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## *Structure of Agriculture<sup>1</sup>*

**T**HE AUTHORS WERE REQUESTED to discuss the structure of agriculture that would prevail if agriculture were organized in a way consistent with society's values for and goals of economic organization and to point out the degree of change in the present structure that would be required and the implications for agriculture in terms of technology and factor prices. We have taken the term "structure of agriculture" to refer to the pattern of asset control and the framework of decision making in the industry. Structure, therefore, is concerned with the number, size and location of agricultural plants, the pattern of ownership and management "binding these plants together into firms, the inter-firm arrangements of a formal or informal nature that influence firm actions and the governmental lines of authority at state and/or federal levels that may modify firm decisions."<sup>2</sup> Structure is determined partly by our values, which may also be altered by changes in structure. Conflicts also may develop and persist between values and economic forces. In such instances, society often takes action to reconcile these conflicts.

In developing this paper, the authors found it necessary to anticipate the contents of Dr. Brewster's paper, "Society's Values and Goals in Respect to Agriculture," Professor Hathaway's paper, "Goals of Agriculture for Economic Organization," and the paper presented by Professor Kaldor and associates, "Goal Conflicts of Agriculture." As a basis for the development of this assignment, therefore, the authors found it necessary to first briefly state their own beliefs with respect to the beliefs and values of society that relate to the structure of agriculture.

<sup>1</sup>Q. W. Lindsey, J. G. Maddox, N. C. State College, H. L. Stewart and J. M. Brewster, Farm Economics Research Division, Agr. Res. Ser., made helpful suggestions in preparing this paper.

<sup>2</sup>Essentially this same definition was developed by R. A. King, "The Design and Use of Synthetic Models in Guiding Changes in Market Structure," a paper presented to the Southern Association of Southern Agricultural Workers, Birmingham, Ala., February, 1960.

### BELIEFS AND VALUES HELD BY FARMERS AND FARM SPOKESMEN

We shall focus attention on four beliefs and values which are especially pertinent to the structure of agriculture and to the role that farmers play in the economy.

Foremost is the widely shared judgment of farmers and farm spokesmen that American agriculture should be structured by family farms. A family farm is commonly described as one on which most of the managerial and labor activities are combined in the same family. Farm spokesmen especially are inclined to believe that farming should be organized as small independent proprietorships embodying the management and labor functions in the family that operates the farm business.

The philosophical ideas on which the family farm is rooted assumes also that such an organization either is or can be developed into a unit that will employ the family labor efficiently and that will yield returns for farm resources that are high enough to enable farm families to enjoy levels of living equal to those enjoyed by other families in society.

Emphasis on the family farm is deeply embedded in our heritage. From the beginning and extending throughout the settlement of the new world, there were no serious institutional barriers to combining into one person or family the managerial and labor roles that were segregated into lord and servant in the older European civilization. John Adams and Thomas Jefferson<sup>3</sup> argued that the inherent right of the colonists to govern themselves had its close counterpart in the claim of every colonist to possess land in his own right. Their arguments proceeded from the political philosophies of the 17th and 18th centuries, which proclaimed property, together with life and liberty, the foundations of a good society. A good society, therefore, was regarded as one in which land ownership was widely distributed and in which the land was owned in limited quantity with the farm family living on the land it farmed. In this setting, each individual was presumed to develop in line with his own capabilities. Thus the good society would be achieved.

There was faith in the market to provide farmers with a fair return. Earnings were determined largely by individual efforts. The family farm, therefore, was considered as providing a

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<sup>3</sup>R. Freund, John Adams and Thomas Jefferson on the Nature of Landholding in America. *Journal of Land Economics*, May, 1948, p. 107.

motivation for increased productivity and as a means of assuring the individual the fruits of his own labor.<sup>4</sup>

An agriculture of predominately family farms has been a dominant goal in public policy concerning the structure of agriculture in the United States. Especially significant was the Homestead Act passed in 1862, which gave land to families who agreed to settle the land for specified periods of time. This act reflected the faith that a farm family owning the land it farmed could dig its living out of the soil. Farming was viewed in a subsistence orientation. The vast technological changes that occurred during the last century were not expected. There was little or no concern over the possibility that the rate of growth in the supply of farm products might exceed the rate of growth in demand.

In 1916, the Federal Land Bank system was established to encourage the development of family farms and farm ownership in the United States. In the early 1930's, the Resettlement Administration sought to relocate families in areas that were re-developed and were to be operated on a family farm basis. The Farm Security Administration also came into being in an effort to perpetuate these goals by assisting farmers and individuals who wish to farm with their capital and credit problems. Each of these acts has affected the distribution of land holdings and the structure of American agriculture.

The family farm is an ideal that is not shared by many other countries nor is it universal among our own farmers. Certainly, the family farm structure was not characteristic of much of the cotton and tobacco areas of the South or of farms in the West and Southwest. In both the far West and the Coastal Plain of the Southeast, farms using many hired laborers are prevalent. In the West, the farm workers are paid cash. In the South, they are paid in kind. The family farm in the United States really developed its stronghold in the New England and midwestern states. The kind of agriculture that developed in the South and far West conflicted with some of the principles on which the family farm philosophy was based — that all individuals had the greatest opportunity to come into their own when they possessed rights in land and had the freedom to use it in accordance with their opportunities.

A second and related major value of many farmers and farm spokesmen is that farm families should own as well as manage

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<sup>4</sup>For a statement of these and related philosophical principles in American agriculture, see J. M. Brewster, *Impact of Technical Advance and Migration*, Proceedings Issue, *Jour. of Farm Econ.*, December, 1959.

and till their farms. This value implies that farming should be reserved for farmers. It arises partly because society respects sole ownership of individual proprietorships. An individual who is in debt is expected to work and save in an attempt to achieve the status of full and complete ownership. When management and ownership are combined in the same person, the owner is entitled to gains and losses arising from good management. One receives the fruits of his own endeavors. Again, this value reflects the faith that the market will return appropriate rewards for productive efforts.

