

## Games, Goals and Political Processes

FEW INDUSTRIES have been as blessed as agriculture in willingness of society to develop and invest in special policy for it. As explained in Chapter 1, U.S. society first acquired and distributed land resources to farmers at favorable prices, without similar action for capital plant of other industries. At restraint of land resources, it invested further in developmental policy for agriculture, turning to socialization of research and adult educational facilities as a means of extending agricultural supply. With initial high return and great extended success of these efforts, supply has pushed hard on demand, with consumers benefiting greatly in food prices and resources freed to other sectors. Society then turned to compensation policies, with price supports and direct payments, to redress losses to farmers arising from the smaller revenue of extended supply. Evidently it supposed positive-sum effects in utility to be possible in development of agriculture, but that the initial distribution of gains and losses did not guarantee aggregate welfare increase unless development was accompanied by compensation. Some general conditions of modern welfare economics have indeed been enacted with vigor and willingness by American society. Compensation payments have been large in both time and monetary quantity. Still, however, farm problems of important magnitude exist. Why is this so?

Structural imbalances underlying agriculture are not lacking in physical and economic means of solution. A large number of persons can suggest several means by which these problems might be erased, either temporarily or permanently. The difficulty has not been in possible solutions but in agreement on policy means for solution. Conflict arises because of differences in goals and values of individuals and groups in respect to farm policy. General society has been less directly involved in this conflict

than have groups within and around agriculture. Society, kind in magnitude of funds appropriated for solution, has questioned less whether they should be provided, but more why they have not been used better in eliminating the problem.

Agriculture is not a subsociety made up of individuals and groups with identical indifference maps and values. Apparently, too, from previous disagreement within the industry, on policy means and ends, not all possible exchanges in policy alternatives are predicted directly to bring mutual gains, as in movement from point *m* in Figure 8.1 to a point on the contract curve within the shaded area. The sharpness of conflict over the type of policy suggests a point on the contract curve, movement from which would improve the position of one group and lessen that of another. The alternatives in policy choice often involve issues such as more or less price support as against less or more of freedom from supply restraints, or of more or fewer farms as against more or less control over the market. In this sense, they are alternatives which can be exchanged, as for *X* and *Z* in Figure 8.1.

Perhaps the alternatives are too often viewed in two dimensions, such as free markets versus price supports without consideration of "third dimension of trade" and compensation which would allow exchanges making all groups better off. It is likely that policy choices have been placed too much in a "black and white" context, without enough alternatives allowed so that negative-sum utility outcomes are averted. Or, is it possible that all policy possibilities must have negative-sum or zero-sum outcomes? The farm policy debate of the 1950's would lead to this appearance; that inability exists for trades which allow mutual gain, or that gain to one which causes loss to another cannot be offset even by compensation from "outside society." But trades, the equivalent of the side payments mentioned later, are typical in much of agricultural policy. These trades perhaps are more apparent within the different groups which make up a single farm organization than between major farm organizations. For example, there is little homogeneity between farm organization members in the Cotton South, irrigated areas of the West and wheat areas of the Great Plains. But they are willing to belong to the same organization and often support, through their congressmen, votes for each other's interests and "live together" in harmony through trades among public appropriations for water and support prices, or protection of sugar quotas. Trades as the equivalent of side payments are not inconsistent with welfare maximization, the movement to successive Pareto-better positions improving welfare level for the several groups involved, and democratic process in the extent that they allow better indication of intensity of preferences by particular groups.

### HETEROGENEITY IN INTEREST AND VALUES

Differences in values or indifference maps do not themselves preclude policy and other organization which leaves all better off or in preferred position. In Figure 8.1, for example, it is unnecessary for indifference

maps to have the same slopes along vectors originating from the origin of the plane. If a nonoptimal point such as  $m$  exists, one farm group which prefers more freedom might obtain such by transfer of more price support or direct subsidy money to a second group which accepts less freedom or vice versa. If movement from  $m$  to points within the shaded area is attained, both groups gain and greater community utility is assured. In effect, this method has been explored in soil bank policy wherein some producers gave up part or all of their ability to produce farm products while others were not given payments and were allowed complete freedom in production. Many alternatives such as this do exist and perhaps need to be explored or applied more widely for attaining progress in farm policy. It is not only possible, in policy stalemate, for opposing groups to be at points on the contract curve, but also choices may not be of the continuous nature of Figure 8.1. In the latter case, the choices are of "either or" and "fork in the road" nature, being mutually exclusive. If one is chosen, the other must be rejected in entirety. Choices in this category more nearly fall in the ideological realm and outside continuous opportunity in degree of substitution and combination. Examples are the institution of slavery, and concept or not of a particular god. Some of the extreme statements on free or supported price for agriculture might appear to fall in this realm.

### **Conflicting Groups for Policy**

General conflict in policy is perhaps less that of ideological nature, however, and more that of position along a contract curve so that economic gain to one group means loss to another in the particular ends pursued. A maze of conflicting groups exists. Some have made trades in policy elements, as between regional commodity groups allowing different types of control restraints or shifts among crops. Often, too, these trades have allowed mutual gain in price supports and ability to produce other crops, but with the effect that the policy goal of restrained output has been violated. In other cases, position on the contract curve apparently would not allow this type of bargaining, and the situation has been more or less stalemated.

Conflicting groups within and surrounding agriculture are many. They do not necessarily have opposing value systems in respect to preference for more income, religion, the virtues of farm and city life in general or relative preference among items of family consumption. More frequently, it is likely that conflict arises because policy which increases income of one group decreases that of another. Milk producers in New England may sacrifice as support prices provide gain to grain producers in the Midwest. The established farmer with ample capital and large-scale livestock production may lose as the beginning farmer emphasizing cash grain production gains under price supports and public storage. Conversely, the livestock producer may gain and the grain farmer may lose from developmental events leading to growing yields and output accompanied by lower feed prices. Conflict over income effects of policy also exists be-

tween farm groups such as: cotton producers in the Southwest against those in the Southeast; cattle producers in the intermountain states against farmers in the Cornbelt who may shift from grain to grass; wheat producers, in respect to two-price plans, against corn farmers; large farmers against small farmers; those who would be squeezed out by free market prices against those who would remain and expand; and others.

Similarly, sectors which sell inputs to or buy outputs from farms conflict in interest with farmers, or each other, in respect to income effects of different policies. A policy of high support prices for feed grains with unrestricted acreage and public purchase of excess production is favorable to the fertilizer industries. The same policy is favorable to the grain storage sector, although it may conflict with the interests of the exporting industry. Policies which retire land in whole farms in concentrated blocks are against the economic interests of merchants in rural areas. Programs to reduce grain acreage conflict with interest of seed corn producers; those retiring land permanently, as against rotation fashion, conflict with interests of grass seed producers. Lime producers and earth movers favor programs of direct subsidy for farm practices, while some farm groups vigorously resist direct payments. Other conflicts could be cited. Not all of the groups represented in these conflicts stand idly by as policy is being formulated, but exert extreme effort to push it in the direction of their interest.

Conflicts also can and do exist between farm policy and national policy, or between the consumer's willingness to contribute tax money for farm subsidies and the desire of agricultural segments for it. In national conflict, the practice of camouflaging surplus disposal under international development programs may slow the speed at which the nation is able to aid in promoting growth in less-developed countries. In more recent years, farm policy has come into sharper conflict with other national policies because of magnitude of drain on the public treasury. Policy means may be altered accordingly for farming.

It is within this framework of conflicting interests that agricultural policy must be formulated. Interests of the various agricultural groups are more heterogeneous than for other major industry groups which join forces in uniform front to obtain legislation favorable to their particular economic interest. It is not at all certain that the various agricultural groups look upon themselves as a total community, nor that they have the common interest of devising a policy to increase the aggregate welfare of the community of subgroups. Apparently some would be willing to accept negative-sum outcomes for the community if goals of their own groups were attained in sufficient magnitude.<sup>1</sup>

<sup>1</sup> Numerous analyses have been undertaken which deal with problems of utility measurement and outcome under various voting and public choice mechanisms. These emphasize the problems of preference summation and selection of public actions which do or do not guarantee an increase in community welfare: Duncan Black, *The Theory of Committees and Elections*, Cambridge University Press, Cambridge, 1958; K. J. Arrow, *Social Choice and Individual Values*, Wiley and Sons, New York, 1951; Corrine Hoexter, *Does the Majority Ever Rule?* Portfolio and Art News Annual, 1961; Wm. Vickery, "Utility, Strategy and Social Decision Rules," *Quar. Jour. Econ.*, Vol. 74; R. D. Luce, *Individual*

### Goal Conflicts and Equity Versus Compensation

Some conflict among farm organizations is over the goals of policy elements. One such conflict is over the magnitudes of payment or price subsidy which should be allowed individual farmers. One organization has argued that size of payments should not be limited but should be in proportion to size of operations. Another organization has argued that absolute ceilings should be placed on payments, with a greater proportion of the income transfers from general society going to small and low income farmers. This conflict arises because of failure to distinguish sufficiently between the policy goals of (1) compensation to assure that aggregate welfare outcome, resulting from the distribution of gains and losses under economic change, is not zero sum and (2) equity in the distribution of income and in providing greater equality of opportunity for persons in highly disadvantageous position. Policy elements for the two should not be confused. Public funds allocated for purposes of compensation should not be restrained to absolute limit, but should be in proportion to sacrifice in income from change (a magnitude highly synonymous with scale of operations). Funds for equity purposes should indeed be retrogressive with income and scale of operations. The two policy goals might best have clear distinction in the form of payment used, payments for both being relevant in a sense of maximizing society welfare.

### Conflict in Means and Merging With Ends

Farm policy conflict is perhaps less over ultimate ends and more over means to attain particular ends. Most groups agree that farm surplus buildup should be eliminated or prevented. But the method of attaining this intermediate end itself gives rise to policy conflict. The conflict may grow out of true differences in values, or because income of various groups will be affected differentially. The buildup and costs of stocks during the 1950's, for example, could have been eliminated through either strict marketing quotas or free market prices. Incomes could be supplemented by either direct payments or support prices and public storage. Income per farm can be increased by the alternative means of (1) fewer people in agriculture, (2) public supply control or (3) subsidies of direct, or price support nature. Conflict and debate over means such as these often has been sharp, more so than over the ends or objectives to which they lead. The means themselves become intermediate ends, over which there is disagreement because of difference in values or economic interests.

