

Figure 6

tivization not worth the effort. Figure 6 is helpful in demonstrating clearly the essential interdependence between the choice of rules and the choice as to the location of activity in the public or the private sector.

One final point should be made before leaving this generalized theory of the constitutional-choice process. As we have emphasized, our approach has been that of analyzing the *individual's* choice among the various possible decision-making rules. It has not been necessary at any stage of the analysis to raise the problem as to the correspondence between the operation of this or that rule and the furtherance of any postulated social goal such as "social welfare" or the "common good."

7. The Rule of Unanimity

We have discussed, in very general terms, the calculus of the single individual in choosing what activities are to be placed in the public sector and in choosing among the various collective decision-making rules. His final decisions have been shown to depend on some evaluation of expected relative costs from the different available alternatives. In this chapter we shall discuss certain aspects of this calculus in more detail. Before doing so, however, we shall introduce a brief methodological digression in order to attempt to justify again our "costs" approach to the constitutional-choice problem, an approach that may seem tedious in certain applications. Following this digression, we shall examine in detail the individual's estimation of the relative costs of organizational alternatives. Here it will be helpful to assume that decision-making costs are absent and to explore the unique qualities possessed by the unanimity rule, especially when compensation payments are made possible. It will also be useful to place our analysis alongside that of the modern welfare economist. Finally, we shall demonstrate that the introduction of decision-making costs is required before any departure from the adherence to the unanimity rule can be rationally supported.

The "Gains" Approach

In our discussion of the net-costs model in Chapter 5, we stated that an alternative "net gains" model could yield similar results. We may start from a zero point where no collective action is undertaken and construct a "gains" or "benefits" function. This function is illustrated by the G curve in Figure 7. This G function would attain its maximum at point M , located on a per-

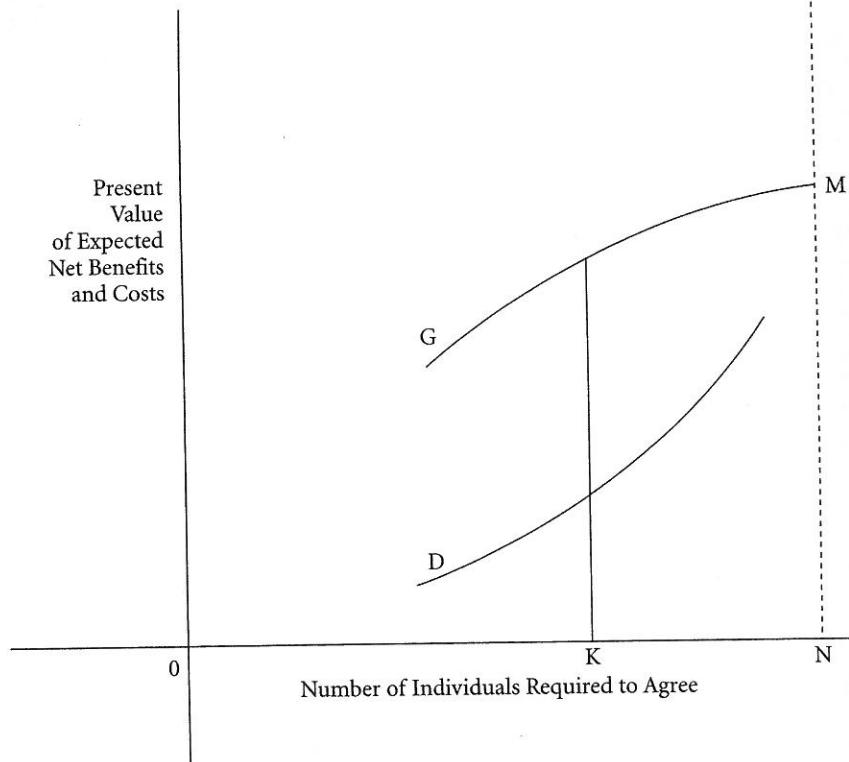


Figure 7

perpendicular to the abscissa directly above N.¹ That is, "net benefits" would be maximized under a decision-making rule of unanimity. This function might be compared with the costs of decision-making function D, drawn in Figure 7 in the same way that it appears in the diagrams of Chapter 6.