This desire for full ownership and the struggle for it by farm operators contrasts sharply with goals now commonly accepted in nonfarm businesses. In nonfarm business, multiple ownership and perpetual indebtedness are accepted as a general rule and separation of management, labor and ownership is typical.

A third widely held value is that efficiency is desirable and that each entrepreneur should be permitted freedom of management to decrease costs whenever he finds the opportunity to do so. This view is related also to one of the concepts underlying the family farm: through family farm ownership individuals have the opportunity to gain from increased productivity and frugality and would therefore seek the most efficient methods of production. It was thought that when entrepreneurial freedom was permitted, the competitive system insured efficiency. This freedom of management value often takes the expression that farm production should be free from regulation by other sectors of the economy and free also from public regulation. It implies the belief that the conditions of perfect competition are reasonably well approximated in agricultural markets. But there is now greater doubt that the perfect competition model is descriptive of agricultural market conditions. Consequently, somewhat less emphasis is now placed upon independence in management by farmers.

Another value which in the past had a great deal of support among farmers and farm families and which probably has substantially less support now is that farming is a preferred or superior occupation and that there should be free entry into farming. That is, farmers have held the view that if their sons like farming they should be encouraged to go into it regardless of abilities or financial position. This view is based partly upon the traditional faith of farmers that they can close the gap between their circumstances and their aspirations by obtaining title to land and working hard. Also, farming was supposed to have social and cultural advantages; tilling the soil was regarded as a superior occupation. This value is related to the value of entrepreneurial freedom. The development of the frontier with its

appeal to farm families and the challenge and dreams of independence associated with it fostered the view that farming is a superior occupation.

The values, both present and past, held by farmers and farm spokesmen have been important in influencing the structure of agriculture. They have affected the pattern of ownership of agricultural assets, the interrelations among firms and the ability of farmers to control decisions with respect to agriculture. As economic forces have altered the conditions confronting farmers, it has become clear that conflicts in values with respect to the best structure of agriculture exist. These conflicts are deep seated. The forces giving rise to these conflicts need to be analyzed and their effects determined if farmers are to be in position to make rational choices among policy alternatives available to them. But this analysis must also consider the somewhat different prevalent beliefs in other parts of our society.

#### BELIEFS OF URBAN PEOPLE IN REGARD TO FARMERS

Most urban people believe that food should be both abundant and low priced and that supplies should be dependable. There is much public support for this goal of abundant food. The separation of urban people from the source of supply of their food has no doubt encouraged the prevalence of this belief. It has been a factor, for example, in the willingness to promote and subsidize development of additional land resources, even when the supply of farm products increases at a greater rate than demand for these products.

A related value held by many nonfarm people is that farming should be free and competitive. This no doubt reflects a public image that competition and freedom are generally desirable and that agriculture represents an industry ideally suited to the workings of competition. Further, a structure involving both free competition and subsidization of resource development assures the public of plentiful food at low prices.

The nonfarm public tends to regard the farmer as a special kind of individual, a hard-working, frugal person who possesses different standards with respect to clothing, education and consumption patterns than his urban counterparts. Therefore, living costs are presumed to be lower on farms than in urban areas. The farmer's production of food presumably insures against real want.

Farm families, however, are no longer satisfied with consumption patterns differing from those of urban residents, and

relatively little food is now used on the farms where grown. But farm families now want essentially the same consumption pattern as urban families and if farm families are to enjoy this consumption pattern, their incomes will need to support it. They are not willing to be viewed as second-class citizens. Changes in the structure of agriculture may be required, however, for farm families to obtain incomes that will be on a par with incomes of comparable nonfarm families.

### STRUCTURAL CHANGES RELATED TO BELIEFS AND VALUES

Economic forces are continually changing. Changes in these forces dictate changes in the structure of business. There are three sets of forces which we believe have especially important effects upon the structure of agriculture and which we shall discuss in the rest of this paper. They are: (1) changing technology and increasing capital requirements in agricultural production, (2) specialization of function in production and (3) industrial development of rural areas and decentralization of industry.

#### Technological Developments and Increasing Capital Requirements

Changes in technology and mechanization of agricultural production provide opportunities for increased efficiency in production and reduced cost. Also, these changes usually involve increases in the scale of the farm business.

The technological revolution in agriculture is rapidly transforming it into one of the higher capital-using industries. The recent changes in production per man-hour serve as an index of this change in technology and the substitution of capital for labor. Production per man-hour has increased 90 per cent in the last 10 years, or 6 per cent per year.<sup>5</sup> This is from 2 to 3 times the increase per year in nonfarm output per worker.

This increase in production per worker has had and will continue to have a tremendous effect on farm size and capital requirements. In the 15 years from 1940 to 1954, the number of farms with volume of sales of more than \$10,000 almost doubled.

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<sup>5</sup>U.S. Agr. Res. Ser., Farm Economics Research Division, Changes in Farm Production and Efficiency. U.S.D.A., Stat. Bul. 233. Revised September, 1959.

The number of commercial farms with sales of less than \$5,000 was cut in half.<sup>6</sup>

Sales per commercial farm averaged about \$7,600 in 1954. The average investment amounted to about \$34,000. Recent projections of numbers of commercial farms, output and capital requirements would indicate a volume of sales of about \$17,000 and investments of about \$70,000 per commercial farm in 1975 at 1954 prices.<sup>7</sup> At 1960 prices the investment would total nearly \$90,000.