This is a general development in social policy and organization: Once established, means have a tendency to become ends. Or the means and ends become intertwined and it is difficult for the public to distinguish between them. In general, ends and means of policy are not discrete. Neither do they, at various levels in the means-ends hierarchy, serve en-

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*Choice Behavior*, Wiley and Sons, New York, 1959; Murray Kemp and A. Asimakopulos, "A Note on Social Welfare Functions and Cardinal Utility," *Canad. Jour. Econ. and Polit. Sci.*, Vol. 18; and Leo Goodman and Harry Markowitz, "Social Welfare Functions Based on Individual Rankings," *Amer. Jour. Soc.*, Vol. 58.

tirely at the extremes of discrete alternatives with zero substitution rates, or as continuous opportunities with constant substitution rates.

Even for an individual or group with a particular indifference map or set of values, the problem is not one of determining which discrete goal or end should be selected over another or all others. Instead, it is a problem of determining, at the various levels in the means-ends hierarchy, what mix or combination of goals is optimum, desirable or acceptable. This is true since the value system of an individual, community or society is not represented by an indifference map wherein the individual indifference curve is linear, denoting that each unit gain towards one goal causes an equal sacrifice in satisfaction for all units of other goals foregone. Instead the indifference lines serving as the counterpart of social values in respect to goals for public policy are curved, denoting that a combination of competing goals or ends is necessary for maximizing quantities which are relevant both for the individual and the community. Under these conditions, except for purely ideological or "black and white" alternatives, one goal is seldom selected to the exclusion of all others. Instead there exists some combination of competing goals, with some of one being sacrificed to gain part of another, with decision of the optimum mix to be decided by society.

The public, however, often has no particularly systematic method for articulating goals and values or means and ends so that they stand out apart from each other or in form for clear choice. Frequently it does not know that one mean or end conflicts with another. Just as often, it has no clear prediction or knowledge of consequence in using a particular policy element as a means towards a particular goal. Sometimes it has not had prior knowledge that a particular action program would intensify the problem it was attempting to solve, as in the cases of surpluses relative to support prices and unlimited corn acreage. Accordingly, major conflicts exist in the means used and the ends pursued. Sometimes public administrators are not even aware of conflicts which exist between two policies or ends. The developmental and compensation policies since the 1930's are examples. On the one hand, society has invested heavily in agricultural development and output increase through partial payments for inputs under the label of conservation practices, through land reclamation and through research and education. On the other hand, it has paid farmers directly for reducing land input and restraining supply. Education and information, or a third policy construct, can eliminate these inconsistencies in policy accomplishments, but much less so the conflicts growing out of values and interest positions along a contract curve.

### **Conflicts in Beliefs**

Conflicts do grow out of lack of knowledge and could be partially alleviated with greater education and information. This is true in the area of beliefs, where particular conditions are thought to be true. Some sectors of agriculture believe competition to be the dominant organization of American economy; some believe monopoly and market power through

collective action to be the dominant structure. One belief evidently held is that economies of scale are limited in agriculture, and that free market prices would not lead to elimination of family farms through growth of large-scale units operated by hired labor. Another belief supposes scale economies to be great and claims that policy is necessary to protect survival of the family farm. Somewhat widely it is believed that democracy in society can be best safeguarded by maintaining a family farm and large portion of the population in agriculture. Other people have pointed to European and Asiatic evidence suggesting the opposite. (Democracy is the prevailing form of society in the labor-industrial complex of Great Britain, but has not persisted in the agrarian complexes of Eastern Europe.) Empirical evidence needs to be extended and established in order that such conflicting beliefs can be reconciled, with selection of those which square with facts.

Facts, where they can be readily established, and education can be extremely useful in clearing up those policy conflicts based on (1) lack of articulation among means and ends, (2) ranges over which means and ends are inconsistent and competitive, (3) the consequences of particular means, in quantitative result in particular ends, or in undesired side effects and (4) inconsistent beliefs about particular states of facts or relationships. Research and education, and particularly the latter, have too often failed to provide the public with sufficient knowledge in these areas. Empirical and logical knowledge can provide a basis for solutions of differences which grow out of different beliefs and misinformation. It cannot, however, do so for those that stem from basic value conflicts relating in an ethical sense to states which "ought to exist."

### **True Value Conflicts and Policy Structures**

Conflict prevails even if all persons and groups have the same values represented by identical indifference maps, as long as some prefer increase in their income and collection of goods at the expense of others. As mentioned previously, if the two sets of indifference curves in Figure 8.1 are identical, conflict still prevails along the contract line. However, conflicts also grow out of differences in values per se, where the choices are not continuous substitution opportunities but represent distinct "either or" choices. Policy takes on configuration accordingly. Some arguments in agricultural policy over free market prices versus support prices and bargaining power may fall near this pole, although they may still involve income conflicts along the contract line. (Free market prices are more favorable to income increase for one group of farmers while support and bargained prices are more favorable for another group.)

While true value conflicts may give rise to policy stalemates, value orientations also may lead to particular policy constructs. There are many examples. The orientation of policy to family farms, excluding large-scale operations based on hired labor, rests partly on a foundation in early values. The large treasury costs of storing surpluses from previous years could have been eliminated simply by touching a match to grain stocks, or dumping them in the ocean. Yet farmer and society

abhorrence of waste prevented this solution of costly surplus stocks. Conservation has such great public appeal in "goodness" that numerous policy elements have borne this label, even though some had no important relationship to extending the time services of resource and others shifted production from the future to the present. These value orientations highly favoring policy elements which lead to "efficiency," and firmly opposing those which lead to "waste," perhaps all fall under Brewster's work ethic.<sup>2</sup> The value-based expression that man should be compensated for his contribution to society perhaps causes subsidies to become cloaked under farm improvement practices rather than as direct payments. The value judgements implied in Brewster's democratic creed "(1) all men are of equal worth and dignity and (2) none, however wise or good, is wise enough to have dictatorial power over another,"<sup>3</sup> perhaps serve to restrain one group related to farming from being able to impose completely its values and wishes on others, although this may result mainly from checks and blocks in the political process.

### GENERALIZED GOALS

The goals of American society were largely those of agriculture a century back. The population was mainly on farms. Rapidly, however, the value structure of agriculture is becoming that of society. This trend will continue. Farm people, while retaining some values dissimilar to those of society in total, now have the same general desires, goals and aspirations as the rest of society. This condition holds true, especially for commercial agriculture because (1) communication media are widespread and effective, providing a greater common denominator of knowledge and preferences, (2) the income, at least of commercial farmers, has risen to levels which cause relevant goals no longer to be oriented directly towards overcoming the arduousness of farm life, isolation, and inadequate shelter and nutrition in the hinterlands and (3) agriculture now has such a small proportion of the total population.

Farm youth generally have the same preferences as urban youth, this force causing younger persons to have large mobility to industry and urban centers. The appeal associated with urban-centered conveniences and related goods and services binds the values and aspirations of farm people closer to those of the city. For this reason, stemming from economic growth and its reshaping of preferences and population, policy of agriculture needs to become less unique to the specific industry and more in general conformance to the economic and social structure which faces families and firms in the farm industry.

Policy of the 1950's focused too much on industry structure and value differences which existed in the past. To make farm policy consistent with more general economic and value structure would mean, for example, that the industry be provided with powers of the market in the

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<sup>2</sup> J. M. Brewster, "The Impact of Technical Advance and Migration on Agricultural Society and Policy," *Jour. Farm Econ.*, Vol. 41.

<sup>3</sup> Brewster, *ibid.*



hands of other major economic groups, but that income supplementation conform more to current consumer preferences, production technology and factor prices. Policy since 1930 has been bent to a structure of agriculture existing at the turn of the century and to a set of problems characterized by the major depression of the 1930's. (Depression has not prevailed in most of the years, during which policy borrowed from the 1930's has been the focus.) It is time that policy be brought abreast of the times in farm value orientation, and in economic structure and growth. There should be greater separation of elements aimed at (1) equity in income distribution and human opportunity (2) compensation to guarantee welfare increase under the pattern of gains and losses growing out of economic progress and (3) general economic fluctuations. (But this clarification of policy is possible only under a clarification of goals.)

### **Steps in Generality of Goals**

Goals can be identified which conform with generalized values of society and have high acceptance throughout the population. Some of the more generalized goals of American society and other societies, where states are selected to represent the individual, include these: (1) progress in the availability of goods and services or real income with increased effectiveness of resources and rate at which product can be transformed from them, (2) equity in the distribution of income and economic opportunity, (3) equity in sharing the fruits of economic progress, (4) security and stability of a national economic enterprise in the sense of freedom from fluctuations growing out of major depression and weather instability, (5) maintenance of an internally and democratically selected social system and protection of it from competing systems, (6) freedom of choice in the degree consistent with health, level of desired progress, equity and stability and (7) opportunity for upcoming generations consistent with progress and individual abilities.

These diverse generalized goals have wide acceptance by U.S. society. But taken together, each does not have equal intensity of preference at all levels of attainment. As they are attained in varying degree, the marginal utility of further increment in some declines relative to others. Hence, at a point in time, one particular goal takes on particular urgency but, as it is attained in greater positive level, another takes on greater marginal urgency for increase. They do, however, serve as relevant criteria for over-all and specific policy. But goodness of policy cannot be measured entirely in the extent to which it furthers any one of these specific goals. This is true since the generalized goals are themselves competitive beyond some level of attainment. Complete freedom can interfere with progress for the system as a whole, where the community appraisal of goals to be attained is not the aggregation of individual preferences when all individuals operate separately. Progress itself can be at rates which conflict with freedom. The individual is not allowed the freedom of robbery, or even of driving up the wrong side of the highway, because the equity of others, either in capital possessions or life, would be violated.

In a broad manner, the several generalized goals above can be summarized into a single one of even greater generality in the sense of aggregation but of more particular sense in its reference to the individual. The above goals are held by democratic society, largely to protect the dignity of the individual and to provide him with fullest opportunity in line with his abilities. If U.S. society had unique character in its creation by the constitution and in subsequent public decisions, it has been in this emphasis on individuals. Progress itself is an instrumental goal or end, as a means to other ends which relate to all individuals. Progress, or its common synonym of efficiency, in the physical context of more factories, more commercial airlines or more corn per acre, has no intrinsic value. It has value only as it creates opportunity for the individual, allows expression of his consumer characteristics and does not lessen his dignity and outlook. Freedom, in the sense of behavior of institutions, markets and individuals, which closes opportunities and reduces dignity of other persons, or does not provide them with education for expression of their abilities, lacks positive contribution to this one generalized goal or purpose.

