The Need for a Wider Interface Among Social Scientists in Agriculture.

Using as an example the radical transformation under way in the food and fiber sector of the economy, the authors inspect the mounting interest in rural development and the lack of interdisciplinary thrust among behavioral scientists identified with agricultural research and service. In considering the emerging structural requirements for commercial agriculture, it is noted that agricultural economists have extolled commercial farmers to match the organizational integrity and performance levels of the industries from which farmers buy and into which they sell but that farmers are reluctant or unable to do this—possibly because the models the economists use do not reckon with all of the behavioral considerations. Emphasizing the need here for input from rural sociologists, the authors call for full commitment from both disciplines and for a synthesis of conventional wisdom entailing both economic and noneconomic considerations of major magnitude. Other recommendations include increasing dialogue between economists and sociologists; involving economists and sociologists in the same research problems; and developing a joint major in agricultural economics and rural sociology at the graduate level. (GC)
The need for a wider interface among social scientists in agriculture

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The agricultural establishment traditionally has received substantial support from the public sector in the form of research and service activity. Viewing the total tableau of past effort in the interests of agriculture at the federal, state, and local levels, it is apparent that the behavioral sciences have had a comparatively small involvement. The emphasis has been focused upon technical processes and innovations for agriculture. The quest has been largely for increased efficiency and higher production capability.

There is mounting evidence that this situation may change dramatically in the future. The people problems identified with agriculture are assuming increasing visibility and are moving to a higher order of priority on the public support agenda. As these problems surface, the behavioral scientists identified with agriculture will be confronted with a wide array of challenges and opportunities. They also will come under increasing pressure for effective performance in pragmatic areas of research. Their performance capability appears to have severe limitations at the present time, especially when one considers the likely configurations that problems may take in the future. A major limitation on the capability of the behavioral scientists stems from the lack of communication among themselves and the consequent inability, as a unified group, to identify with emerging relevant problems in a fashion that will produce a research and service output consistent with the future need. The emerging problems in the agricultural sector of the economy strongly suggest the need for pooling of...

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social science expertise. There is little visible trend in this direction.

The requirement for an increasing interface between behavioral scientists is well illustrated by two basic trends that are afoot in agriculture and an examination of what these trends portend in terms of research and service performance needs in the future. These trends relate to (a) the emerging structural requirements for commercial agriculture, and (b) mounting interest in rural development.

The core of the behavioral science expertise identified with agricultural research and service effort consists of agricultural economists and rural sociologists. The main thrust of this paper is the need for unification of effort by these two groups. There are those carrying other disciplinary titles who are also involved, and they are excluded from the comments which follow only because the inferences and implications are so clearly applicable.

The Need Relating to Commercial Agriculture

There is a radical transformation underway in the food and fiber sector of the economy. This transformation involves the process of industrialization. Marketing and input supply firms are becoming larger through growth both in scale and diversification dimensions. The trend is toward increased vertical and horizontal coordination and control in the interests

1 The advantages of interdisciplinary relationships among social scientists have been recognized by many others. One of the more comprehensive treatments is provided by Sherif and Sherif, Interdisciplinary Relationships in the Social Sciences (Aldine Publishing Corporation: Chicago, 1969). While focusing upon the basic need, the 20 contributors to this volume give little recognition to the role of or requirement for an economics input into the interdisciplinary relationship.

2 Many have written on the process of industrialization in agriculture. One of the more succinct treatments of this trend is provided by James Duncan Shaffer, "Working Paper Concerning Publicly Supported Economic Research in Agricultural Marketing" (ERS, USDA, March 1968), p. 11ff.
of efficiency or for the purpose of obtaining a more powerful position in the marketplace. Commercial farmers are being swept along in this industrialization process, but have either a reluctance or an inability to participate fully in it. They do not seem to be able to match the innovations in structure and organization that are taking place on all sides of them. Consequently, they are becoming less and less compatible with the remainder of the economy, and their market power and performance position is gradually eroding.

The fact that commercial farmers need to match the organizational integrity and performance levels that typify the structure of the industries from which they buy and into which they sell is not particularly new. For at least fifty years, agricultural economists have assiduously extolled the advantages and the necessity of such action. Despite this effort, comparatively few effective organizational countermeasures have been taken by producer groups.

Why do producers tend to lag behind in this regard? In view of the considerable past effort that has been devoted to explaining the need for and advantages of escalating the level of organization on the part of producers, there are several possible explanations why this has been so slow in coming about: (a) Those who have espoused the doctrine of producer organization have not been successful in their communication efforts; (b) Producers have received the message but remain unconvinced that their long-term economic well-being, or perhaps survival, depends upon following this course of action; and (c) Producers have heard the message loud and clear, are convinced of its relevance, but remain incapable of taking the action that is so essential to their economic interests.