These projections do not necessarily conflict with the family farm as a goal since they meet the condition that labor be supplied by the individual farm family. Available evidence indicates that such changes in size of farm can easily be made within the framework of a family farm structure of agriculture.

Past changes in scale and efficiency in farming have occurred without any increase in the use of hired labor. Farms operated by family labor have maintained their dominant position in United States agriculture. The tendency for the size of farm to continue to rely primarily on the labor of the farm family is explained partly by the willingness of farm families to accept lower earnings on labor and capital than the earnings received in other sectors of the economy where larger businesses prevail.<sup>8</sup> Adjustments in the levels of farm and nonfarm earnings obviously represent a long-term rather than a short-term prospect. However, such a rise in the rates of return in farming to levels comparable to those in other sectors might in turn provide a more direct test of the prevalent and comforting hypothesis that almost regardless of type of farming, there are no significant economies of scale in agriculture beyond the size limits of family farms.

As scale is increased, further conflict seems likely between changes in technology and the value that the farm should be owner operated. This conflict stems from increases in capital requirements and the narrowing of the profit margin resulting from the expansion in production.

The increased amount of capital needed in farming is causing farmers to reassess their ideas in regard to getting started in farming and in regard to farm ownership. The tendency for the supply of farm products to outrun demand has made it difficult

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<sup>6</sup>J. V. McElveen, *Family Farms in a Changing Economy*. U.S.D.A., Agr. Info. Bul. 171. March, 1957.

<sup>7</sup>K. L. Bachman, *Prospective Changes in the Structure of Farming*, presented at the 36th Annual National Agricultural Outlook Conference, November 18, 1958, Washington, D. C.

<sup>8</sup>See G. L. Johnson and Joel Smith, "Social Costs of Agricultural Adjustments," in *Problems and Policies of American Agriculture*. Iowa State University Press, Ames. 1959. P. 261.

for farmers to accumulate sufficient capital to bring about adjustment needs as rapidly as technological advances make new adjustments possible and profitable. Hence, farmers are turning more to outside financing for farm adjustments. This development is in conflict with the goal of full ownership.

In the past, agriculture has financed most of its growth in capital from savings. From the standpoint of agriculture as a whole, Tostlebe estimated that during the 1940-49 period, 90 per cent of the new capital came from savings of farmers.<sup>9</sup> There appears to be good reason to believe that this pattern is changing. In the future more capital from nonfarm sources and larger capital loans would appear likely.

There appears also to be general agreement that the larger capital loans will require more emphasis by farmers and lenders on the total credit needs of the farm and the likely effects on income. This will probably mean that educational, loan and service agencies will need to work more closely with farmers in developing sound business plans.

Continued expansion in scale thus may also conflict with the basic idea in the family farm that the management and labor function should reside in the same person. This is particularly true of the prevalent belief that the farmer should have complete freedom in management. As scale increases, eventually a point may be reached at which the farm business enterprise, like many nonfarm businesses, may find it profitable to develop some specialization in the management, labor and capital functions.

The increased capital requirements and the associated technological developments place a premium on sound management decisions in agriculture. As a result, commercial banks and other credit agencies are turning to more direct participation in the farm planning and in the major management decisions of the farm operator. Public credit agencies were developed to perpetuate freedom in management as well as encourage ownership of the land. Since the 1930's, however, the Farmers Home Administration has required farm plans as a basis for its loans.

Other public credit agencies also are becoming increasingly aware of management requirements for profitable operations. They are giving less attention to security and more attention to the purposes of the loans and to economic prospects for repayment. These developments represent a shift away from complete freedom of management by the farmer who obtains credit.

On the other hand, farmers' beliefs have probably encouraged

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<sup>9</sup>A. S. Tostlebe, *Capital in Agriculture*. Princeton University Press, Princeton, N. J. 1957. P. 19.



the development of some types of credit. For example, the use of land purchase contracts has grown rapidly in recent years as an instrument for obtaining outside capital with minimum down-payments. Land purchase contracts differ from mortgage financing chiefly because the title remains with the seller until all or a specified percentage of the total payment has been made. Such arrangements are consistent with farmers' beliefs in the desirability of ownership, freedom in management and faith in their ability to close the gap between their present situation and their aspirations. Purchase by land contract, however, usually entails greater risk for the farmer buyer than does conventional financing. Many students of agricultural financing believe that credit systems in agriculture should encourage wider sharing of the substantial risks involved in modern farming.

The growth in capital requirements is making it difficult for new farmers to go into farming in the framework of historical values held by farmers. It is no longer sufficient to dole out or otherwise make available small parcels of land and instill in people the hope of being able to close the income gap by going into the farming business, as was formerly considered to be the American ideal. The high instability in agricultural earnings makes it virtually impossible for such farmers to obtain a line of credit consistent with the needs of modern agriculture. Certainly, if vertical integration continues to increase or if there is a shift to perpetual financing of farms, American farmers must be prepared to give way on their views with respect to management rights as the sole prerogative of the farm operator and also with respect to the desirability of combining all management and capital functions in the same individual.

### Growing Specialization in Farming

Traditionally, agriculture in the United States has been an industry in which individual units commonly carry on several enterprises. But a definite trend toward product specialization has occurred in recent years. The number of major enterprises per farm dropped about a fourth from 1940 to 1954. With the development of specialized machinery and equipment, many farmers have found it profitable to specialize in the commercial production of a relatively few enterprises to better utilize the large capital investments needed. Specialization in dairy and poultry farming, for example, is increasing significantly.