The several generalized goals mentioned above often are involved in specific policy, but seldom provide the "working data" used or required in coming to grips with a particular economic problem of the smaller scale found in agriculture. They do serve as general criteria on which policy can be evaluated and directed. But they are too broad and general to have great content in formulating specific policy elements. Even at this level of generalization, however, agreement could not be obtained by all sectors on farm policy.

While all farm groups undoubtedly agree on liberty for society, as freedom for the nation to govern without interference by an outside country, they do not agree similarly on complete liberty in production and marketing decisions. On the one hand, some organized groups strongly insist that more freedom of decision be retained or returned in the farm industry. But just as vigorously, other groups campaign for more control over production and marketing. Selected farm groups have democratically voted production controls, marketing orders and other degree of sacrifice in liberty of decisions. Farm commodity groups which serve as examples are milk, wheat, tobacco and fruits and vegetables. But even farmers who are homogeneous in the sense of deriving income from cattle do not agree in respect to degree of decision liberty. Cattle ranchers stump strongly for freedom while dairy farmers in major milk sheds willingly accept quotas and marketing orders.

At a somewhat lower level in generalization are the more mechanical goals of economics. Two general goals, directed toward maximization of utility or satisfaction by society, are efficiency in production and efficiency in consumption—the optimum allocation of resources and income respectively among persons, commodities, time periods and locations. Criteria exist, in the marginal terms outlined earlier, as a means of specifying sub-goals or conditions which must exist if these two general

economic goals are to be attained. At another step down the ladder of generalization, we have the goals of economic progress, equity and stability, as held by society. They are "less strenuous" than the goals for optimum economic organization in the sense that they do not require the "tight" marginal conditions associated with the over-all rules for economic organization. Society may simply define the degree to which these goals are desirable, or failure to attain them is undesirable. The maximum level may not be spelled out and only minimum restraints are exercised accordingly through social policy.

Evidently most individual publics or groups which make up U.S. society desire economic progress. Yet we have no evidence that the maximum rate of economic growth is desired. Most economists could mention a dozen ways in which obstacles to progress would be lessened and the rate of economic growth accelerated. Greater public investment in education, improved counseling and employment services, aid to underdeveloped communities, elimination of feather-bedding and particular monopoly restraints in use of technologies and longer work weeks are examples. Still we accept a less-than-maximum rate of growth, even though economic progress is an obvious national purpose, because it is not an ultimate goal and is not valued discretely at a higher level than all other goals. Too, while American society has reflected a goal of some equity in income distribution, it has not tried to maximize this goal. Rather it more nearly has tried to provide a minimum in level and availability of consumption opportunities.

Another step down the ladder of goal generality is represented by goals rooted in economics, political structure and sociology and tied directly to farming. These include preservation of the family farm and the Jeffersonian doctrine of a large rural population to insure democracy. But again, while society may have accepted such specific goals for agriculture, it has not attempted to maximize them, because they fail to serve as discrete goals substituting at a sufficiently high and constant marginal rate for all other goals.

Need for re-examination of goals and values for agricultural organization and policy arises because the physical and economic structure of the industry has been changing rapidly, due largely to continued national economic growth, affecting both the relative rewards of resources used in different industries and the consumption opportunities open to people. Agricultural production is oriented increasingly towards, and highly integrated with, the dominant commercial-industrial interests and social systems of our total society. Modern agriculture must be analyzed and explained in terms of the major developments in U.S. society. Its value systems, goal patterns, social organization, technical development, and its recurring social, political and economic crises are becoming inseparable from those of total society.

In origin, U.S. society was rural with values and policy constructs oriented towards an arduous and isolated country enterprise. With beginning of industrialization, a set of unique values continued to prevail, with

a somewhat different set emerging in the urban sector. But with attainment of rapid economic progress and high levels of per capita income, values peculiar to agriculture have rapidly been disappearing, just as agriculture as a majority in population and political strength has been disappearing. Evidently, and to an extent which can reasonably be expected, the main policy goals of commercial agriculture are the same as those for the rest of society. Too, society evidently has no major policy goals for agriculture which are distinguishable from those for society as a whole. Nonfarm sectors of society have concerned themselves particularly with positive policy in respect to growth in employment, investment and income opportunities. At even less general level and in more specific meaning, industry and business prefer emphasis on monetary and fiscal policies to promote economic growth, rather than on those which combat recession. Labor prefers policies which provide growth and greater employment opportunities, rather than unemployment compensation during depression. It is unlikely that commercial farmers longer are in search of relief policies aimed at protecting income during depression, but likewise seek economic policy leading to production and price environments allowing successful ventures for those efficient in business.

### **Near Goals for Agriculture**

The goals of freedom, equity, progress (efficiency) and security desired by total society are equally desired by farm society. There is not societal obligation to provide any of these in quantities greater for agriculture than for the total population. Neither is there basis for providing them in smaller quantities. To an extent, these goals have to be looked upon as competing ends to be attained with limited means or resources. Not all, therefore, can be attained in unlimited extent. A proper balance or mix must be attained, partly in the sense of allocations in Figure 8.1 and in an equity sense, but in a manner consistent with social organization itself. Security cannot be absolute and final, with no one ever faced with penalties of price in failure to respond to change, otherwise there can be no progress. Freedom, a cornerstone of U.S. society, must be restrained to the extent that the amount enjoyed by one person does not encroach unduly on that of another person, to the extent that its exercise by one is the denial of it to another, or to the extent that equity is violated. Equity cannot be pushed to the extent of equality and complete restraint on progress incentive and freedom. However, as we have suggested previously, not all goals to which values attach represent transformation of limited but divisible means among a collection of ends, all of which are desired in positive quantity. Resource quantities per se are not involved in certain questions of the goals mentioned above. Whether resource quantities are large or small have no bearing on such freedom and human right questions as those dealing with existence or lack of slavery. Neither are quantities of resources involved in equity of life itself, with one indi-

vidual taking that of another. Fortunately, farm policy issues seldom touch upon such "resourceless" decisions as these, unless in some of the more extreme ideological discussions of market free prices.

The socially preferred mix or precedent for these generalized goals will be provided by over-all society to agriculture, or by agriculture along with other occupational and cultural elements of society. Urban society, being largest in population and seeing inability of agriculture to arrive at its own goals, may even specify and write the farm policy legislation of the future. Hence, it is useful to discuss farm policy goals which are more closely related to agriculture's contribution to the general community, in attaining the minimum restraints in equity and opportunity held by the urban sector and in erasing some of the more chronic conditions which have existed in agriculture. Within this framework, some immediate and practical goals for agriculture are these: (1) Excess productive capacity of agriculture needs to be immobilized to prevent accumulation of unused surpluses and to be shifted to uses which are more consistent with demand under economic growth; (2) stocks larger than magnitudes to cover pipeline supplies in domestic and international requirements and to meet fluctuations in weather and yields, should be prevented, along with treasury costs of carrying them; (3) food should be produced in degree of abundance and efficiency that keeps its real price low to consumers but which allows resource returns in agriculture comparable with factors of equal quality in other broad sectors; (4) progress by agriculture in rate of transformation of resources into products should parallel that of the urban economy, but agriculture should reap an equitable share of the gain from this process; (5) mechanisms should be provided for general society to share the social costs of adjusting structure and supply of agriculture to a pattern conforming with current and prospective demand for food; (6) living standards and conveniences in agriculture, including housing for all strata of the farm population, should be at levels of minimum decency prescribed for society at large; (7) poverty and underemployment embracing a large number of farm families should be wiped out; (8) farm-born children and labor should be given opportunities for gainful employment and useful citizenship equal to those of general society, through appropriate public investment in education, training, guidance and employment services; (9) mechanisms for compensation should be provided to guarantee that the distribution of gains and losses from economic progress sponsored by the public has positive-sum outcome for people in agriculture, and especially for the older and less mobile portion of the population; (10) mechanisms should exist to lessen and prevent the economic cycles peculiar to agriculture and to guarantee that their effects are not negative-sum in distribution of gains and losses over time and among farms and processing firms; (11) the pricing system, as an expression of consumer preferences and particular national needs, but not to force farming into sacrificing through an unstable competitive system or as the sole means of attaining pressing

national purposes, should have greater play in resource allocation than reflected in surplus buildup and storage investment in the 1950's; and (12) the subset of national policy with focus on agriculture should be geared to the same quantitative target as general social policy in respect to rate of economic growth and rise in per capita incomes, minimum level of income, security and stability of income, market and price power and efficacy of pricing mechanism in drawing resources into sectors of growth and demand expansion. These can be looked upon as minimum restraints to be attained, rather than as goals to be optimized in a tight mathematical sense.

In broad outline, this policy subset is one of minimum restraint in respect to income, stability and opportunity—the main elements of farm problems. It allows recognition that the promising opportunity for the major portion of farm youth is in growth opportunity outside the industry. It also allows recognition that while older farm persons have little flexibility, the policy goals held for themselves are not necessarily those held for their children and grandchildren. It recognizes that degree of difference exists between (1) the instability and compensation problems of commercial agriculture and (2) the poverty and underemployment problems of farms with extremely low income. In attainment of such goals, however, it should be recognized that all persons in the rural complex, including those of farm oriented businesses and services, are equally important as individuals and members of society. The fortunes of this latter group generally fluctuate with those of agriculture. Therefore, it has the same claims on social policy as agriculture. And just as citizens of agriculture are no less important than those of general society, in respect to community welfare maximization, individual opportunity and national aspirations, those of the service complex in rural areas are no less important than those of agriculture. Finally, the subset directs farm policy towards an environment favorable to success for farmers who are efficient in their business, rather than focusing on relief measures oriented to major depressions of the past and a structure of agriculture that has long been gone and can't possibly return.

### COMPETITION AMONG AGRICULTURAL POLICY GOALS

There are ranges over which different goals of farm policy are complementary, with increased attainment of one also bringing increased attainment of the other. Both should then be increased together, regardless of the values or weights attached to either. More policy elements could be made complementary, as illustrated in Chapter 16 in respect to research and development with contribution to general progress under mechanisms reserving a share of gains to farmers. But greatest policy issue is over competitive goals.