To the economist this approach would be the more suitable, since the curves become fully analogous to the total-revenue and total-cost curves employed in standard price theory. The "optimum" decision-making rule for the activity depicted in Figure 7 is that shown where the slopes of the two total curves are equated, or when "marginal net benefits" equal "marginal costs of decision-making" (K/N in Figure 7). There is nothing at all incorrect in this solution. It does require an explicit use of a marginal calculus which

¹ For a part of its range, the G curve could, of course, lie below the horizontal axis; that is to say, the "net benefits" may well be negative under certain decision-making rules.

we are able to circumvent by using the alternative, and more simplified, "net costs" approach. The "net benefits" approach is shifted to the "net costs" approach by a simple change in the zero value on the ordinate. If this is taken to be the point at which all benefits from collective action—whether in the elimination of external costs or in the utilization of potential external economies—have been realized, we may start with the recognition that the private organization of almost any activity imposes some external costs on individuals, costs that are unrelated to their own behavior. Collective action may or may not be expected to reduce these costs. The minimization of costs rather than the maximization of some difference between benefits and costs becomes the criterion for organizational and rules decisions. Moreover, in terms of the simple geometry of Chapter 6, it becomes possible to add the two total-costs curves vertically and to choose, or rather read off, a single low point. In the geometrical presentation no explicit reference to an equating of marginal values is required, although the solution could, of course, be defined in marginal terms. The net benefits to be secured from collective action are not neglected or overlooked in this alternative approach. They are represented clearly by the possibility and the extent of the reductions in total external costs imposed.

As suggested in an earlier chapter, this net-costs approach is intuitively more acceptable when collective action is aimed at removing negative externalities (external diseconomies) of private behavior. However, the model applies equally well in the positive, or external economies, case. The failure to undertake some sort of joint action, collectively or privately, when external economies are present is a failure to remove an external cost, expressed in an opportunity cost sense. In fact, one merit of this approach is the absence of any analytical distinction between economies and diseconomies. An additional merit, already mentioned in Chapter 5, is that, through isolating decision-making costs, we are able to compare the costs of undertaking collective action with either the costs of organizing voluntary private activity so as to eliminate a relevant externality or the costs expected to be imposed as a result of the spillover itself.

Cost Minimization and the Unanimity Rule

We have discussed the individual calculus in terms of two functional relationships between the levels of expected costs and the share of individuals in

the group required to agree before decisions are made. If we disregard the second relationship, that is, if we assume that the total costs of organizing decision-making are absent, the external costs from collective action expected by the individual were shown to be minimized only when the rule of unanimity prevails—when all members of the group are required to agree prior to action. (The C curves in the diagrams of Chapter 6 cut the abscissa at N.) This single decision-making rule acquires a unique position in our whole analysis which suggests that if costs of decision-making could be reduced to negligible proportions, the rational individual should always support the requirement of unanimous consent before political decisions are finally made. This conclusion follows only from the acceptance of the functional relationship as defined, that is to say, only if it is accepted that net external costs are reduced to zero by the operation of the unanimity rule. Since the reason why this must be so may not be intuitively obvious, we shall try to show that it is based strictly on the individualistic postulates and that, if these are accepted, the rule of unanimity does assume the special role assigned to it in our treatment of the constitutional problem.

Let us begin by considering a single activity that is organized by private decision-making but which does impose some external costs on the individual. The individual experiences some reduction in his utility as a result of the private behavior of other individuals. Let us further assume that these external costs are present because of spillover effects and that no effort is being made to eliminate these through voluntarily organized institutional changes. Take the common oil pool as a familiar example. We assume an initial distribution of property rights such that there are many separate owners of drilling rights to the large common pool and that there has been no joint arrangement worked out voluntarily. Recognizing the spillover costs imposed on him by the actions of others, the single owner will support some collectivization of decision-making if the costs of the latter are disregarded. He may recognize that *any* centralization of decision-making will reduce the external costs that he expects to incur, but he will also recognize that only if the consent of all members of the group is required will he be free of all expectations of external costs. Take the circumstances of the single owner whose productive equipment is somewhat more modern than that of most of his fellow drillers. Suppose that a proposal is made to set over-all limits on drilling by collective action and to allow the actual quotas to be set by a simple

