This seems justified on two accounts: first, it will facilitate communication by referring to something which we all know; second, such a conference constitutes an excellent opportunity to become more conscious of the diversity of approaches and of the main questions which preoccupy our colleagues throughout the world, even if all have not been equally well represented here.

WHERE DO WE COME FROM?

Our past, more precisely the intellectual traditions which influence us, must absolutely be taken into account if we want to be clearly conscious of what we are and to properly examine the relevance of our objectives and of our criteria of professional excellence; this justifies the question defining the object of this first part of my paper. The answer seems clear to me, even if its consequences raise fundamental ambiguities. We come from the 'agronomic' tradition and we claim to be fully fledged economists.

The 'agronomic' tradition

What is the exact meaning of this expression? For me, without ignoring the Roman agronomists or the concerns of Olivier de Serres, whose 'Mesnage des champs', written at the end of the sixteenth century, may be viewed as the forerunner of farm management, the real birth of 'agronomy' took place during the nineteenth century in western countries. From there it spread to most countries of the world as the scientific basis of modern agriculture. Agronomists behaved as the missionaries of scientific and technical progress in the countryside. This proselytism would be condemned by most of us today because it is much too closely linked with the scientism of that period. But it is from there that stems our concern for application.

The 'agronomy' of the nineteenth century must be understood in a broad sense. It is the use of all scientific disciplines which can clarify the problems of agriculture. In this sense, agricultural economics is clearly an 'agronomic' discipline; and this is widely reflected in most institutions of higher agricultural education and research in the world. Admittedly, like other social sciences, agricultural economics conquered its place late, and often with many difficulties. Strikingly, it is roughly at the same time, in all western countries, that this 'agronomic' tradition was born. Even in new countries, as for instance were then the United States, the birth occurred at that time. Let us remember that the Morrill Act, creating the famous land-grant colleges in all the states of the Union, was passed in 1862; whereas in my own country, the Institut National Agronomique was only established definitively in 1879. This 'agronomic' origin has had lasting consequences until today:

- 1. an empirical and pragmatic attitude which favour eclecticism;
- a good concrete knowledge of our object, which makes us sensitive to the interactions among the technical, economic, social and political dimensions of the problems under study;
- 3. as a result, a good disposition for multidisciplinary works.

The study of the problems of agriculture has thus been, since our origin, an essential characteristic of our discipline. But the reference to economic science is no less important.

Our claim to be fully fledged economists

One may say that ever since economists existed, they have not ignored agriculture. The Physiocrats viewed it as the only productive activity; and it is Ricardo who elaborated the concept of rent which, essentially, we still use today. Yet, it would not be perfectly legitimate to view ourselves as the direct intellectual heirs of these illustrious ancestors. They were fundamentally interested by the economy as a whole and not in solving the problems of agriculture.

The birth of agricultural economics was more the result of a meeting between the preoccupation of the agronomists and the contribution and rigour of the economic approach. This statement can be illustrated by an anecdote. In a paper published in 1965, Boussard³ noted that Dumont, a famous agronomist, had rediscovered the marginal principle 70 years after the Austrian School. He was referring to a paper discussing priorities in the choice of agricultural investments, justly criticising the mistakes of a purely technical approach. What must be emphasised here is that the agronomist had been empirically led to a correct economic reasoning but he did not have a sufficient economic culture to place his analysis in a broader reference framework. In my little story, the agricultural economist is Boussard, a well-known member of our association. This story illustrates a general proposition. The study of problems faced by farmers, or by those who are concerned with agriculture for one reason or another, leads to an identification of economic questions. The scientific approach of the economist permits him then a greater degree of accuracy and rigour. This is particularly true in the realm of conceptualisation and in the articulation of hypotheses. We are all convinced of that, I am sure. And it is probably the attractiveness of this rigour which explains why some of us see

disciplinary excellence as the ultimate criterion to judge the quality of an agricultural economist. With many others, I believe that such a point of view is too narrow. It ignores too much our agronomic origin. But if disciplinary competence is not sufficient to be a good agricultural economist, it is nevertheless indispensable. It is in that sense that we must be fully fledged economists. And if we believe Keynes, when he wrote that an economist who would only be an economist would not be a good one, our dual origin should not be an obstacle or an excuse for not being fully fledged economists.