Few farm policy goals are discrete and mutually exclusive, but are best represented by a production possibility curve as  $b_3$  in Figure 8.1 where we take  $X$  as indicative of attainment for one goal and  $Z$  as that

for another. Substitution thus is possible and the task is one of obtaining the correct mix, given the heterogeneity of values and interests surrounding agriculture. Policies of agriculture have long been directed to competing goals, partly because this is as it should be and partly because the public and administrators have not realized that certain policies are opposite in their effect. Goals of agricultural policy over time have dealt with development and efficiency, to uncover new technologies for farmers and to help them reorganize their resources in order to increase factor/product transformation rates. But in the short run and for a particular stock of resources in agriculture, this progress goal requires smaller attainment in farm income under inelastic demand. It also conflicts with larger numbers of farms, and even family farms under certain circumstances. On the other hand, greater income has been the goal of recent policy, but the means sometimes used to attain it, immobilization of particular inputs, have led to lower efficiency. Goals dealing with compensation and income have sometimes included means which make both positive and negative contribution to this end. For example, ACP payments put money in the hands of farmers but the practices to which they are attached increase output and, under the conditions of inelastic demand, are expected to serve as income reducers. Even within agriculture, positive attainment of goal for one geographic or commodity sector has often meant smaller attainment for another. Higher prices for corn as a commodity on cash grain farms increases its price as a resource on livestock farms. High support prices representing positive income gain for some commodities have resulted in smaller sales in world markets for such commodities as cotton. In the area of foreign policy, restraint of international aid to conform with disposal of farm surpluses and use of domestic shipping facilities has caused U.S. investment in international economic development to be restrained.

Many of the direct goals of policy are not themselves ends, but are only means in a complex means-ends chain. This is true of parity prices, although concentration on them for so many decades has caused them to become viewed somewhat as an end. As a means, however, the intermediate goal of price level may come to interfere with attainment of other ends, as illustrated above. Considered as a means relative to the end of higher income, price support level through commodity loans has substitutes in attaining the particular goal. A relevant question, then, is whether means other than price supports with nonrecourse loans can be used to bolster and stabilize farm income and provide progress equity without causing some of the negative side effects in respect to still other goals. Obviously, in respect to parity prices or price supports as a means to higher income and equity in the sharing of progress, substitute means are possible, to the extent that they are not excluded by ideological differences or by the economic interests of particular groups which furnish inputs and process and store the products of agriculture.

Conflicts in goals and interests do not, of course, arise purely from economic policies aired in the public. Some arise similarly from policies in

the control of private firms and sectors. Income goals of the medical profession are not entirely compatible with maximum health goals of the public, in respect to spread and price of medical services. Neither are the pricing and production policies of industries which use informal price agreements and market sharing consistent with the marginal conditions of efficiency and consumer welfare outlined in Chapter 8. These self-administered policies which give rise to favorable prices in nonfarm industries are much less evident to the public than those of agriculture because their price is paid through the market, rather than through taxation.

## THE POLITICAL PROCESS

Farm policy has often been deeply imbedded in and restrained by politics. The "patchwork" nature of policy sometimes appears to be a compromise or mixed strategy of the nature obtained in a minimax solution of zero-sum games. The political struggle over farm policy sometimes also seems to suggest that payoff must be zero-sum, with gain to one group being a balancing loss to another. In other views, however, the miscellaneous character may be selection of mixed policy elements to allow Pareto optima as suggested in later chapters. Compromise through the political process itself perhaps is reflection of the value-based creed that "all men are of equal worth and dignity and none . . . is wise enough to have dictatorial power over another."<sup>4</sup>

A common plea is that "farm policy be removed from politics." But this would be unfortunate. The political process provides a forum to which policy issues can be brought for public debate and evaluation. It is the means by which the distribution of gains and losses from policy and change can be evaluated and estimated. Economists have disavowed any ability to make interpersonal or intergroup utility comparisons. As subjective, clumsy and imperfect as it may be, the political process is the means by which this measurement is made. Aided by information available to guide it, a quantity often too meager, the political mechanism is a means for predicting gains to be had and losses to be realized, and the nature of their distribution, as policy is enacted towards particular goals. Judgement is made, outside the realm of Pareto optimality, whether the gains to particular sectors outweigh sacrifices to others, or whether the national interests and purposes are furthered by enactment of particular policy.

The "fuss and struggle" which accompanies political debate, both at the level of special interest groups and legislative bodies, is one method of reflecting possible gains and losses from particular legislation, and in suggesting intensity of desire by groups whose wishes may be submerged by majority vote. Notwithstanding the fact that the process is sometimes accompanied by pure chicanery and log-rolling, the latter not always un-

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<sup>4</sup> Brewster, *ibid.*



like a scheme of compensation or side payments allowing expression of varying intensity of preference among goals and policies, its pull over the long run undoubtedly is towards social policy following the thread of public interest and increasing aggregate or community welfare.<sup>5</sup>

If farm policy were removed from politics, there would be no public forum for weighing distribution of gains and losses over the population to provide mechanisms which redress sacrifices not foreseen in previous legislation and for legislating new policy which promises to increase aggregate welfare. No opportunity would exist for minority groups to express the magnitude of losses they believe to prevail from particular enactments. Farm policy formulation has appeared a complex and time-consuming process in recent decades. Agreement on means of solving some obvious problems has been difficult, and resulting policy appears to be anything but systematic.

But permanent long-run policies seldom are developed and accepted quickly. As Benedict indicates, reform movements often must persist for a century before they obtain results.<sup>6</sup> It took a good half century for formulation of a generally agreeable land policy after independence. Even the emergency legislation of the 1930's rested on nearly two decades of debate, and some experimentation, which led up to it. However, knowledge and learning can, as outlined later, aid the political process and speed its policy decisions under democracy. Too, when we consider the many groups involved in coalitions representing different policy goals, the conflicting groups over alternative policy elements, the intensity of interests of even minority groups and the consequent need for "side payments in policy allowances," the system and pattern of legislation which arises is not entirely unsystematic.

### Model of Competition and Power

Freedom surrounding agriculture will best persist as long as there is more than one organization or interest group which is able to carry on policy debate and to have its concepts, philosophy and recommendations brought to the public. The possibility or tendency towards elimination of opposition in farm views and effects evidently led McConnell to title his book "The Decline in Agrarian Democracy."<sup>7</sup> Even should it stump greatly for freedom, the existence of a single farm organization or interest group with monopoly power over farm legislation would be inconsistent

<sup>5</sup> For indication of log-rolling as a method for expression of intensity of desire, see R. D. Luce and H. Raiffa, *Games and Decisions, Introduction and Critical Survey*, Wiley and Sons, New York, 1957, p. 361. The condition that individual preferences are equal or symmetrical is more nearly assumed where methods for expressing intensity are considered to be inappropriate. For discussion of political equality and equal weights for preferences, see R. A. Dahl, *A Preface to Democratic Theory*, University of Chicago Press, Chicago, 1956, pp. 35-40.

<sup>6</sup> M. R. Benedict, *Farm Policies of the United States, 1790-1950*, Twentieth Century Fund, New York, 1953, p. xii.

<sup>7</sup> Grant McConnell, *The Decline of Agrarian Democracy*, University of California Press, Berkeley, 1953.

with the very concept of competition. It would be the equivalent of national politics and policy with only a single political party.

Progress is safeguarded and promoted by more than one political party, under democracy such as that of the United States, even though the political process gives rise to "much noise" and, sometimes, roundabout movement to policy goals. Further, given the existence of various groups with unlike opportunity and production possibilities in agriculture, existence of more than one farm organization or pressure group with effect on farm legislation helps to insure a mix of policy elements providing positive-sum outcome in utility increase for the industry and society. Some modern political theory proposes group and social choice based on the end of power maximization by the individual or particular group.<sup>8</sup> Maximum power and control over others rather than utility maximization per se—although the two need not be separate—is sought. In this sense, the activity is the same as a zero-sum, two-person game: what one gains the other must lose. One wishes to increase its power and utility at the expense of the other, without concern over the aggregate outcome. This concept of attempted power maximization may characterize the power struggle of farm groups over agricultural policy, a conflict relating not to mutual gains in welfare or Pareto-better opportunities of such but in terms of "who shall have the political strength," with policy adapted towards this end more than others. The point is suggested in the following statement by Schultz:

Underneath all of this is a concealed issue that burns all our minds, which is not brought to the surface and analyzed and treated. . . . In our day, we are more concerned with who has power and what we have done to power relationships and the whole political aspect than with the thing that is accomplished. What we are worried about most is what we have done to ourselves in the political structure and relationships.<sup>9</sup>

The struggle for power per se, or the power maximization model may go a long way in explaining major splits over farm policy, especially among major farm organizations. Is it the attempt of organization to create policies and administrative frameworks which maximize their political power and control over others which dominates conflict over policy? Or is it straight competition in economic interest and difference in basic values? Some recent maneuvering might lead conclusion towards the power maximizing model, rather than any definite attempt of all farm organizations to maximize economic welfare of all agriculture, or even to wrest greatest economic advantage for interests of farmers who make up membership of major farm organizations.<sup>10</sup>

<sup>8</sup> For discussion, see W. H. Riker, "A Test of Adequacy of the Power Index," *Behavioral Science*, Vol. 4; and R. A. Dahl, "The Concept of Power," *Behavioral Science*, Vol. 2.

<sup>9</sup> T. W. Schultz in J. D. Black, *Federal State Relations in Agriculture*, National Planning Association, Agricultural Committee, Mimeo, 1949. Also, see Grant McConnell, *The Decline of Agrarian Democracy*, University of California Press, Berkeley, 1953, Chap. 17, p. 134.

<sup>10</sup> For similar discussion of related issues, see McConnell, *op. cit.* and R. E. Dahl and C. E. Lindbloom, *Politics, Economics and Welfare*, Harper and Brothers, New York, 1953, Chap. 17.

## GROUP AND INDIVIDUAL INTERESTS

U.S. society is not now composed of millions of persons with identical tastes, preferences and values, nor was this ever so.<sup>11</sup> Accordingly, it is necessary that balance in goal attainment be decided in the political process, with appropriate consideration for the values and preferences of the many groups which make up the society. In few cases is one group allowed to impose or dictate its goals entirely over another. Examples where differences have been so conflicting and discrete that one sector of society attempted absolutely and completely to impose its values and preferences over other sectors, were in slavery and prohibition. But most value and goal differences are not this extreme. Hence, methods of resolving conflicts are possible over time and through less violent political means and mechanisms. Groups with conflicting interests have, in U.S. society, been able to use time and the bargaining process better to understand each other's positions and finally to agree on policy which is mutually acceptable.