majority voting rule. The owner in question may rationally support the collectivization of decision-making in the first place because this will reduce the expected external costs, but he will vote against the particular quota that the majority of his fellows choose because his own interests would be better served by different limits on production. Some external costs, imposed on him by the majority in this case, can be expected to remain. Moreover, so long as there exist minorities who disagree with the decisions reached, some external costs will be expected by the individual at the time of constitutional choice because, at this time, he will be unable to determine with any degree of accuracy what his role will be in any particular decision in the future. Only the unanimity rule will insure that all external effects will be eliminated by collectivization. The member of the dissident minority suffers external effects of collective decisions enforced on him, and, so long as there remains any possibility that the individual will be a member of such a minority, expected external costs will be positive, although collectivization may reduce these expected costs substantially below those that might be expected from unrestrained private action.

All of these seem to be obvious points when considered in this fashion. This being true, it is especially surprising that the discussion about externality in the literature of welfare economics has been centered on the external costs expected to result from *private* action of individuals or firms. To our knowledge little or nothing has been said about the *external* costs imposed on the individual by *collective* action. Yet the existence of such external costs is inherent in the operation of any collective decision-making rule other than that of unanimity. Indeed, the essence of the collective-choice process under majority voting rules is the fact that the minority of voters are forced to accede to actions which they cannot prevent and for which they cannot claim compensation for damages resulting. Note that this is precisely the definition previously given for externality.

As we have already noted, the rule of unanimity makes collective decision-making voluntary in one sense. Therefore, in the absence of costs of organizing decision-making, voluntary arrangements would tend to be worked out which would effectively remove all relevant externalities. Collectivization, insofar as this is taken to imply some coercion, would never be chosen by the rational individual. As previously emphasized, the individual will choose collectivization only because of its relatively greater efficiency in the organiza-

tion of decision-making. The existence of external costs (or the existence of any externality) creates opportunities for mutually advantageous "trades" or "bargains" to be made among individuals affected and also profit possibilities for individuals who are acute enough to recognize such situations. Furthermore, if we disregard the costs of making the required arrangements, voluntary action would more or less automatically take place that would be sufficient to "internalize" all externality, that is, to reduce expected external costs to zero. As implied earlier, all ordinary market exchange is, in a real sense, directed toward this end. Moreover, if there were no costs of organizing such exchanges, we could expect marketlike arrangements to expand to the point where all conceivable relevant externalities would be eliminated.

These conclusions follow directly from the underlying conception of the State itself, a conception discussed in Part I. The political mechanism in our model is viewed as a means through which individuals may co-operate to secure certain mutually desired ends. The political "game" is positive-sum, and all positive-sum games must have some "solutions" that are dominant over all participants. Since this is true, the ends are, in effect, attainable also by voluntary action if decision-making costs are neglected.

The Role of Compensation

The close relationship between collective action taken under the rule of unanimity and purely voluntary action is analytically helpful since the formation of marketlike arrangements would necessarily involve the payment of compensation by some parties to others. This suggests that the positive collective action that may be justified need not directly benefit all members of the group, even if unanimous consent is required. Nothing suggests that the elimination of external costs increases the utility of each member of the social group. If this were the case, little or no action could be taken since it must be realized that externalities rarely affect all members of the group in the same way. More often, the external costs imposed by private action will be concentrated on a minority group of the total population, and other individuals in the group will receive some external benefits as a result of these external costs. If compensation payments are introduced into the model, however, the limits on the location and distribution of the externality become irrelevant.