WHERE ARE WE NOW?

If this dual origin, agronomic and economic, defines what agricultural economists are today, agricultural economics does not exist as a separate scientific discipline different from economics. On the other hand, it is clear that there are agricultural economists. Even in the most developed societies, agricultural activities are still specific enough to justify the specialisation of economists dealing with them. They must, however, remember that these activities are only a subset of the productive activities of that society. Experience shows that such a practical definition of the field of agricultural economics is sufficient. Finally, agricultural economists are economists who view themselves as such.

How, given these ambiguities of our professional objectives may we judge where we are? More precisely, what is the state of our discipline as it can be assessed at the end of this conference? To treat this question, I find it useful to decompose it in three sub-questions:

- 1. What are the topics preoccupying agricultural economists and are they relevant?
- 2. What are the economic foundations of our analysis?
- 3. What use do we make of analytical techniques? Are we threatened, as feared by Glenn Johnson by the danger of 'modernism', defined by McCloskey?⁴

Before tackling successively these three questions, two limits of the exercise undertaken here must first be emphasised. The nature of the papers presented at an international conference represents a very biased sample of our activities. Specific research projects and the very technical aspects of these research projects are necessarily under-represented, as are the studies designed to tackle the specific problems of a given decision-maker. Besides, presenting a paper in a conference session is a difficult task. The limits on the length of the papers prevent the authors from presenting all the aspects of their research. Very often the paper presents a synthesis of several years of research or the works of numerous authors. The author cannot justify the methods which were used. Thus it is difficult for the audience to assess critically the validity of the conclusions. In spite of these limitations, and particularly if one is conscious of them, examining the three questions listed above is worthwhile.

The topics

The first striking characteristic is their extreme diversity, going, for instance, from rather theoretical developments at the farm level to a criticism of the criteria of malnutrition, through the structure of agriculture, the handling of uncertainty, the international capital market or regional co-operation among developing countries. These examples only illustrate a diversity which is actually much greater, as revealed by a reading of the conference programme.

Of course such a diversity, which reflects the variety of agricultural economists' preoccupations is a great asset which must be maintained.

Another dimension of the diversity of papers presented during the conference relates to their nature: synthesis of an individual's works or the works of various authors, preliminary reflections prior to launching a research programme, synthesis of one author's reflections based on research but also on his long experience. My epistemological eclecticism leads me to believe that this again is a good thing. We can, and therefore we must, learn in different ways. The various sources of knowledge, the various approaches are, in my view, more of a complementary than of a competitive nature. I know that this point of view is not shared by everyone. But, at least, it leads us to raise important questions about how to judge the quality of our works. The double diversity just alluded to makes it difficult indeed to choose clear and simple criteria to judge professional excellence. One cannot rest satisfied with a judgement which would be expressed in too narrow 'scientific' terms.

What would be the criteria of disciplinary excellence? Very briefly research is deemed to be good if it contributes to the accumulation of economic knowledge, i.e. if it brings answers to a question which has been left open so far, or if it permits a fruitful reformulation of the question. For instance, the new household economics belongs to that category. Clearly, the main purpose of specialists in a discipline is to enrich or renew the existing theory.

In an applied discipline, such as agricultural economics, the starting point of the investigation and its objective are not expressed first in theoretical terms. One must refer to problems of agriculture. Of course such a contrast is over-simplified. The scientific approach in social sciences constantly goes back and forth between theory and practice: thus the opposition is not as clear-cut as suggested above. But even if the difference is only one of degree, the distinction is real.

To judge the quality of our works, one must therefore go back to the epistemological foundations of scientific criteria and keep, it seems to me, four 'classical' criteria:

- 1. the discourse must be clear and understandable by one's peers;
- 2. it must be free of internal contradictions;
- 3. it must be consistent with the observations of facts;
- 4. finally, it must be relevant.