Democratic societies seldom articulate a single valued long-run policy and immediately adopt it. Instead, they formulate a broad general concept of long-run goals and move in their direction, away from structures existing at the moment, through a succession of short-run improvisations upon which agreement can be obtained. While this process is less spectacular and revolutionary than those political mechanisms which allow or force sudden and discrete breaks from the present or past, or which force a violent break between alternative sets of values, it is more consistent (1) with social mechanisms which recognize the acquired values of individuals and groups and (2) with the democratic process.

Brewster's creed of *self integrity*, the central judgement that in case of conflict both the individual and group are responsible for seeking a new mode of thought to unify conflicting views, does reflect itself through the political process in the long run.<sup>12</sup> However, while certain basic and original values or creeds harmonized well with the premachine economy of agriculture, they are less consistently held with respect to the current capacity and structure of agriculture and with respect to the economic social and power structures of other industry and resource groups. Political debate and conflict in respect to farm policy during the 1950's are indicative of the metamorphosis now taking place within agriculture, in respect to its economic role in an industrial society and in one where pure types of neither competition nor monopoly are predominant.

The United States was never motivated by an inspirational conviction of a single goal and purpose. Initial differences have always existed and they have been resolved by time and the political process. Our society has made progress because certain national interests do transcend special interests and because competing individual groups do exist. The purpose

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<sup>11</sup> For different concepts and difficulties in defining the public interest, see G. Shubert, *The Public Interest*, The Free Press, Glencoe, Ill., 1960.

<sup>12</sup> Brewster, *op. cit.*

of public policy is precisely to reconcile conflicting interests and points of view and to establish some harmony of purpose "amidst a welter of interests." This process is possible in a democratic society to the extent that government officials who formulate policy and the individuals comprising the competing interest groups are capable of being influenced by some conceptions of national interest transcending their particular interests. Demeter, goddess of agriculture, cannot wave her wand over the countryside, providing immediate insight and agreement on areas where national interest transcends group interests for agriculture. No single "round package of farm legislation as a once and for all cure-all" for farm problems will ever be in sight. Or is this necessary. As we outline in later chapters, policy with numerous elements is necessary to guarantee aggregate welfare increase.

Differences in farm policy are no sharper than those for other national policy problems which are resolved outside the framework of discrete ideological choices and violent subordination of one set of interests and values by another. In these cases where group values and interests have led to conflict in choice of means or goal mixes, but have eventually been transcended by national interests, the process has not been accomplished in a lightning flash. Instead, some broad and general national goals have first been articulated, even if nebulous and distant in character. Then starting from where it was, society composed of various groups has, through the process of bargaining and re-examining positions, taken gradual steps from the prevailing conditions in the direction of broader and more ultimate goals. And while, in the long sweep of history, the general movement has almost always been in the direction of national purposes which could be articulated, not every step was so, a few being sideways and occasionally one backwards, as time and the bargaining opportunity of the political process were exercised in resolving special interests with national interests, or in bringing distributions of gains and losses to better assure increase in aggregate welfare. Compared with most other nations and social institutions over the past 200 years, the process has been extremely successful as evidenced by the stability of the bargaining institution itself, and by the stability and continuance of both a democratic form of government and the political process.

### **Debate and Discussion in Inventory of Ends and Prediction of Means Consequences**

Goals below the generalized level of life, liberty and happiness are so numerous that all cannot be selected in equal quantities or pursued until their marginal utility is driven to zero. Hence, "measurement" by the public is necessary for guidance in the level and mix to be selected. Political debate and "give and take" is a method of discussion, for a more ample inventory of goals and sub-goals and their effects as they are known in fact or held in belief. Discussion is the most ancient and universal process for reasoned calculation in social policy, whether this be through the house organs or officers of farm organizations, the P.T.A.,

the politburo or the legislative committee. In a manner, it is an analysis or history of experience; it is a prediction, albeit imperfectly at times, of expected outcomes where payoff matrices have not been and cannot be, constructed empirically. Misunderstandings and previous biased or accidental distortion of facts can be uncovered. Seldom can voting be conducted successfully without discussion, whether this be at the program committee of the 4-H Club or in presidential elections.

Discussion and explanation, the exchange of information, also is used in that other major mechanism of decision, the pricing mechanism, except that it often is less public, involves fewer people and leads to more rapid acceptance or rejection of a particular alternative. Decision making through either the voting or pricing mechanisms would generally be inefficient without discussion and information. Discussion and examination of alternatives for social choice are typically minimized where one body wants its particular choice to be forced, as in "ramrodding" an alternative through an organization's executive committee or in the sham of democracy under a dictatorship. The strategy here is to hide the facts and distort the extent of knowledge (even to extent of stifling education and scientific fact). In the same vein, removal of farm policy from politics would generally remove the advantages of discussion in public decision making, and bring the imposition of alternatives by those in the position to dictate particular actions. The larger the group over which the discussion must occur, of course, the longer and more difficult is the process of weighing and choice among alternatives. It is understandable, then, that time is required to obtain policy with an important degree of unanimity over the complex and large industry identified as agriculture.

Trial and error is required in social policy because knowledge often is only subjective and consequences cannot be articulated accurately. The public, group representatives and legislators often have little knowledge of economic principles, and but meager information of useful research even where it is available. Often, or almost typically, the broad range of choices to be made and the many means of attaining them extend over phenomena far outside the realm of aid from theoretical economics. However, the general logic of economics is still applicable and itself explains, in rough manner, why equilibrium in policy changes and shifts back and forth between program elements as progress in goal attainment takes place.

As one goal is selected and approached through relevant policy, its marginal urgency or utility declines and others are increased in marginal value. These values at the margin are constantly changing, as has been true between equity in income distribution and economic progress. At lower levels of economic progress, income equity, even to the extent of redistribution, had great apparent marginal attraction to the masses. But with economic growth and attainment of high per capita incomes in such nations as the United States, income redistribution comes to take on less marginal value, while economic progress, and an equitable share in its fruits, takes on greater marginal preference among laboring groups,

as well as industrialists. The emphasis in national policy thus shifts accordingly. Finally, re-examination of policies and switchback among them is necessary because man cannot always tell which ones he prefers until he tries them. To remove farm policy from politics and the political process would destroy this opportunity in information collection, weighing of preferences and flexibility in the decision-making process.

If we look upon political debate as trial and error measurement of alternatives, as a method of listing alternative goals and their degree of competition and as a tool for predicting the consequences of different policies, there are obvious ways in which the process can be facilitated and improved. An obvious method is the provision of more research, facts and information for these exact purposes. We have more to say about the opportunities in this respect in Chapter 16. However, at this point, one relationship is worthy of mention: As societies grow and expand, and simple biological desires become fulfilled, with spread of preference into the broader realm of complex services resting in psychological and sociological phenomena, the process of decision also becomes more complex. However, as society becomes this rich it also has the resources for investment in greater research and education to aid the public decision-making process. Too little of research, and particularly of education, has been made available and used in public decision on farm policy, although the void here is no greater than in other phases of national policy, such as that dealing with foreign and fiscal affairs.

## APPROACHES IN GAME THEORY

We have seen that policy goals themselves are competitive for both individuals and the nation. Also, competition exists between different individuals in respect to the gain they derive from different goals. To specify an over-all policy, in respect to level of attainment of various goals, which will maximize national or group welfare is one thing. To specify how over-all policy is developed is quite a different thing. Hence, it is worthy of time to pause and illustrate the types of policy strategies that may arise under particular conditions of special group interests, coalitions of various groups interested in policy and by voting procedures. We illustrate only two, but they are useful examples with real life counterparts.<sup>13</sup> Our examples are with two-person, zero-sum and  $n$ -person, nonzero-sum games. Some conflicts in policy fall in the zero-sum category—what one group gains, the other loses. The conflict over free market versus production control falls best in this category with (1) one group gaining more money income from a free market and another group gaining more from production control and price supports or (2) one group with values which give it greater utility under “pure competition” free-

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<sup>13</sup> Other approaches and phases of game theory would be relevant, such as those of “fair division,” bilateral monopoly, nonstrictly competitive, side payments and uncertainty. For discussion of these see M. Shubek, *Strategy and Market Structure*, Wiley and Sons, New York, 1959; Luce and Raiffa, *op. cit.*

dom and the other group gaining greater utility from more money income and less freedom. Other conflicts in policy are clearly of positive-sum construct. For example, farmers in different regions, producers of different commodities, firms selling fertilizer or machinery to agriculture or sectors storing surpluses all may push legislative elements which helps to syphon more of public appropriations, or their indirect effects, in the direction of the particular group.

Over the longer run and on broad party basis farm policy is decided in elections. If the population has strong feelings for or against a particular policy structure, it can vote it out or maintain it, although in the short run and through mechanism of congressional committees, particular policy arrangements come into being which are not direct reflection of choices of the majority of the voting population. Typically, farm policy does not arise from alternatives posed to the voting populace for decision. Instead, it arises in congressional committees where vote is representative of different commodity, geographic or other interests. Only later does it have opportunity for evaluation by the voting public. Knowledge or estimates of gains and losses ordinarily is initially greater in the committees and the groups they represent than over the public at large. Hence, if the coalitions which gave it initiation persist, a given policy also may tend to persist for some time.

In the theory of political decision making, it can be shown that there are conditions under which majority selection, through committee or other procedure representing individuals or groups, need be that which is estimated to be "equitable," or which will give gain to all members of the group.<sup>14</sup> Coalitions may be formed which allow gain to some of the group but not to others. This condition arises where each separate individual or group wishes to maximize its own gain or utility. The individual or group does not concern itself with optimal conditions necessary for maximization of gain or utility to the aggregation of individuals or the community, considering interpersonal differences, or even to Pareto-better positions which better guarantee positive-sum utility outcome over all groups. The effort, in a game theoretic framework, is for the individual or group to select the strategy which promises to maximize its own gain, considering strategies of others who also are involved in the game and the fact that gain to some may be kept at zero, or even may be negative. In this sense, the individual or group doesn't "give a hang" about welfare per se of others; its indifference map is fixed and does not change configuration depending on the level of utility of competing individuals or groups.