Even more important has been the growing specialization of farmers in certain phases of farm production. Specialized

nonfarm industries produce inputs for farmers or furnish marketing and processing services formerly carried out on the farm. Most dramatic has been the growth of large-scale industries to produce inputs for farm use. Farming can now be called a "nonfarm input industry." More than half the inputs used in agriculture come from nonfarm sources and the percentage has increased sharply. The proportion of total inputs represented by nonfarm inputs has increased from about a third in 1940 to more than half in 1958. These nonfarm inputs include machinery, fertilizer, pesticides, gasoline, feed additives and other services now produced in the nonfarm sector. They have substantially replaced farm land and farm labor in the production process.

Economic forces leading to specialization of function in production require coordination in decisions and are in conflict with independence of decision making. This conflict has become especially apparent in the case of contract farming in which decisions are made at some central point to apply throughout the entire system of production and marketing. Specialization and integration do not necessarily conflict with the aspects of the family farm pertaining to labor. In most instances, the work is still performed by the farm family. The conflict with the concept of the family farm stems from a reduction in the range of decisions left to the discretion of the farmer.

This value that the management function should be vested in the farm family is in large part peculiar to agriculture. As a society, we do not concern ourselves with the fact that an individual or family operating a gasoline station, for example, often has much of the management function performed by an integrated parent company, even though much of the capital also is supplied by this company.

Specialization of farmers in production is consistent with the value held by farmers that only farmers should farm. Farmers themselves, however, are not consistent on this point in that their values permit expansion in activities by farmers, taking over certain nonfarm functions through the formation of cooperatives, yet they are concerned when nonfarm firms make inroads into agricultural production. Many farm leaders, for example, believe that it is desirable for farm people to form cooperatives and to perform marketing and processing functions normally performed by nonfarm firms. The same spokesmen, however, are often greatly concerned when nonfarm firms begin moving into the production of farm products. Only in part does this inconsistency in outlook seem to be tied into specific bargaining problems of farmers.

Currently important is the conflict between independence of

management and the feeling of many farmers and farm spokesmen that higher farm incomes are needed. Specialization of farmers in the production function has made the farmer's income more dependent on prices. Price decreases associated with the rate of expansion in the production of farm products together with rising costs for increased quantities of nonfarm inputs has conflicted with the belief of farm people that the market will provide satisfactory incomes. Regulation of farm production, on the other hand, conflicts with the value of urban residents that food should be low in price and abundant. Regulation also conflicts with freedom of entry and with the value held by farmers that efficiency should be encouraged and that the techniques of production that promise lowest cost should be adopted.

Freedom of entry is a cherished ideal of many people. But freedom of entry is the effective regulator of profits in a competitive economy. If returns on resources are desired that are larger than would prevail under conditions of freedom of entry, producers must decide whether they prefer freedom of entry or higher returns.

### Industrial Development

A third force that is altering the structure of agriculture is industrial development in rural areas and the decentralization of American industry. Industrial development brings with it opportunities for higher incomes, especially higher returns for labor services. In many instances, business developments in rural areas are shattering the farmer's view of farming as the best of all possible ways of life. As local industrialization develops, farm families see people with higher levels of living and higher incomes. They soon learn that it is possible to achieve these incomes and levels of living.

Faced with the growing complexities of farm management, increased capital requirements in farming and alternative opportunities in nonfarm employment, many farm people are turning to nonfarm occupations. Part-time farming is increasing; many farmers are holding land in the hope of gaining from increased land values in the future or as a means of obtaining some measure of security against industrial recessions.

The earnings from nonfarm uses of capital also are becoming increasingly important not only to part-time farmers but also to operators of larger commercial farms (Table 11.1). Annual average income from nonfarm investments totaled more than \$1,000 for operators of class I farms and nearly \$400 for operators of

class II farms. Somewhat similar results are shown in a recent study of farmers in western Oklahoma. In this area, nonfarm assets averaged nearly \$10,000 per farm, with several groups having nonfarm assets averaging \$15,000 to \$20,000.<sup>10</sup> Experience with nonfarm investments would seem likely to lead farmers to expect somewhat similar returns from farm investments.

Table 11.1. Average Off-Farm Income of Farm Operator,  
Specified Sources, 1955\*

Class and type of farm	Income of farm operator			
	Nonfarm business †	Interest, dividends, trust funds, and royalties	Rental of nonfarm real estate	Total specified items
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Class I . . . . .	532	407	68	1,007
Class II . . . . .	154	181	29	364
Class III . . . . .	96	160	45	301
Class IV . . . . .	158	84	27	269
Class V . . . . .	200	47	30	277
Class VI . . . . .	80	11	11	102
Part-time . . . . .	403	28	72	503
Residential . . . . .	272	74	30	376

\*Farmers' Expenditures, Cooperative Survey USDA-U.S. Dept. Commerce, Dec., 1956. Vol. III, Pt. 2, 1954 Census of Agriculture, p. 50.

†Net income.

Bellerby emphasizes the beliefs of U.S. farmers that agriculture is a preferred occupation in explaining the long-term unfavorable farm-nonfarm income relations in the United States. In this connection, he states: "Farming [in the U.S.] has developed largely on a family basis with hired labor as a comparatively small part of the land force; except in respect to acreage the production unit has therefore been small. Subsistence farming involving varying degrees of selfsupply has traditionally given rise to the assumption that a farmer can attain a greater degree of independence and insurance than is attainable in other occupations."<sup>11</sup>

There is reason, however, to believe that these assumptions may be changing. In considerable part, this change is related to

<sup>10</sup>L. J. Connor, W. F. Lagrone and W. B. Back, Farm and Nonfarm Income of Farm Families in Western Oklahoma, 1956. Okla. State Univ. Bul. B-552. March, 1960. Oklahoma State University and ARS, USDA cooperating.