The first two criteria imply expliciting one's hypotheses and being open to criticism, i.e. the two main characteristics of a scientific attitude according to Popper.⁵ The last two criteria are less well recognised, thus they deserve to be further elaborated upon. Since there is no observation which can be independent of the observer's questions and assumptions, consistency with observation is, logically speaking, an extension of internal consistency. The point however is that this extension is often very convenient. And this justifies identifying it as a specific criterion of quality. Thus formulated, the three first criteria characterise objective knowledge. But perfection in this matter does not exist. Even if it is an ideal to pursue, objectivity can only be a relative quality; most often, it is possible to know in real life whether or not one is progressing in this respect. The fourth criterion, relevance, is of another nature. It relates to the interest of the new knowledge for the solution of more or less important practical problems. It is essential for an applied discipline, such as agricultural economics.

These criteria of quality are general and may be applied to any type of knowledge; but they will not be appreciated in the same fashion, depending on whether a research is more or less applied. Moreover, some works may deserve a good score on one criterion and much less on another. How can one class them in the same hierarchy? How can one choose between two works, one of which tests with great rigour an assumption having little interest, the other, dealing with a very important question, but providing a not very powerful test of the assumptions? Clearly, the evaluation will depend upon the point of view of the judge.

In order to make the evaluation easier, one could consider that relevance is a preliminary condition. Once having made sure that the research topic is relevant, one could worry about the first three criteria. Unfortunately, experience shows that such a solution is not satisfactory. The quest for relevance must be permanent, i.e. present at all steps of the research, influence all methodological choices and the interpretation of results.

Given this diversity in the application of quality criteria, a broad pluralism and much reciprocal tolerance among agricultural economists are called for. Examination of the economic foundations of our analysis will lead us to a similar conclusion.

The economic foundations of our works

Here again, diversity is very great, even in the papers that were presented at this conference. This diversity relates both to the place of explicit economic considerations and to the nature of the economic theory used as reference, even if most papers clearly used the neoclassical economic theory. This diversity is a good thing in the perspective of epistemological eclecticism presented above. The most encouraging development however is the extension of the theoretical field used as reference in our works. I have particularly in mind the interdependencies emphasised on several occasions, which led several authors to take explicit account of the international capital market or of the evolution of exchange rates. The attempts made to build general equilibrium models may be viewed in the same perspective.

By contrast, we are still too timid in our criticisms of the concepts and hypotheses of economic theory. Of course there are exceptions. After all, agricultural economists have made significant contributions to production theory, particularly regarding the fixity of factors of production, to the new household economics, to the theory of human capital, to intersectoral relationships, to the handling of the dynamics of numerous economic phenomena (recursive programming, adaptive process, dynamics of supply ...).

These contributions should encourage us not to rest satisfied with the theory of textbooks. It is true that in many of the above examples, contributions were made by economists who were at the margin between agricultural and general economics. Perhaps this shows that we are not yet completely fully fledged economists. Yet there is much to be done indeed. Analysis of practical problems of agriculture raises theoretical issues of a fundamental nature. To quote only a few examples: decision processes in family farms, consequences for the relationship between production, consumption, and savings decisions, nature of the dynamics of microeconomic adjustments to a constantly changing economic and social environment, nature and dynamics of economic and social relationships within rural communities at the local level, articulation among macro, meso, and microeconomic phenomena in every development process, consequences for the choice of a development strategy, determinants of agricultural policies. Perhaps we do not devote sufficient efforts to the identification and precise formulation of these theoretical questions and our conference may only have reflected this situation.