Rules in modern welfare economics can only specify changes under which the total product will increase and patterns of distribution which will increase total utility in the sense that some are better off and none are worse off, or that all are better off. It can specify only solutions of unanimous consent, or where there is basis for agreement among all

<sup>14</sup> For example, see Arrow, *op. cit.*, and J. M. Buchanan and G. Tullock, *The Calculus of Consent*, Michigan State University Press, East Lansing, 1961.

individuals or groups concerned. It cannot specify a change which involves conflict in the sense that gain by one means loss for the other. This point is emphasized in Figure 8.1 where, starting from point  $m$ , two individuals can agree, have unanimous consent, in step-by-step movement to selected points within the shaded area where other indifference curves intersect, until tangency of two curves is attained along the contract line. But at this point, conflict arises and consent can no longer be unanimous, each gain in position of one individual being loss by the other. This also is true starting at point  $e$  and supposing  $X$  to represent the utility of one person and  $Z$  the utility of another with  $b_3$  as an opportunity curve. Any change between  $e$  and the boundary of  $b_3$  as a set of possibilities, within the right angle, causes increase of utility by one or both and allows possibility of unanimous consent. But any change which gives a combination outside of the quadrant  $egh$  increases utility of one at the expense of the other. Consent can still be attained in a Paretoan optimum sense for movements along the contract line if gain to one is accompanied by compensation to the other individual in amount equal to or greater than the latter's direct loss, supposing that there is exterior source for the necessary side payments. Assumed, obviously, is the equivalent of positive-sum reorganizations; otherwise the status quo would be maintained. But we must also examine game theoretic situations where this is not true and positive-sum outcomes are not guaranteed in the short run, although national interests and the political process will tend to direct them back to this condition in the long run.

### Two-Person, Zero-Sum Games and Pressure Group Strategy

To illustrate these possibilities, we examine some simple political decisions which may be put in a game theoretic framework and which represent choice between competitors which need not, or do not, imply maximization of community or aggregate utility. On the one hand, we have political activity which parallels decision under two-person, constant-sum games with solutions in the minimax manner. Others perhaps are in the manner of Savage's minimization of regret or in the terms of the Hurwicz optimism-pessimism principle.

We select a problem subjected to the more conservative minimax principle as an illustration of mixed policy strategies and structures which may arise under these conditions.<sup>15</sup> Here the strategy is put in the context of a "game against nature" where the opposition is malevolent, always using its most devastating strategy. We suppose two special interest groups, each having resources (money, time of staff, vote trading ability, influence on congress or legislative committees, etc.) which can be

<sup>15</sup> For detailed discussion of the various approaches, see Earl O. Heady and W. V. Candler, *Linear Programming Methods*, Iowa State University Press, Ames, 1959, Chap. 17; L. J. Savage, *The Foundations of Statistics*, Wiley, New York, 1954, Chap. 2; L. Hurwicz, "Some Specification Problems and Applications to Econometric Models," *Econometrica*, Vol. 19; R. D. Luce and H. Raiffa, *op. cit.*, Chaps. 4 and 5; Martin Shubik (ed), *Readings in Game Theory and Political Behavior*, Doubleday, Garden City, 1954. (Doubleday Short Studies in Political Science.)



allocated to different strategies bringing gain to it, or allowing it to avert loss. Its problem is to determine the manner of allocating these resources (i.e. the proportion to use for each strategy—the frequency) to best meet its individual goals of gain. We suppose the resources are used to influence opinion and votes of the public, or in lobbying to influence Congressmen who vote on actual legislation.

We believe that many farm policy conflicts do approach a zero-sum game in nature. Some farms which can expand, under certain policies, gain at the expense of those who must give up farming. Greater output and less revenue in aggregate may bring greater income to more progressive farmers who increase output by more than the average, but loss to those who increase output at a lower rate. Similarly, higher feed prices under quotas may cause grain producers to gain at the expense of livestock farmers. Hence, groups (coalitions) may congregate around a particular policy possibility, trying to set up different strategies in order to bring policy elements, considering the strategies of their opponents, which will “maximize the minimum of gains” or will “minimize the maximum of losses” considering the strategies of their opponents. The result logically need not be a pure strategy, or a single policy element, but a collection of policy elements resulting from the “game” as reflected through political bargaining and trades.

Represented as a two-person zero-sum game, we can suppose two coalitions, or groups  $A$  and  $B$ . That represented by  $A$  has the set of strategies of finite number represented in (9.1), where  $a_1$  may represent trade with an outside group to receive a particular price support level (or lack of it),  $a_2$  represents a land withdrawal scheme,  $a_3$  represents provision to maintain particular limits on farm size, and so forth.

$$(9.1) \quad A = [a_1, a_2, \dots, a_m]$$

$$(9.2) \quad B = [b_1, b_2, \dots, b_n]$$

Similarly,  $B$  has strategies represented in (9.2) where the elements,  $b_i$ , have similar meaning. Arranging the two sets of strategies as in (9.3), we have elements of the payoff matrix,  $C$ , where  $c_{ij}$  represents the gain to  $A$  and the loss to  $B$  if the former uses the strategy  $a_i$  and the latter uses the strategy  $b_j$ .

$$(9.3) \quad \begin{array}{c} \\ a_1 \\ a_2 \\ a_i \\ a_m \end{array} \left( \begin{array}{cccc} b_1 & b_2 & \dots & b_j & \dots & b_n \\ c_{11} & c_{12} & \dots & c_{1j} & \dots & c_{1n} \\ c_{21} & c_{22} & \dots & c_{2j} & \dots & c_{2n} \\ c_{i1} & c_{i2} & \dots & c_{ij} & \dots & c_{in} \\ c_{m1} & c_{m2} & \dots & c_{mj} & \dots & c_{mn} \end{array} \right)$$

Policy outcomes may mean income or utility gains to some but not to others, as in the case of large farms versus small farms and extended output versus revenue change, or the value attached to price supports or their opposite among grain buyers and sellers.

However, payoff elements need not always represent loss to one and gain to another, but may represent differential magnitudes of gains or losses (i.e. we may add constants to the elements of a zero-sum game). Now, if  $A$  wishes to guarantee a minimum loss (maximum gain) regardless of the strategy employed by  $B$ , he must determine "frequencies"  $p_1, p_2, \dots, p_m$  to attach to his various strategies. Similarly, if  $B$  wishes to guarantee maximum gain (minimum loss) regardless of  $A$ 's strategy, he must specify "frequencies"  $q_1, q_2, \dots, q_n$  to attach to his strategies where we have the restraints:

$$(9.4) \quad \sum_{i=1}^m p_i = \sum_{j=1}^n q_j = 1,$$

$$(9.5) \quad 0 \leq p_i \leq 1$$

$$(9.6) \quad 0 \leq q_j \leq 1$$

and  $A$  wishes to guarantee a given gain (loss) or value  $v$ , regardless of the strategy used by  $B$ . Thus the problem in matrix notation is to solve the set of relationships in (9.7) for  $B$  and (9.8) for  $A$  where  $V$  is vector with all elements equal to  $v$ , with  $v$  being the maximum of minimum gain to be attained by  $B$ , considering the strategies available to  $A$  (the minimum of the maximum losses which can be attained by  $A$  considering the strategies open to  $B$ ).

$$(9.7) \quad CQ \leq V$$

$$(9.8) \quad C'P \geq V$$

$Q$  and  $P$  are the vectors of frequencies respectively for  $B$  and  $A$ . The solutions will indicate the mixture of strategies, frequencies of such, that  $A$  should employ if it wishes to minimize its loss and that  $B$  should employ if gain is maximized, depending on the strategies open to each, and the player considered to be the minimizer.

In terms of a pressure group, the solution (of the  $p_i$  and the  $q_j$ ) can be considered to indicate the proportion ( $p_i$  and  $q_j$ ) of outlay (money or effort) to be allocated to each of its possible strategies. Hence, within this conservative framework wherein the first player assumes that the second will use the strategy most devastating to the first and selects a collection or mix of moves to guarantee a given level of gain (or loss), a collection of policy elements may be selected by each.<sup>16</sup> The resulting policy thus may be looked upon as a "compromise."

The above framework is more nearly one where we assume zero-sum outcomes, with one gaining what the other loses and with unwillingness to "put all eggs in one basket." It would seem, however, that competing

<sup>16</sup> A single strategy will be selected only in case the minimum element of a row in  $C$  is identical with the maximum element of a column of (9.3), the existence of a single element defining a saddle point.

groups might better examine the possibility of trades such as those outlined in Figure 8.1 and guaranteeing positive-sum rather than zero-sum, or even the possibility of negative-sum, outcomes for the aggregate of groups. But as we outline later, a policy including a mixed strategy, rather than a "pure" approach, has basis in equitable and positive distribution of gains to all groups, and need not arise purely from opposition and conservative strategies.

Compromise and miscellaneous policies of this same general mixed nature, but not necessarily determined in the degree of empirical sophistication or in the inflexible formulation above, quite typically arise in appeal of major policies to miscellaneous interest groups. In a large and complex society such as that of the United States, decisive majority is not frequently provided by any single sector of voters. Hence, policy in respect to particular over-all problems or goals often has elements with some appeal in gains to numerous sectors. Farm policy in the late 1950's was so composed, with support prices for those who could so gain, unrestricted plantings of corn for those who preferred more freedom, land withdrawal on dispersed basis to help restrain production but to meet criticism of rural businessmen who feared concentrated withdrawal, storage of grains favored by those who store it and foreign disposed purported to aid in international political and developmental obligations.

Even though numerous of these elements were in conflict in respect to attainment of particular ends, "mixed strategy" was used to invite voting majority of persons with interests surrounding agriculture, even if policies with more distinct contribution to group ends and national welfare maximization might have been specified. Or the policies which arise may be likened to games and decisions with side payments, thus breaking out of the tight zero-sum construct above. The side payment does not take the form of money transfer but is a particular program allowance to one group so that it will "go along" with a major policy proposal. Producers in one region may be allowed a particular provision if they will "go along" with a major legislative proposal. For example, if the policy involves production control and support prices, one regional group may be allowed to shift its "withdrawn land" into other crops. Or it may be given an amendment to legislation, providing it with a somewhat different support level. Side payments are not inconsistent with community welfare maximization, even though they give rise to policy constructs which appear heterogeneous and unsystematic. They do, as pointed out later, allow recognition of intensity of desire by minority groups.