<sup>11</sup>J. R. Bellerby, Agriculture and Industry Relative Income. Macmillan & Co., New York. 1956. P. 292.

industrialization in rural areas. The challenge in agriculture in this context is to create opportunities for adjustment within agriculture that will enable those who wish to continue in farming to earn returns on their resources equal to the returns received for comparable resources in other uses and to create channels for migration of people from farms and into nonfarm employment who prefer to migrate at prevailing relative wages. In many instances, nonfarm capital has moved into agriculture with the hope of obtaining capital gains from increased land values. This has been especially true near industrial centers. There is strong evidence that the rapid rise in land values that has occurred over the last 30 years may have run its course. In the late fifties increases in land values have slowed perceptibly; sales records indicate decreases in average real estate values have occurred in the Corn Belt and Lake states. Probably, there will be less gain in the immediate future from increased land values in predominantly rural areas. Also, we may find in the future that farm people will be less willing to accept a low return for their labor and capital used in farming in the hope of reaping windfall gains from land ownership.

### CONCLUSIONS

The values held by farm and nonfarm people affect the structure of United States agriculture. They also affect the views of various segments of our society in regard to the role of the farmer in our economic system. Economic forces change over time, however, and when these forces are superimposed upon values, conflict develops between these forces and values with respect to how agriculture should be structured. Conditions created result in a change in values or impediments to the fulfillment of economic goals. Changing economic forces are now causing farmers and society in general to make some difficult choices between deep-seated values with respect to the structure of agriculture and the levels of income of farm families.

For many decades, farm people have been willing to accept substandard rates of return for labor and management, partly in the hope of reaping windfall gains from increased land values. Conditions now seem to be changing. Agriculture has found it difficult to obtain the price stability needed to plan profitable and efficient production. The emphasis on agricultural adjustment has been to decrease cost by adopting improved technology. This has led to greatly expanded agricultural production and to changes in optimum size of farm firms. These changes have been so

large that we are forced to rethink the beliefs involved in the family farm full ownership and management freedom. In the past, for example, the family farm was defined in terms of the management and the family labor force. The alterations in the structure of American agriculture that have occurred recently and are now occurring make it difficult to maintain freedom of entry into agriculture and to retain entrepreneurial independence of farmers without decreasing the incomes of farm families. It is likely, therefore, that in the future family-operated farms will have more of the management functions performed by off-farm sources. Farmers in turn will need to reassess their beliefs and to develop a more consistent course of action in guiding the forms taken by the adjustments.

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## *Discussion*

LET'S BEGIN by pointing out a few problems that have given rise to considerable confusion in the discussion of agriculture's policy problems. The first of these concerns the very nature of conflict in human society. Why do so many social scientists insist on believing that it is possible and desirable to attain a human state in which contentment and peace is universal? If that wondrous body of human experience, the humanities, tells us anything about the nature of man, conflict is an inevitable concomitant of human existence. The best we can ever hope for is some acceptable balance between conflicting forces in nature and in human society. Indeed, it is to be doubted that man could ever be happy in a universally placid environment. Is it not true that when things get "too quiet" we find distractions and recreations which inject excitement, danger or uncertainty into our lives? The fact that we are eternally fated to live with some degree of conflict suggests the usefulness of a threshold concept for differentiating in policy analysis between acceptable and unacceptable levels of conflict.

But then, what is conflict? Or what even is a "value conflict"? We must yet define consciously and adequately one of the central concepts about which we have been conversing for three days. The writer submits that the meaning is not self-evident and that the term has been used here in quite a number of different ways. Let the writer list some of these different usages. (1) There is the case of conflict where specific values or goals of the parties to conflict are completely inconsistent and goal attainment

by one party prevents absolutely the attainment by another of some specific goal. (2) There is the case of competing values and goals under conditions of approximate equality of power. In this case it is to the advantage of all parties involved to do some trading of goal attainment much as commodities are traded in a market characterized by free competition. (3) There is also another case of competing values and goals where substantial difference in power exists between the parties involved. In this case the differential power positions focus in a bargaining process which normally results in the gain or goal attainment being distributed in some manner related to the distribution of power among the parties to the bargaining process. (4) There is the case of irrationality (inconsistency of action) due to semantic difficulties or to communication inefficiencies. This usage of conflict does not involve values except as they may be related to the semantic difficulties. This usage can be applied to individuals or group behavior. (5) There is also another case of irrationality as an explanation of conflict which is limited primarily to the behavior of individuals. This is the explanation of apparent irrational conduct and conflict derived from Freudian analysis of frustration and from abnormal psychology.

Before we spend much more time conversing with each other about values and conflict in agricultural policy, agricultural economists, the writer thinks, would do well to pursue philosophic value theory further than they have and also to investigate the considerable body of literature on conflict that now exists.

A second difficulty commonly encountered in policy discussions is the frequent lack of historical perspective and understanding among those in agriculture who are concerned with the present policy difficulties. This has led to some very widely held beliefs about facts in agriculture that are contrary to actual objective fact.

Perhaps the best example of this in agriculture is to be found in the beliefs concerning the role of private enterprise and government in the early as well as later economic development of this country. There is no denying the importance of freedom and private initiative in our nation's growth, but the federal and state governments have made huge public investments in the development of this country. Yet this is conveniently forgotten or denied by some social scientists as well as farm leaders and others in attempts to promote private enterprise as an important social goal in formulating agricultural policy. They do a disservice to their own cause.