The techniques of analysis

This conference was not a very good place to judge the analytical techniques which we used. As indicated earlier, the limited length of the papers and their nature tend to eliminate discussions of this type. Thus, I cannot do justice to this question in spite of its importance. I would, however, like to call your attention to a striking contrast which I cannot explain. Having recently spent a year in the United States, I have become more conscious of the difference between research practices there and in France. In the US, emphasis is placed much more on the use of quantitative techniques for testing hypotheses without worrying enough, in my view, about the scope and significance of these hypotheses. In France, researchers are more worried about the global formulation of the problems they analyse without being much concerned with the rigorous test of the hypotheses. Clearly, the situation described here for the United States is very similar in Australia, Canada, Germany, and perhaps also the Netherlands. Does it reflect an excessive degree of modernism? The 'French' situation can probably be found elsewhere as

well. It does not suffer from that weakness, but should it be preferred? Restricting myself to the case of France, it is clear that the scientific debate was too much influenced there five or ten years ago by the participants' ideological positions. The growing use of descriptive statistics over the last few years is clearly a progress. But, the quantative estimation of the parameters of a model or the test of hypotheses through econometric methods remain very rare. Frankly speaking, my impression is that we have here two extreme situations, neither of which is satisfactory.

WHERE DO WE GO FROM HERE?

Raising questions about our future is useful mainly to know whether or not we should re-examine our objectives and our criteria of professional excellence. No one, of course, can pretend to bring definitive answers to these questions faced by all of us collectively and individually. I can only present here a few personal reflections with the purpose of nourishing the debate. For this, I suggest three questions:

- 1. Are we really conscious of the status of our discipline?
- 2. Which orientations should occupy our professional activities?
- 3. What consequences are there for our International Association?

Are we conscious enough of the status of agricultural economics?

In the old debate within economics between the desire to build a 'hard science', as rigorous as possible, at the cost of necessarily simplifying abstractions, and the wish to take into account the interactions with the social and political dimensions of the phenomena under study, I clearly lean towards the second attitude. This emphasis on the status of economics as a social science is, in my view, fully consistent with our 'agronomic' tradition and the applied character of agriculture economics. I know, however, that this choice is not shared by all. The dominant current in what we French would call Anglo-Saxon agricultural economics, very attached to the neoclassical theoretical reference, tends on the contrary to neglect the social dimension of the phenomena which we study. The point of view which I espouse here has important consequences for the definition of our professional objectives.

It suggests that our main role, as agricultural economists, is to explain and make explicit the mechanisms of the phenomena involved in any rural development process. Some social actors benefit, others suffer from it. To explain is to shed light on these conflicts which are sometimes hidden. In this sense, our role becomes one of social critique. And this immediately raises the question of our status, of our relationships with those who hold power and with the various categories of social actors. Answers to these questions cannot be given in general terms. They must be thought out case by case. But the questions are important and the fact that they have practically not been dealt with in this conference reflects, it seems to me, the domination of the neoclassical current which tends to ignore them. Which orientations for our professional activities?

The diversity of topics in our conference was emphasised earlier. In this broad range, which must be made broader yet, I would like to call your attention to only a few points which are too often neglected or misunderstood.

The lack of data, or their inaccuracy, have been emphasised several times, in particular for many African countries. Did we draw all the consequences of this situation for us? In particular, do we exert sufficiently critical a judgement when interpreting the results of our research based on these uncertain data. In the case of agriculture, the lack of data often leads the agricultural economist to collect or to participate closely in the collection of data. Do we do it enough or with a sufficiently critical mind? Do we question enough the meaning of these data? Do we criticise the relevance of the concepts which the data are supposed to capture for rendering account of how micro-economic units function and evolve, be they production units, consumption units, accumulation and reproduction units? Personally, I feel that these elementary issues which often relate to the validity of fundamental economic concepts, are not raised often enough. Yet it is well known that the correspondence between such basic concepts as production, work, consumption, and reality is not immediate. The domain of agricultural economics is not only at the micro-economic level; I already indicated that it has been a progress for us to take into account many interactions among sectors within a national economy and among national economies. But the most serious theoretical difficulty which we face seems to me to be the articulation between the macro-economic level and the micro-economics of production units such as the peasant family. The fact that this difficulty was not explicitly enough recognised during this conference appears to me as the source of many frustrations, at least among some participants.