The above framework illustrates procedure by which miscellaneous policy structure may arise. We go further in the game theoretic framework below, illustrating how choice of policy can be made under democratic procedure and voting majority where concentration is on individual or group rather than aggregate-society gain. Even though the situation we now illustrate is known to have its "everyday" counterpart in politi-

cal decision, no one has yet come up with a substitute for majority voting which allows better attainment of certain desired conditions in group decision making.<sup>17</sup>

### ***n*-Person, Constant-Sum Games and Voting Majority**

The diversity of groups within agriculture and those surrounding agriculture, some with consistent and some with conflicting interests in particular policy programs, perhaps provides for decisions falling more nearly in the framework of an *n*-person, constant-sum game wherein coalitions can be formed, in effect through either general elections or congressional committee memberships. It is here that interests of the particular group in maximization of its own gain prevail without regard to aggregate or community welfare, if we assume lack of side payments. In other words, a particular group or individual is not concerned with the smallness of gain to another, whether this be zero, small or even negative.

The general outcome can be illustrated by a simple example, although it has application with greater numbers and certain greater complexities in alternatives and decisions.<sup>18</sup> For illustrative purposes, assume a public program which results in *m* dollars which will find allocation as benefits to three groups or individuals, the latter being different geographic or commodity groups in agriculture—agriculture as compared to groups outside of agriculture which handle farm inputs and products, etc. Or, *m* may be the magnitude of a market return which can be distributed differently among large or small farms, feed producers or livestock farmers, or over other various commodity and geographic groups, depending on the type of farm policy selected. Selection of policy in this case will be determined by majority vote, with different policies bringing different fractions of *m* to each group or individual.

Normalizing the game, expressing it in functional form and letting 1, 2 and 3 refer to the respective individuals or groups, we have the following characteristic function or values of different groupings or coalitions of individuals or groups where *v* indicates the value or payoff to the coalition indicated in the parentheses:

$$(9.9) \quad v(1) = v(2) = v(3) = 0$$

$$(9.10) \quad v(1, 2) = v(1, 3) = v(2, 3) = m$$

$$(9.11) \quad v(1, 2, 3) = m$$

<sup>17</sup> Cf., K. O. May, "A Set of Independent Necessary and Sufficient Conditions for Simple Majority Decisions," *Econometrica*, Vol. 20. He points out that simple majority rule alone is the only rule resulting in the properties of (1) decisiveness, (2) anonymity, (3) neutrality and (4) positive responsiveness.

<sup>18</sup> For other application or discussion of game theory in political decision, see: K. W. Deutsch, "Game Theory and Politics," *Canad. Jour. Econ. and Polit. Sci.*, Vol. 20; Luce and Raiffa, *op. cit.*, Chap. 14; A. Downs, *An Economic Theory of Democracy*, Harper and Brothers, New York, 1957, Chap. 10; M. Shubek (ed.), *Readings in Game Theory and Political Behavior*, Doubleday, New York, 1954; and Buchanan and Tullock, *op. cit.*, Chap. 11.

If each stands alone—no coalition as in (9.9)—the coalition value is zero for all groups. If coalition is formed to give a majority, any pair as (9.10) in this case, the value of coalition is the total benefits,  $m$ , to be allocated under the policy, as also is true in (9.11), or for any coalition including more than a majority of individuals. An “equitable” sharing of policy gains, through selection of a particular structure of government program, is the distribution or imputation of  $m$  indicated in the set of (9.12), with equal portions of  $m$  going to all three “players” as indicated by the proportions of  $m$  representing, from left to right, the respective shares to groups 1, 2 and 3.

$$(9.12) \quad \left(\frac{1}{3}m, \frac{1}{3}m, \frac{1}{3}m\right)$$

However, this imputation is not stable and does not provide a “solution” to the game. The requirement for a stable solution is that the set of alternative imputations—e.g. the proportions in (9.12)—from which it is selected (1) dominates any imputation not included in the set and (2) must include imputations all of which dominate others or are dominated by others in the same set. A set of imputations satisfying these requirements is included in all three sets of (9.13).

$$(9.13) \quad \left(\frac{1}{2}m, 0, \frac{1}{2}m\right) \quad \left(\frac{1}{2}m, \frac{1}{2}m, 0\right) \quad \left(0, \frac{1}{2}m, \frac{1}{2}m\right)$$

The imputation in (9.12) is not stable because 1 and 3 can form the coalition (1, 3) in (9.13), both gaining over (9.12) at the expense of 2. Hence, with each trying to maximize individual gain, (9.12) is not a solution for any one. However, if the coalition (1, 3) is formed to give the imputation  $(\frac{1}{2}m, 0, \frac{1}{2}m)$ , individual 2 can propose the alternative coalition (2, 3) with gain from an imputation such as  $(0, \frac{2}{3}m, \frac{1}{3}m)$ , 2 now having payoff of  $\frac{2}{3}m$  rather than zero as under the first imputation in (9.13).

In terms of maximizing individual gain, this coalition and imputation also is preferable to individual 3 over the coalition (1, 3) and equal sharing of  $m$ . But the (2, 3) coalition, and its imputation above, now can be changed to better the position of both 1 and 2 if they form the coalition (1, 2) and vote for policy elements which result in the imputation  $(\frac{1}{2}m, \frac{1}{2}m, 0)$ . Either 1 or 2 now might “forsake his friend,” and form a coalition with 3 at his own personal gain. But obviously, unless the game were to go on endlessly without stopping for gain of any individual, either 1 or 2 might end up outside the coalition and with zero gain. Hence, in terms of their own interest, 1 and 2 may simply call a halt to the “juggling,” each having a greater gain than under the “equitable” sharing. They also have equal gains.

There are, of course, many imputations that could be retained in this manner. However, the set of imputations in (9.13) are considered to be more stable than any of those not in it, and particularly that in (9.12). The “equitable” imputation is considered to be the least stable of all imputations. Any coalition can upset it, while particular coalitions are needed to upset others. With the imputation  $(\frac{2}{3}m, 0, \frac{1}{3}m)$  only two other coalitions are possible to bring down that existing. Under the proposition

of maximizing individual gain, independence of utility functions and the absence of side payments, it is expected that coalitions will arise which leave no gain to some (or even loss if we suppose different types of games).

The analysis can be extended to any number of groups or individuals, with the solution set always containing a symmetrical distribution of gains to the smallest possible number forming the majority coalition. However, as the number of participants increases, the individual becomes less important in position, thus perhaps more inclined to depart from particular imputations. Coalitions formed will be less stable and permanent with greater number of individuals or groups, a phenomena not without example in agricultural policy. In the example above, we generally assumed symmetrical gain to the individuals of coalitions. However, where this is untrue, with the gain being differential and where all enter equally into voting, but side payments are allowed, imputations may result which are more stable than those outlined above but which do not result in the "equitable" sharing of the policy gains among those who form the coalition.<sup>19</sup>

The *n*-person positive-sum game illustrated above shows how coalitions may be formed to distribute the gains of particular policy or income conditions to particular groups. The gain or quantity to be distributed may, in agricultural policy, be a given public appropriation or it might be the amount of money generated from food expenditures in the market. The groups involved can be different commodity, regional or income groups of agriculture. They also can and do include groups outside of agriculture which have possible payoffs to themselves as alternative policies are selected. In the latter groups are producers of lime, fertilizer and machinery, the sectors and industries which process farm products, provide storage facilities, supply credit or perform numerous other functions relating to agriculture. They do group around agriculture as coalitions with specific interests. While formal games are not played, coalitions are more nearly represented in direction of emphasis in lobbying, public relations and similar activities.<sup>20</sup> During periods such as the 1930's, farm organizations joined efforts in what might be, in game terminology, termed an "equitable imputation." In later decades, however, they have been less able to arrive at "fair exchanges" and "unanimous consent." The result has been that opposing coalitions in interests have been formed among competing organizations in their attempt to affect farm policy legislation, rather than all forming a single coalition as in the early 1930's.

As we have mentioned before, exchanges do take place in policy formulation. These trades, which differ from the example above in the sense

<sup>19</sup> For discussion of these and relative situations, see Buchanan and Tullock, *op. cit.*, Chap. 11.

<sup>20</sup> For one person's presentation and interpretation of the groups interested in farm policy and the methods they employ see: Wesley McCune, *Who's Behind Our Farm Policy?* Praeger, New York, 1957.

that they need not leave some groups with zero gain, certainly give rise to policy with miscellaneous elements as an attempt to impute utility to various competing groups. In game terminology, the miscellaneous elements serve as "logrolling" effects wherein groups make trades. A particular group supports a policy element favored by a second group, if the latter will support a provision desired by the former. In a purely economics context, one cannot say that a mix of policy elements so arising, although they appear highly heterogeneous, are inconsistent with welfare or utility improvement. These trades are comparable to movements within the shaded area of Figure 8.1. Farm organizations are themselves coalitions of interest groups, and include coalitions within their ranks. This point, as well as the manner in which different strata within a farm organization can make trades representing Pareto-optima arrangements among their own ranks and can conduct "logrolling" for mutual benefit is suggested by McConnell in the following:<sup>21</sup>

The charge sometimes made that the Farm Bureau does not speak for the farmer is not wholly meaningful. "The farmer" is an abstraction. However, the question, for *what farmers* does the Farm Bureau speak, is highly meaningful. The Farm Bureau, in the words of its own publication, is "an organization of superior farmers." Moreover, the record of its action shows that it has served as the spokesman of these "superior farmers." Thus, the narrowed basis of Farm Bureau organization approaches one of *class* within agriculture. . . . Since the basis narrowing the constituency of the Farm Bureau is one of class rather than producer groups, it is clear that local bureaus will show considerable diversity on the latter score. . . . State farm bureaus have seldom opposed the national organization, and the conflict of interests between commodity groups has been minor and transitory. It is a type of controversy readily adapted to settlement by bargaining and logrolling by a few leaders. Thus, support for a labor policy desired by Southern or California interests can quite easily be exchanged for a price policy desired by Middle Western groups. The two policies do not conflict and, while the one side of the bargain may gain nothing from the other's policy which it agrees to support, neither does it suffer any loss. The result is that the national organization adopts both policies. This would appear to be the solution to the seeming paradox that, although the great center of the Farm Bureau is in the Middle West, the Farm Bureau consistently follows a policy on matters of farm labor that benefits plantations and corporation farms in other parts of the country. Any opposition to this policy would have to come on a class basis, and the Farm Bureau organization has been formed in a way which makes this impossible.