What are the facts? Early governmental expenditures were made to develop transportation systems and to protect the settlers

from Indian attacks. First, canals and later roads such as the Wilderness Road and the Cumberland Road were built to the West. River transportation was improved. "Land-grant railroads" were flung across the continent in good part with public capital. Later both mainline highway and secondary roads were built. Various forms of public aid were and still are extended to irrigation, drainage and rural electrification projects. In recent decades the United States has undertaken major resource development projects such as the TVA and the Missouri Valley Authority. Most of this development has been created with or "triggered" by federal and state resource investments — and agriculture and private enterprise have thereby profited greatly. Other, even more direct, examples of government investment in agriculture abound: Rural Free Delivery of mail, farm-to-market roads, conservation payment programs, and the federal farm credit system including the Federal Land Banks, the Production Credit Associations, the Intermediate Credit Banks and the Farmers Home Administration — all examples of agencies set up to facilitate the flow of capital into agriculture. The development of human resources also has long been a concern of this society. Many states early founded public universities. The land-grant college system was begun under the Morrill Act of 1862 which made large grants of federal land to states for the establishment and support of land grant colleges. At every turn in our history, federal and state governments have fostered development through protective legislation, public investment and subsidy. Indeed, the first Act of the First Congress of the United States, after enacting a system for the administration of oaths, was the passage of a bill designed by Alexander Hamilton to protect and subsidize infant industries through tariff regulations.

In analyzing or discussing policy conflicts in agriculture, it seems to me to be most important to distinguish carefully between beliefs about facts and beliefs about normative matters or values. Many of our present difficulties both in policy analysis and in policy actions result not so much from the existence of conflicting values held, but from the confusing of facts with values (i.e. the tendency to believe what is, is what ought to be) and the failure to hold accurate beliefs about the facts of our past history and present situation.

There is a third difficulty which commonly confounds policy discussions today. In handling values and beliefs there is a ready tendency to lump these into farm-held values and beliefs and urban-held values and beliefs. This assumes a homogeneity within urban culture and within rural culture which simply does not exist. While quite a few values are held in common over



many social sectors of the United States, great diversity characterizes both urban and rural culture. There are probably greater differences in beliefs and values between the Southern Appalachian farmer and an Iowa commercial farmer than there are between the same Iowa commercial farmer and a Chicago businessman. We would be well advised in our analyses to handle values and beliefs in terms of more specific socio-economic groupings than simply urban or rural people. Bishop and Bachman recognize this necessity of greater differentiation when discussing farm-held values but seem not to recognize it when treating non-farm values and beliefs.

To turn more to the specifics of Bishop and Bachman's paper, the writer would first point to their definition of structure. This definition is derived in most part from market structure theory and is limited in meaningfulness to economic variables. It does seem to me that in discussing problems as broad and as complex as the relationship between values and goals and the structure of agriculture that something more inclusive than simply an economic definition is probably necessary. At least the writer is made uneasy by a definition which is designed to be related to values and goals but which among other things leaves outside its scope relevant social groupings.

In discussing industrial development and its effects on agriculture the authors seem to attribute the melding of urban and rural cultures in this country to industrial development. This, if it is their intent, seems to me to be a substantial oversimplification. One can point to too many rural communities today which have experienced rather thorough integration with urban culture and have come into contact with little or no direct industrial development. Surely the extension of urban culture and the erosion of rural institutions have resulted in major part from the extension of modern communication and transport systems into rural areas. To see this, one need only to reflect momentarily upon such innovations as rural electrification, Rural Free Delivery, the telephone, radio and television, the automobile, the all-weather farm-to-market road and other aids to physical movement.

In discussing the beliefs and values held by farmers and farm spokesmen, the authors mention the value of freedom. They discuss freedom in terms of management and indicate that as a value this means that "farm production should be free from regulation by other sectors of the economy and free also from public regulation." Much confusion has resulted in public discussions of the value of freedom in farm policy. It is a concept with which philosophers have difficulty. Social scientists would be advised

to exercise great care in its use. Rarely these days is the term freedom qualified in its use in agricultural policy. It is thus often used or thought of as absolute freedom. This conception of freedom has done and is still doing much mischief in agricultural policy, for in any practical sense, for man, no such thing as absolute freedom exists. Rather there is only some relative degree of freedom as one has greater or lesser ranges of choice between alternatives in the pursuit of some set of goals. The search for absolute freedom tends to produce great saints such as St. Francis of Assisi, and great sinners such as the Marquis de Sade. While those hot in the pursuit of absolute freedom are quite conspicuous in agriculture these days, one finds strangely little evidence amongst us of saintliness.

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## *Discussion*

THE ORIGINAL OUTLINE of this discussion of goals and values in American agriculture gave Bishop and Bachman the task of describing the "structure of agriculture if made consistent with society values for and goals of economic organization; degree of change from present and implications for agriculture in the light of modern technology and factor prices; and comparisons with other economic sectors if they were modified accordingly."

It is not surprising that our authors found it difficult to fulfill this assignment. They were not furnished a statement of "society values for and goals of economic organization" and this conference has not yet agreed on such a statement. Indeed, one participant has referred to such statements as unattainable Holy Grails. The writer is not going to waste much discussion time (which is a scarce resource at this conference) placing blame on anyone for this situation.

Instead, the writer will demonstrate that we are not in possession of a generally acceptable procedure for developing and using value concepts in the solution of policy problems and then present a hypothesis about the nature of our deficiency which suggests some remedial measures.

## THE DEMONSTRATION

The lack of a generally accepted philosophic position for

developing and using value statements will be demonstrated mainly with quotes from papers presented at this conference.

For instance, differences among the value and goal statements presented by Markham, Brewster, Timmons, Larson, Hathaway and by Bishop and Bachman are, in themselves, evidence that we do not have a generally accepted method of developing and using normative concepts for solving policy problems.