The unanimity test is, in fact, identical to the compensation test if compensation is interpreted as that payment, negative or positive, which is re-

quired to secure agreement. Moreover, if decision-making costs are neglected, this test must be met if collective action is to be judged "desirable" by any rational individual calculus at the constitutional level. We may illustrate this point by the classical example of Pigovian welfare economics, the case of the smoking chimney. Smoke from an industrial plant fouls the air and imposes external costs on residents in the surrounding areas. If this represents a genuine externality, either voluntary arrangements will emerge to eliminate it or collective action with unanimous support can be implemented. If the externality is real, *some* collectively imposed scheme through which the damaged property owners are taxed and the firm's owners are subsidized for capital losses incurred in putting in a smoke-abatement machine can command the assent of all parties. If no such compensation scheme is possible (organization costs neglected), the externality is only apparent and not real. The same conclusion applies to the possibility of voluntary arrangements being worked out. Suppose that the owners of the residential property claim some smoke damage, however slight. If this claim is real, the opportunity will always be open for them to combine forces and buy out the firm in order to introduce smoke-abatement devices. If the costs of organizing such action are left out of account, such an arrangement would surely be made. All externalities of this sort would be eliminated through either voluntarily organized action or unanimously supported collective action, with full compensation paid to parties damaged by the changes introduced by the removal of the externalities.²

Comparison with the New Welfare Economics

By approaching the problem of the calculus of the single individual as he confronts constitutional choices, not knowing with accuracy his own partic-

2. Since the conclusions here are not immediately apparent, additional comments may prove helpful. Assume that an industrial plant emits smoke which imposes real costs on local residents. Insofar as these residential property owners must undergo costs which the plant owners do not undergo, the capital value of the plant to *the group of residential owners* must exceed the capital value of the plant to its current owners. Mutual gains from trade exist, and, if we disregard all decision-making costs, trade will take place. The new owners may *not* find it profitable to introduce *complete* smoke abatement. However, since internal marginal costs of production will be increased, some reduction in output will be undertaken, provided that we assume the initial position was one of disequilibrium. For an interesting discussion of many of these points, see Ronald Coase, "The Problem of Social Cost," *The Journal of Law and Economics*, III (1960), 1-44.

ular role in the chain of collective decisions that may be anticipated to be carried out in the future, we arrive by a somewhat different route to a final position that is, in many respects, closely related to that taken by the "new" welfare economist. The modern welfare economist refuses to make interpersonal comparisons of utility, but yet he seeks to make some judgments concerning the welfare effects of proposed institutional changes. In order to be able to do so, he falls back on the criterion designed by Pareto. A change must be demonstrated to make at least one person in the group "better off" without making any other person "worse off," with "better off" and "worse off" being defined in terms of the voluntary preferences of the individuals as revealed by behavior. Translated in terms of decisions, this means, of course, that a change can be definitely shown to increase "total welfare" only if all persons agree, that is, only if there is the unanimous consent of all members of the group.³ Even to be able to make this statement, the welfare economist must accept certain ethical precepts, although these are admittedly very weak ones which should command wide assent. These precepts are those that are normally implicit in the framework of the individualistic society. To be able to go beyond the Pareto rule and to judge a change "desirable" when all parties do not agree, the economist would find it necessary to compare the utility of one individual with that of another, a comparison which must by nature introduce prospects of disagreement among separate persons. Unwilling to take this step, the welfare economist stops at the Pareto rule and disavows all claims to positive conclusions beyond its limits. He does not, however, normally suggest that collective action beyond the confines of the Pareto rule is undesirable; he is simply silent on such matters.

Some of the problems faced by the modern welfare economist are removed by our approach, but, as might be expected, others arise as more troublesome. By concentrating on the constitutional problem as faced by the individual, we need not discuss the comparability of his utility with that of others directly. We postulate only that the individual, at the time of constitutional choice, is wholly uncertain as to what his role will be in the

3. For an extended discussion of the relationship between the Pareto criterion and the unanimity rule in collective decisions, see James M. Buchanan, "Positive Economics, Welfare Economics, and Political Economy," *Journal of Law and Economics*, II (1959), 124-38. Reprinted in *Fiscal Theory and Political Economy: Selected Essays* (Chapel Hill: University of North Carolina Press, 1960), pp. 105-24.

collective-decision process in the future. If he assumes that his interests will dictate that he will more or less randomly take various positions in the decision-making process at various times, he will take this into account in choosing what activities to collectivize and what decision-making rules to adopt. Quite clearly, under such circumstances, the individual will not rationally choose to collectivize an activity under the control of any less-than-unanimity voting rule merely because he anticipates that, *if he is in the decisive group*, net costs will be reduced below those expected from private organization. He can insure his presence in the decisive group only by the voting rule of unanimity, and there will be nothing to prevent his supporting this rule if the costs of decision-making are neglected.