The solutions and strategies which arise under coalitions of the type outlined for (9.9) to (9.13) do not guarantee policy which maximizes aggregate or community welfare. Certainly there are many policy proposals and coalitions which are not aimed to do so. If we are to understand the "why" of many policies which apply to individual groups, we must look to frameworks of political decision making which fall in this realm. Fortunately, however, the political process of democracy does provide for debate and reconsideration and the presentation of information and alternatives even by groups left in minority position. Threads of community welfare concept do arise and are given opportunity to transcend gains and interest of particular groups, although the process often is sluggish and open to considerable gain of some at loss to others before it

<sup>21</sup> McConnell, *op. cit.*, pp. 170-71.

rectifies a particular policy structure.<sup>22</sup> Hence, while we have outlined some theory explaining the "why" of different policies and decisions, they best refer to the short run, with broader concepts of equity usually coming to prevail in the long run. (However, we can point out some coalitions and strategies in social policy which have indeed prevailed over a *long* short run with equity and opportunity for large population strata excluded accordingly.)

## POLITICAL STRENGTH IN ATTAINING FARM POLICY GOALS

Slowly but certainly the political strength of agriculture, of greater proportion than its population or in its contribution to national income, is melting away. The decline in political strength of agriculture is itself a function of economic growth. The process is not exogenous and mysterious, but its variables are endogenous to the economic system as it expands and develops. Primitive societies devote major resources to producing food, clothing and shelter. Since labor is low in price relative to capital, most of the labor force and population is in these extractive industries. But with the eventual conquer of hunger and growth in per capita incomes, the pattern of demand shifts more to nonfarm goods and services in the manner outlined in previous chapters. Directly the demand is for consumer goods, but indirectly it is for resources. With growing scarcity of labor relative to capital and with predominance of labor in service and public enterprises, expansion in size and complexity of the economy draws labor from agriculture to the nonfarm economy in amounts more than proportional to capital. Accompanying labor in the shift to nonfarm sectors are families and voters. Hence, the shift in political power from farms to urban sector is chartered. This process will continue in American society, just as it will in other nations where both the right of decision through the voting mechanism and economic growth prevail. In fact the two sets of decision-making mechanisms—the pricing system and the ballot box—are not separate but closely intertwined as they shift the pattern of demands and powers relatively from agriculture towards nonfarm sectors.

Following the first reapportionment of the U.S. House of Representatives, 101 of the 106 representatives were elected by farmers and planters. It has been suggested that not more than 100 of 435 representatives were directly affected by the farm vote by 1957.<sup>23</sup> Too, it is becoming increasingly easy for the President, and major party policy, to be elected apart from the vote of the farm states. At the national level particularly, this decline in political power will continue as the economy becomes attached in greater proportion to nonfood products. Farm problems will come less

<sup>22</sup> Means which give rise to "voice" by minorities, allowing some expression of intensity of preference by them as against the majority, are devices as logrolling, vote trading and the filibuster. Enactment of "games of fair division" also allows expression of intensity.

<sup>23</sup> For discussion of these quantities, see: A. N. Holcombe, *Our More Perfect Union*, Harvard University Press, Cambridge, 1950; R. B. Talbot, "Trends in Political Positions of American Farmers," from *Goals and Values in Agricultural Policy*, Iowa Agricultural and Economic Adjustment Center, Iowa State University Press, Ames, 1961.



to dominate other programs of the nation, as in the case of foreign policy where aid has too often been tied to disposal of surplus farm products rather than in investment to give greatest marginal productivity of developmental goals.<sup>24</sup> In the terms of population and resources represented by the industry, agriculture long was able to maintain an important degree of "overrepresentation" in decision on economic policy. Overrepresentation has been especially true in state legislatures where major policy decisions are those of taxation, allocation of road funds and certain economic regulations of commodities and labor. However, it continues at the national level where agriculture still has overrepresentation in geographic allocation of the Senate, control over House committees on agriculture, subcommittees on agricultural appropriations and special congressional arrangements in protection of committees.<sup>25</sup>

As time goes by and the House declines in representation from rural districts, various of these powers will decline. However, as urban areas become more important in the initiation and control of farm policy, it is not given that they will lack interest in guarantee of equitable degree of stability and favorable resource returns in agriculture. General society has been extremely kind and patient with agriculture, in magnitude of appropriations to it and in extended time to experiment with policies which have had high treasury costs. It is unlikely that farm or general society would have allowed government purchases and storage of surplus autos, refrigerators and television sets in the magnitude of farm products during the 1950's. Future urban societies are unlikely to withdraw the opportunity of income policies and opportunities from agriculture, but they are likely to ask how their funds are spent.

Constitutional emphasis on securing and guaranteeing basic human rights and civil liberties can be interpreted as a directive towards equality of opportunity, and not equalization of income or similar rewards, except as the latter is attained by the former.<sup>26</sup> U.S. society is likely to continue this emphasis for the agricultural sector, even as political power of the industry declines further, but with opportunity defined in the broad framework of national purposes and with minimum restraints in market power no less than for other major groups.

## ROLE OF RESEARCH AND EDUCATION IN POLITICAL DECISIONS

As we mentioned earlier, political discussion fills a useful function in democratic selection of social policy. It serves to express goals relevant to all groups, the possible distribution of gains and losses from different policy subsets, the expected payoff or consequences of different means, and the general complementarity and competition among ends. The longer and more widespread the discussion, the larger the number of

<sup>24</sup> For discussion of orientation of foreign policy into channels of particular advantage to agriculture, see H. N. Carroll, *The House of Representatives and Foreign Affairs*, University of Pittsburg Press, Pittsburg, 1958, pp. 34-65.

<sup>25</sup> For details on such points as these, see C. M. Hardin, "Farm Political Power and the U. S. Government Crises," *Jour. Farm Econ.*, Vol. 40.

<sup>26</sup> See Buchanan and Tullock, *op. cit.*, Chap. 13.

hypotheses, beliefs and facts ordinarily brought to focus on a given set of policy proposals. The discussion step is essential in social choice. There is method, however, for improving the discussion and informational phase of public decision making. Research and education can be used to contribute information of the type needed for evaluation of policy alternatives. Research cannot, of course, say which values ought to prevail, what goal is "good" or "bad." It can, however, add knowledge for the decision-making process in the sense of indicating or predicting (1) which ends are in conflict with each other, (2) which ends are inconsistent with the resources or means available, (3) the consequences or quantitative effect of a particular means, (4) the possible or expected distribution of gains and losses, in monetary or other measurable units, of a particular subset of policies and (5) similar quantities for predictable phenomena. Not all quantities can be forecast or predicted which are useful for public decision making, but many more than are typically used can be.

As societies grow richer, they can invest more in research and education to help in spread of knowledge and efficiency in choice, although this information probably has greatest marginal social value for poor societies where there are few resources and error in choice is relatively more costly. Of course, it also is true that as societies grow richer, the kind and quantity of public choices becomes more complex. They deal less with means to fill man's basic wants and more to development of opportunity in exotic preferences which have greater variance among individuals. For this same reason, the process of research to aid in public discussion and decision also becomes more complex, with ability of useful research perhaps lagging behind the spread in variety of phenomena concerned.

Research and facts for public knowledge and use in social decisions are useful only if they are communicated. Educational machinery thus is necessary. And the facts must not be suppressed if they are to be useful. "Book burning" takes place, of course, under the extremes of dictatorial society where knowledge and opportunity for democratic selection are withdrawn from the populace. But "book burning" is an activity of degree, ranging from literal attempt to destroy inventory of knowledge and facts to mere attempt of a pressure group to discredit research and suppress communication of it through educational channels. "Book burning" in degree is even reflected in actions of research workers and educators where they allow facts of positive agreement with major pressure or interest groups to come to print but withhold facts that are negative in respect to the groups' stand or position. Land-grant universities have not always been exempt from pressures to "burn the books" in various degrees.<sup>27</sup>

Often the facts needed are simple and time-worn, sometimes appearing

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<sup>27</sup> For detail of the political pressures and special interests used to herd agricultural research and education in directions desired by particular groups, and to suppress work in particular fields, see C. M. Hardin, *Freedom in Agricultural Education*, University of Chicago Press, Chicago, 1955, pp. 1-154; and *The Politics of Agriculture*, The Free Press, Glencoe, Ill., 1952, pp. 20-34.

of pedestrian nature to the technical economist. For example, few farm people know the meaning of concepts such as price and income elasticities of demand, or their empirical magnitudes. Few know the role of agriculture under economic growth, or the relative promise of prosperity for their son on an inadequate farm as compared to prospective growth industry. Young persons often have little knowledge of capital requirements to allow them success in terms of income approaching the U.S. living standard. Given more knowledge of this type, fewer persons would emphasize policy choices aimed at the moment and more would press for those looking to the longer-run structure of the farm industry and its relation to the national economy. Farm people are intelligent if given objective information, as also is true of most voters over the sweep of a generation.

In particular, land-grant universities need to put much more emphasis on public affairs in extension and other educational programs. Only a small minority of state extension services, covering only a small fraction of the nation's voters, have had a full-time person assigned to public affairs education. National policy is not determined by the people of a dozen states, and increased public investment is needed accordingly.

The specific objective of such education is not, of course, to impose values or value judgements on people. Instead, it is to provide objective facts and information and intelligent discussion so that individuals can better identify alternative goals and formulate their values accordingly; so that they can better understand conditions of conflict and complementarity among various goals and ends; so that they can better evaluate the consequences of following different policy means; so that they can more effectively identify the most efficient and effective means for attaining particular policy ends; and so that they can even make improved distinction between ends and means.

Some states have refrained from making this investment in public affairs education because they fear the subjects involved are controversial.<sup>28</sup> But again, experience of those states with broad extension education programs in social sciences indicates that this need not be so, if educators are objective and do not try to impose value judgements onto the public they serve. In fact, the public image of land-grant universities likely is larger, and public financial support is probably broader, where extensive educational programs in public affairs are carried on with the vigor of education in the production technology. The public image of the land-grant universities needs to be broadened substantially beyond that of purveyors of technical skills, if they are to fulfill their role in helping people more adequately to understand the urgency of better defining public goals and purposes and in developing appropriate policy elements, or even if further improvement in technology is to be better understood in terms of contribution to long-run national objectives and broad financial support is to be made available for it.

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<sup>28</sup> See Hardin, *op. cit.*