There is also absence of agreement on how normative concepts enter into the definitions of problems. Bishop and Bachman, for instance, conceive of problems as differences between concepts of "what ought to be" and "what is" as they write, "Economic forces change over time . . . and when these forces are superimposed upon values, conflict between these forces and values . . . develops."<sup>1</sup> By contrast, Brewster regards "the heart of any serious social problem to be a conflict of deep seated value judgments."<sup>2</sup> Wilcox took a third position and argued that our serious policy problems can be solved with answers to questions of fact.

Turning from use to development of normative concepts, we find Brewster and Foote at nearly opposite poles. Brewster writes, "no amount of rigor in any conceptual system of rules and no amount of completeness in quantitative measurement can determine what uniform weights to give to our competing judgments of value . . . . The ideal models of scientific theory and measurement are not to be equated with so-called normative systems of life and social organization." By contrast Foote discussed the operation of a maternity hospital as an example "of how values and goals and social action can be conceived scientifically." Foote must note with some satisfaction that Brewster does discuss values with some rigor and that he does assign weights to value judgments. Shepard's comments served to underscore our lack of agreement. So does Shannon's statement that "the role of the scientist is one of describing cost and consequences rather than specifying goals."<sup>3</sup>

In 1956, Heady wrote, "Some few workers, perhaps, feel their directive is to change values . . . . This approach is for ministers and boy scout leaders not economists."<sup>4</sup> Recently he wrote, "In

<sup>1</sup> C. E. Bishop and K. L. Bachman, *Structure of Agriculture*. This book. P. 249.

<sup>2</sup> John M. Brewster, *Society Values and Goals in Respect to Agriculture*. This book. P. 114.

<sup>3</sup> L. W. Shannon, *Goals and Values in Agricultural Policy and Acceptable Rates of Change*. This book. P. 274.

<sup>4</sup> Earl O. Heady, *Basic logic in farm and home planning*. *Jour. of Farm Econ.*, 38 (1956): 808.

case of true education, the problem is to provide information, knowledge and principles which allow the individual to form his own values."<sup>5</sup> Another sentence implied that providing information, knowledge and principles does not mold individual values in the sense of having predictable and, hence, controlled effects on them. We read Heady and Burchinal's remarks about "a problem of determining what mix or combination of goals is optimum, desirable or acceptable."<sup>6</sup> Still later we heard "this conference has as one objective an explicit examination of value-goal patterns as they impede or facilitate . . . developments designed to bring incomes in agriculture to levels comparable with nonfarm activity or to adjust resource use in the directions indicated by the pull of the market."<sup>7</sup> What, we may ask, if some values do impede? Who changes them? Boy scout leaders? Or economists using "information, knowledge and principles?" Or, perhaps ministers? Fortunately, Heady is slowly overcoming a restrictive position in philosophic value theory and the philosophy of science. Incidentally, I can point out somewhat similar though less pronounced inconsistencies in the writings of Glenn Johnson.<sup>8</sup>

The disagreement between Foote and Greene on the possible existence of a public interest represented another lack of agreement on normative matters at this conference.

Cochrane's normativistic attack on the Kaldor and Hines modern welfarism further illustrates our lack of agreement. The Kaldor group envisions value conflicts as the problem of allocation among competing ends<sup>9</sup> while Cochrane envisions them as problems of determining ends!

In 1958, Ken Parsons launched an attack against the position of J. D. Black and Heady which is also the Kaldor and Hines position.<sup>10</sup> At this conference, Heady and Burchinal bowed to this

<sup>5</sup> Earl O. Heady, How Much Should We Allocate to Education? *Farm Policy Forum*, 12(2, 1959-60): 26.

<sup>6</sup> Earl O. Heady and Lee Burchinal, *The Concern With Goals and Values in Agriculture*. This book. P. 5.

<sup>7</sup> *Ibid.*, P. 12.

<sup>8</sup> Glenn L. Johnson, *Burley Tobacco Control Programs, 1933-50*. Ky. Agr. Exp. Sta. Bul. 580. February, 1942. P. 88; \_\_\_\_\_ and Harry M. Young, *What About the Burley Tobacco Control Program?* Ky. Agr. Ext. Service Circ. 516. 1953. Pp. 25-26; L. A. Bradford and Glenn L. Johnson, *Farm Management Analysis*. John Wiley & Sons. 1953. Pp. 350ff. and p. 429; \_\_\_\_\_ and Joel Smith, *Social Costs of Agricultural Adjustment . . . , Problems and Policies of American Agriculture*, Iowa State Univ. Press, Ames. 1959. P. 250; \_\_\_\_\_, *Value Problems in Farm Management*, *Jour. of Agr. Econ.*, 9 (June, 1960): 1f; and \_\_\_\_\_ and L. K. Zerby, *Values in the Solution of Credit Problems*. TVA Symposium on credit. (Spring, 1960).

<sup>9</sup> Don Kaldor and Howard Hines, *Goal Conflicts in Agriculture*. This book. Discussion by W. G. Cochrane.

<sup>10</sup> Kenneth Parsons, *The Value Problem in Agricultural Policy, Agricultural Adjustment Problems in a Growing Economy*. Iowa State University Press, Ames. 1956. P. 295f.

attack and recognized John Dewey's means-end continuum<sup>11</sup> though not to the exclusion of the position presented by Kaldor and Hines. Thus, Heady and Burchinal demonstrated within the confines of one chapter that they do not have a consistent position. At least they argued simultaneously that (1) the values of means and ends are interdependent,<sup>12</sup> (2) ends should be maximized<sup>13</sup> but (3) values should not be imposed on others.<sup>14</sup> If the values of means depend on the values of ends and we should maximize ends, then it seems fair to ask how we avoid imposing values for means?<sup>15</sup>

Time does not permit further exploration of the conflicting positions presented at the conference with respect to the development and use of value concepts.