Finally, I would like to emphasise the interest for us of conducting the analysis of the determinants of agricultural policies. My own research has convinced me that, in the long run, the role of economic variables is essential. But, in the short run, this influence is exerted through the political process and, as a result, it does not obey a strictly economic rationality.

All of this does not mean that economic concepts are useless, nor that all efforts to quantify are doomed to failure. Experience shows, on the contrary, the outstanding generality of questions put in economic terms. Any society must give concrete answers to such questions as: how to feed itself?, through production or exchange?, with which resources in the first case? against what in the second? Besides, all economic reasoning implies some quantification. Even the analyses conducted in apparently qualitative terms imply orders of magnitude.

As a result, my general plea is that we must be rigorous, exert our critical minds, and be attentive to the relevance of the concepts which we use; in brief, we must take seriously the four criteria of professional excellence discussed above. The desire to rigorously analyse the

problems of agriculture leads us to raise important theoretical questions. It also leads us to combine very diverse sources of information. As a result, collaborations are often necessary. The conditions of inter-disciplinary collaborations have been extensively discussed. Less well known are the conditions of a fruitful collaboration among agricultural economists working in institutions whose objectives are different – research, public administration, firms, consultants. Much could be gained, I am sure, from comparative studies of our practices in this matter. In the absence of such an analysis, one can at least say that the difficulties of this collaboration reflect the ambiguity of our discipline, constantly torn between the desire to accumulate knowledge and the need to solve problems. In this respect, the absence at our meetings of many specialised consultants is probably revealing. Whatever their reasons, their absence deprives us of an experience of analysing individual decision-makers' problems, (Glenn Johnson's third category). It is up to us to get organised so that we can mobilise their knowledge otherwise.

Consequences for our International Association

We must take our diversity and the inequalities among us more into account. Gathering only individual members, our Association is of course open to all agricultural economists of the world with the same rights and the same duties. But we do not have the power to suppress the inequalities. This situation justifies that we give particular support to our colleagues in countries where professional life is the least developed. It must also influence the policy of our new *Journal* and the conception of our conferences.

For the *Journal*, we are trying to constitute an editorial board which will be as representative as possible of the regions, of the main types of works done by agricultural economics, and of their main approaches. The editorial policy will aim at encouraging the publication of articles respecting the same plurality.

For our Conferences, it seems to me that we should revise their conception in order to satisfy better the diversity of interests among our members. All ideas and suggestions in this respect will be welcome. I promise you that the Executive Committee will study all of them carefully and our Vice President for Programmes will take them into account for the conception of our next conference.

CONCLUSION

Our diversity has been repeatedly stressed in this paper. The main lesson is that we must struggle to have the plurality of points of view respected. A real debate, without concessions made only for the sake of politeness, implies a great amount of courtesy. This implies much intellectual modesty and reciprocal tolerance, two virtues which are easier to preach than to practise. Still, I encourage you to try.

Regarding substance, if we want to remain faithful to our double

tradition, agronomic and economic, we can, I believe, be inspired by A. K. Sen's presentation at the beginning of this conference. Let us ourselves avoid the ready-made answers of 'instant economics'. Let us show to our partners how economic analysis, i.e. first, the conceptualisation of problems in economic terms, permits one to pose them better and to contribute to their solution. It is in this manner, I believe, that we will be fully fledged economists and that we will fulfil our social role as agricultural specialists.

NOTES

- ²Malassis, Louis., 'Economie agricole, agroalimentaire et rurale', *Economie Rurale*, 1979, vol. 131, pp. 3–10.
- ³Boussard, J. M., 'Réflexions sur l'objet de l'économie rural', *Economie Rurale*, vol. 63, January–March 1965.

⁴McCloskey, Donald N., 'The Rhetoric of Economics', *Journal of Economic Literature*, vol. 21, no. 2, 1983, pp. 481–517.

⁵Popper, Karl, R., *The Logic of Scientific Discovery*, Harper and Row, New York, 1965.

¹Johnson, Glenn L., 'Scope of Agricultural Economics', this volume.