The approach taken here has the advantage over the new welfare economics in that it does enable us to discuss the organization of social action beyond the limits of the Pareto rule. Whereas the welfare economist either remains silent on all proposals that involve less-than-unanimous support or falls back on some nonindividualistic ethical ordering as given by a "social welfare function," we are able to describe the individual calculus on the constitutional level. The unanimity rule for reaching collective decisions will be supported only if the costs of decision-making are neglected. When it is recognized that resources must be used up in the process of reaching decisions and that these genuine-resource costs increase rapidly as the decision-making unit is expanded to include more members of the group, it is relatively easy to see that the rational individual will deliberately choose to collectivize certain activities and to allow these to be organized under rules that require less-than-unanimous consent of all members to decisions.

This advantage of the constitutional approach may be more apparent than real, for, while it is conceptually useful, it does move the analysis further away from any operational implications that may be tested empirically. The welfare or political economist may construct operational propositions about specifically proposed policy changes; he may advance a proposal as "presumed Pareto-optimal." This proposal then takes the form of a hypothesis subject to testing, subject to conceptual refutation. The test lies in the degree of support that the proposal obtains. The attainment of consensus in support of the change would lend support to the hypothesis; failure would tend to refute the hypothesis.

The notion that the attainment of unanimous support provides the test

for the validity of specific propositions advanced by the political economist should be sharply distinguished from the notion that the rule of unanimity should be chosen at the constitutional level as the appropriate decision-making rule for collective choices.⁴ It may be quite rational for the individual to choose a majority voting rule for the operation of certain collectivized activities. Once this rule is chosen, collective decisions at the legislative or policy level will be made accordingly. However, under the operation of such a rule, the political economist, trying to advance hypotheses concerning the existence of "mutual gains from trade" through the political process, is severely restricted. To insure that a proposed change is, in fact, Pareto-optimal, general agreement must be forthcoming. However, if the rule, laid down in advance by the political constitution, requires only majority approval for positive action, the compromises that might be required to attain consensus become unnecessary, and the political or welfare economist is left with no means of confirming or rejecting his hypothesis.

We have arrived at an apparent paradoxical situation, but upon closer examination the paradox disappears. The constitutional approach indicates clearly that the anticipated costs of reaching decisions will cause some collective activities to embody specific decisions made with less-than-unanimous approval. The welfare-political-economist approach indicates that a specific choice is Pareto-optimal only if all parties reach agreement. This suggests that even the most rationally constructed constitution will allow some decisions to be made that are "nonoptimal" in the Pareto sense. This inference is correct if attention is centered on the level of specific collective decisions. The problem here lies in determining the appropriate level at which Pareto criteria should dominate. If the constitutional decision is a rational one, the external costs imposed by "nonoptimal" choices because of the operation of a less-than-unanimity voting rule will be more than offset by the reduction in the expected costs of the decision-making. For any single decision or choice, full agreement must be possible if the action is to be justified by the Pareto rule. However, because of the bargaining range that is present, the haggling and bargaining required to reach full agreement may be quite costly. If these

4. The first aspect of the unanimity rule was stressed in James M. Buchanan's "Positive Economics, Welfare Economics, and Political Economy." At the time this article was written, the author did not fully appreciate the constitutional problem under discussion in this book.

costs are expected to exceed those that might be imposed on potentially damaged minorities, the individual confronted with constitutional choice may decide to allow collective action to proceed under some qualified majority rule. An interpersonal comparison of utilities, of a sort, does enter into the analysis here, but note that the individual is not required to compare the utilities of A and B. He is required only to compare his own anticipated gains in utility in those situations in which he is in the decisive group with his anticipated losses in situations in which he is in the losing coalition. This calculus is made possible by the chain of separate choices that is anticipated. Moreover, since this calculus is possible for each individual, constitutional decisions to allow departures from unanimity at the level of specific collective choices may command unanimous consent.⁵