### A HYPOTHESIS AND SOME SUGGESTIONS

The writer has a hypothesis to present which deals with this failure of the discipline to secure a generally acceptable means of developing and using value statements in solving policy problems. He hypothesizes that our inability to work effectively in this area stems in part from our various commitments (often as a result of accidents in our personal educational histories) to special positions in the philosophy of science and philosophic value theory. He hypothesizes, further, that our commitments to these special positions prevent us from utilizing the contributions which other positions have to make to the solution of special problems. Consequently, the writer would hypothesize that a fuller understanding of these positions and of the interrelationships among them might free us of some intellectual shackles thereby increasing our productivity.

If it were not for two considerations, the writer would advocate that we ignore all positions in philosophic value theory and the philosophy of science and proceed on a "common sense" basis to solve problems. The two deterring considerations are (1) the subtle nature of our commitments to restrictive positions and (2) the strong possibility that our common sense can be made more

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<sup>11</sup>Heady, Burchinal, *op. cit.*, p. 4.

<sup>12</sup>*Ibid.*

<sup>13</sup>*Ibid.*, p. 5.

<sup>14</sup>*Ibid.*, p. 2.

<sup>15</sup>This should not be construed as complete acceptance of the Parsons point of view on the part of the discussant who is convinced that Parsons (and Dewey earlier) regards the values of ends and means to be interdependent because he fails to recognize "an identification problem," and does not fully appreciate the role of opportunity costs in determining value. See G. L. Johnson, Value in Farm Management. *Jour. of Agr. Econ.*, 9 (June, 1960): 8ff.

effective with contributions from unknown positions. We have to understand our positions in order to change them by either contraction or expansion. These two considerations seem to condemn us to examine and study alternative approaches within the philosophy of science and within philosophic value theory. The writer regrets that this book has not included more chapters which would be helpful in this respect.

In making this study and examination of alternative positions in the philosophy of science and philosophic value theory, the writer would suggest that we follow the advice of John Wisdom, Trinity College, Cambridge, who advocates<sup>16</sup> that we divide all statements about how to develop and use value concepts into two groups (1) those which are simple and easily understood and (2) those which are complex, strange and hard to understand.

The simple, easily understood statements can be divided into the helpful which we can retain and the useless which we can reject.

The strange complex difficult statements create trouble. For one thing complexity is easily confused with profundity. Further, meaningless statements and portions of statements may be confused with meaningful ones and followed at the expense of undue restriction on our activity. A possible procedure seems to be that of examining the meaning and usefulness of such statements in developing and using value concepts for solving individual problems. This procedure permits full utilization of common sense but not at the expense of ignoring important restrictions and contributions which may be contained in strange, complex and difficult statements on how to develop and use normative concepts.

Perhaps it would be helpful to try to indicate what this approach might lead us to do.<sup>17</sup> The writer expects that it would

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<sup>16</sup>These suggestions were made to the discussant by Professor Wisdom during a period of sabbatical leave study at Cambridge University. They are contained in a manuscript entitled *Paradox and Obsession: Freedom and Order*, which was loaned to the discussant. Professor Wisdom anticipated possible publication by Blackwells. Other results of the discussant's sabbatical leave study are presented in *Value Problems in Farm Management*. *Jour. of Agr. Econ.*, 9 (June, 1960): 1ff. Also see footnote 4 in this discussion.

<sup>17</sup>For a more detailed exposition of this approach see G. L. Johnson and L. K. Zerby, *Values in the Solution of Farm Credit Problems*. TVA Symposium on credit, Knoxville, Tenn. (Spring, 1960). The source of some of the ideas presented in this reference and in the above footnoted paragraph include: Kurt Baier, *The Moral Point of View: a rational basis of ethics*. Cornell University Press. 1958; Abraham Edel, *Ethical Judgement, the Use of Science in Ethics*. The Free Press, Glencoe, Ill. 1955; Paul Edwards, *The Logic of Moral Discourse*. The Free Press, Glencoe, Ill. 1955; E. H. Madden, *The Structure of Scientific Thought*. Houghton Mifflin Co., Boston. 1960; and S. E. Toulmin, *An Examination of the Place of Reason in Ethics*. Cambridge Univ. Press. 1950.

cause us to distinguish less sharply between techniques for developing and using factual beliefs, on one hand, and normative beliefs, on the other. Further, he imagines that we would tend to regard both as about equally realistic or unrealistic and that we would regard both as essential in defining and solving many problems. Also, we might even regard it our duty to help develop both types of beliefs. And, because errors in forming both factual and normative beliefs can lead to wrong actions, we would be expected to be about equally sensitive concerning our responsibilities for such errors. We might even become as sensitive about imposing false factual concepts as about imposing normative concepts on others. We would probably insist that our concepts be internally consistent as well as consistent with our experiences and observations. Experience with values as well as the physical world would be considered but not to the exclusion of other possible sources of normative concepts. Father O'Rourke would probably be less critical of us. Failure of a solution to produce anticipated results might cause us to search for the factual and/or normative concepts responsible for this failure that we might correct it.

Many will reject these suggestions as to what this nonrestrictive approach might lead us to do. Many of the objections will arise because the approach ignores restrictions contained in what the objector believes is the proper approach to science or the study of values. Such objections would substantiate the writer's basic hypothesis if ignoring the restrictions were to lead to increased ability to develop and use normative concepts in solving policy problems.

In closing, the writer would like to observe that some of the most intense discussion has dealt with the problem of developing and using normative concepts. If the contributors had concentrated on this problem rather than assuming that we have agreement on how to develop and use normative concepts, Bishop and Bachman might have been spared the difficult assignment of describing the structure of agriculture if organized according to a vaguely known set of "society values and goals for economic organization."