The first two of these possible explanations are hard to accept. There
Is a near universal recognition on the part of farmers that they are disadvantaged as a result of their organizational posture relative to that of those industries which surround them. Most view their plight with a genuine sense of frustration and bewilderment. This is heightened by the fact that considerable enabling legislation has been passed at both the state and federal levels which permits aggregation of producer activity through cooperatives, bargaining associations, and marketing agreements. Effective use of this enabling legislation is the national exception rather than the national rule. Nor have farmers or their representatives been able to make a convincing case that more powerful enabling legislation is needed. As a general proposition, farmers have not been able to turn the organizational corner to any large extent. The reasons why they have not been able to do so deserve much more intensive consideration than they have received in the past.

The problem seems to lie in the fact that the models with which economists have made the case for organization do not reckon with all the variables that need to be taken into account. Conspicuously missing are the many highly complex behavioral considerations involved in the process of achieving unity of purpose and action when this process entails a trade-off of individual decision-making prerogatives in the interest of financial

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3 "Farmers as independent operators have not been able to coordinate quality improvement programs or to schedule more even flows of products to the extent demanded by today's (food) industry. . . . We believe that farmers do not yet fully appreciate the importance of cooperative action in marketing their products." Report of the National Commission on Food Marketing, Food from Farmer to Consumer (U.S. Government Printing Office, June 1966).

4 Some economists are of the view that not even the relevant economic variables are taken into account. See Peter Dorner, "Needed Redirections in Economic Analysis for Agricultural Development Policy", American Journal of Agricultural Economics 53 (February 1971), p. 9.
gain. Economists are ill-equipped to deal with these behavioral considerations. The need for an input from sociologists is very much in evidence.

And the need is for considerably more than casual or consultative involvement. The requirement calls for full joint commitment. There is little to suggest that the solution lies any more in applying the organizational theories of the sociologist than in applying economic theories to the organizational problem. The evidence all too clearly indicates that neither is adequate in and of themselves. A synthesis is needed of the conventional wisdom on both sides of the question into a new set of concepts that more closely approach the complex reality of the problem.

The restructuring of commercial agriculture appears inevitable. It will be brought about by the inexorable forces that are generated beyond the farm gate in the product and factor marketplaces. The principal question that is unsettled is the role that the social scientists will play in the restructuring process. Ostensibly, social scientists should provide workable guidelines that will minimize the trauma involved, and which will reflect the public interest in a viable agriculture capable of sustained food and fiber production at reasonable costs. Whether they will prove capable of doing so remains to be seen.

It is clear that such guidelines entail economic and noneconomic considerations that are of major magnitudes in importance. It also appears evident that these considerations are inextricably linked in a manner which precludes very much unilateral action by the economist and the sociologist.

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5 Sherif and Sherif, op. cit., Chapter 19. The "Fish Scale Model" advanced by Campbell provides an alternative view of how the interdisciplinary requirement can be approached. The view in this paper is that overlapping coverage of problems by various social science disciplines is not sufficient. What is needed to deal with the organizational problems of commercial agriculture is the synthesis of a new set of theories that constitute a fusion of economics with other behavioral sciences—and which may be of a substantially different form and content than any theory now available.
that can be translated into rational and workable courses of action by producer groups. If they are to make a meaningful contribution, they will need to greatly improve their intellectual rapport. They need to find some means of surmounting the intellectual barriers that have existed in the past.

The Need in Rural Development

The advances that have occurred in technical capabilities to produce food and fiber products over the past three decades have given rise to a persistent problem for people who live in a rural setting. The returns for labor services in agriculture have been low, and fewer people are needed to perform these services. These conditions have been responsible for a massive migration of people from rural areas to urban centers. Not everyone can participate in this migration—there are those that are entrapped by age or the lack of technical skills; there is an increasing number entrapped by the diminution of employment opportunities in urban centers; and there are those who are entrapped by strong family ties or sheer affinity for rural living.

Advances in production technology also has brought substantial relocation in food and fiber production. Many areas have lost comparative advantage in the production of labor intensive crops and have been forced to adjust to less intensive enterprises. This adjustment in intensity has given special thrust to the out-migration process. It has served to further restrict the opportunities of many people who remain in a rural setting.

There is a growing viewpoint that the urbanization process should be reversed. This dimension of the rural development problem is not dealt with in this paper. From the standpoint of social scientists identified with agriculture, it appears prudent that they establish their capabilities for ameliorating conditions for people who now live in the rural setting before they assume responsibility for the larger and more complex problems involved in this reversal process.
There are thus many people and in fact whole areas that have been disadvantaged by the trend of economic events. They have not and do not now share equitably in the total product of our society. They do not enjoy the quality of life that is consistent with our national capability to produce goods and services. Their disadvantage is substantial, and it has both economic and social dimensions.

There are increasingly clear manifestations of a national desire to improve the lot of people who live in a rural setting. At both the state and federal level, substantial emphasis is being placed on the development of programs designed to provide employment opportunities and improve the quality of life for rural people.

The field of rural development is of such scope and involves so many facets that it currently has an amorphous quality. Few are clear on the full magnitude of the task that lies ahead, and fewer still have a distinct image of where and how to start on it. Economists are inclined to view the problem mainly as one of generating economic activity in the rural setting and of efficiently providing adequate services to rural people. Sociologists view the problem more in terms of aspirations and motivations, viable community organizations, communication problems, and leadership roles. Interests of the two groups overlap on such issues as education and training, optimum organization of activity, and problems relating to taxation and finance. But even in such areas of overlapping interest, there is a paucity of examples of joint research effort.

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The emerging need for research and service activity relating to rural development brings into sharp focus the requirement for an interdisciplinary approach on the part of social scientists in agriculture. It appears highly unlikely that the needs in this important field can be met adequately unless this approach is taken. And there is some imperative for urgency in the development of interdisciplining working relationships during the formative phases of work in this field.

The interdependence among social science disciplines pervades the entire rural development problem. Consequently, more is involved than simply widening the common interest base between the disciplines. Economic development efforts will be effective only if they are compatible with the value systems of the people who are involved; improvement in the quality of life must be subject to constraints that have their origin in the abilities and motivations of the people, the resource base identified with them, and the extent to which the public is willing to effect income transfers to achieve specified goals. The urgency and the necessity for a close unification of the behavioral science effort in addressing the rural development problem is clear. The joint involvement of social science disciplines is a prerequisite that must be met if most problems in this area are to be resolved. It appears highly improbable that the performance of social science disciplinary groups will be adequate if they go it alone in this field.

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The two problem areas that have been discussed constitute vivid illustrations of the need for a widening interface between economists and other social scientists in agriculture. There may well be those who view the
foregoing remarks as a restatement of conventional wisdom and perceived need. The allegation of triteness would seem hard to defend on the basis of the body of literature that treats with the need for a wider interface between the two groups and the means of developing it. It is even harder to defend with evidence of sustained attempts of economists and rural sociologists to join forces in an effort to resolve some of the pressing problems identified with agriculture. There have been joint efforts, but in the main, these have fallen far short of the kind of commitment that is required. There is a distinct and apparently often unrecognized difference between complementary research effort and a true multidisciplinary approach. The latter involves a melding of theories, methods, and research techniques into a unified attack on problems that have multidisciplinary configurations. There are many such problems at hand in addition to the two discussed here. Those relating to agricultural labor, to pollution of the environment by agricultural enterprises, to the need for more effective use of the rural resource base for recreation, and to the emerging need for research in the consumer interest are highly visible examples. If these are to be dealt with effectively, a multidisciplinary approach on the part of social scientists will be required. The pressure in this direction will be substantial and unremitting in the future.

The upcoming interface requirement is a far cry from the situation that exists today. Economists and rural sociologists identified with agriculture now communicate on rather restricted terms. They pursue lines of inquiry that are generally different, and which reflect a tacit jurisdictional accommodation that has been reached over time. Both the communication and the working gap between the two groups is substantial. In part, the problem has its origin in the differing base of theoretical concepts.
These not only differ, but, when taken separately, are inadequate to cope with many of the macro problems of a behavioral nature that exist in agriculture. The research approaches used by agricultural economists and rural sociologists also differ widely, and so do the principal analytical techniques that the two groups employ.

All of these are impediments that must be overcome. A full prescription whereby this may be accomplished is not readily available. However, several courses of action would seem to have prospects for moving the two groups in the desired direction. First, there is the need for a conscious increase in the dialogue between economists and sociologists in the field of agriculture. They do not know each other well enough, and they do not have a necessary and sufficient understanding of each other's discipline to work closely together. This dialogue may take many forms, but informal seminar exchanges seem to offer the best opportunity in view of the elementary professional level at which it must start on both sides. It would be easy to underestimate the time that will be required for such dialogue to develop into a meaningful and constructive interface. Many on both sides will rationalize that they cannot afford the time and effort that will be involved. Perhaps a few will pause and reflect on whether they can afford not to.

A conscious effort also should be made to involve economists and rural sociologists in the same research problems. As indicated earlier, many opportunities for such involvement exist, and an even wider variety will be available in the emerging problems of the future. It would be best if this involvement could be on a voluntary basis, but administrators should not be reluctant to use the pressure of their positions to achieve this end. One would be naive indeed to assume that such alliances would rapidly
blossom into close and effective working relationships. In the early stages, the friction may well be substantial, and the efficiency with which work is accomplished will likely be low. Such should be the expectation and the price one is willing to pay for creating the climate for intellectual interchange that is so sorely needed.

Finally, close consideration should be given to the development of a joint major in agricultural economics and sociology at the graduate level. While this is a longer term remedial measure, it would appear to be the one with greatest potential. It would attack the problem at its source: the intellectual gerrymandering that results from a preoccupation with depth at the expense of breadth that typifies graduate curricula in both disciplines. Development of a joint major would clearly involve compromise in what both economists and sociologists think that graduate students need to know in order to enter the professional ranks. This compromise, in itself, should do much to stimulate interchange between the members of the respective faculties! But the need for and advantages of such compromise seem far from unrealistic when one views many of the emerging problems of the future and the kind of training that will be required to deal with them.

Others may be able to think more inventively on ways for widening the interface between agricultural economists and sociologists. In fact, the principal intent here is to get the dialogue going. Achieving an effective coalition between the two groups will without doubt be a traumatic and trying effort. But it should be well worth it when one considers the potentials for accomplishment.