This does not suggest, however, that the less-than-unanimity rule for choice at the level of specific decisions will produce the same results as a unanimity rule or that these results are, in any sense, "optimal." As the analysis of Part III will demonstrate, all less-than-unanimity decision-making rules can be expected to lead to nonoptimal decisions by the Pareto criterion, and it remains quite meaningful to analyze these decision-making rules for their properties in producing "nonoptimal" choices. Clearly, the ultimate constitutional choice must depend on a prediction of the operation of the various rules for decision-making, and if a certain rule can be shown to lead, more or less automatically, to nonoptimal choices, the costs of this property can be more accurately compared with the anticipated costs of decision-making itself.⁶

The constitutional choice of a rule is taken independently of any single specific decision or set of decisions and is quite rationally based on a long-term view embodying many separate time sequences and many separate collective acts disposing of economic resources. "Optimality" in the sense of choosing the single "best" rule is something wholly distinct from "optimality" in the allocation of resources within a given time span. The Pareto criterion itself is something different in the two cases because the individual is,

5. "May" is used in the permissive sense here. Sharp differences among individual utility functions could prevent the attainment of unanimity at the ultimate constitutional level.

6. Note that by saying that less-than-unanimity rules will lead to the making of "nonoptimal" choices, we are not saying that these rules work inefficiently by any other than the simple Pareto criterion.

in fact, different. In the first situation, the individual is uncertain as to his location along the decision-making spectrum in the chain of separate collective acts anticipated; in the second, he is located, identified, and his interests vis-à-vis those of his fellows are strictly confined. This distinction allows us to reconcile, to some considerable extent, our purely individualistic approach with the more traditional methodology of political science and philosophy. At the constitutional level, *identifiable* self-interest is not present in terms of external characteristics. The self-interest of the individual participant at this level leads him to take a position as a "representative" or "randomly distributed" participant in the succession of collective choices anticipated. Therefore, he may tend to act, from self-interest, *as if* he were choosing the best set of rules for the social group. Here the purely selfish individual and the purely altruistic individual may be indistinguishable in their behavior.

Consensus as a Norm

The individualistic theory of the constitution that we have been able to develop assigns a central role to a single decision-making rule—that of general consensus or unanimity. The other possible rules for choice-making are introduced as variants from the unanimity rule. These variants will be rationally chosen, not because they will produce "better" collective decisions (they will not), but rather because, on balance, the sheer weight of the costs involved in reaching decisions unanimously dictates some departure from the "ideal" rule. The relationship between the fundamental norm here and the practical expedients deemed necessary in the operation of the State is analogous to many that are to be found in personal, social, and business life. Nevertheless, the resort to practical expedients in the latter cases does not cause the individual to lose sight of the basic rule of action appropriate to the "ideal" order of things. In political discussion, on the other hand, many scholars seem to have overlooked the central place that the unanimity rule must occupy in any normative theory of democratic government. We have witnessed an inversion whereby, for reasons to be examined later, majority rule has been elevated to the status which the unanimity rule should occupy. At best, majority rule should be viewed as one among many practical expedients made necessary by the costs of securing widespread agreement on political issues when individual and group interests diverge.

8. The Costs of Decision-Making

In this chapter we shall examine more carefully the second cost relationship which was introduced in discussing individual constitutional choice. This relationship connects the expected costs of organizing decision-making itself with the proportion of the total group required for decision. This aspect of the constitutional-choice problem has perhaps been neglected to an even greater extent than that discussed in Chapter 7. Few scholars, to our knowledge, have explicitly analyzed decision-making costs. As a result, the only rational economic justification for constitutional selection of less-than-unanimity rules for collective action has tended to be overlooked, although, of course, the fundamental ideas have been implicitly recognized.

Individual and Collective Decisions

Professor Frank H. Knight has often posed the question: When should an individual rationally stop considering the pros and cons of an issue and reach a decision? This question itself suggests that purely individual decisions involve costs. For this reason the individual typically "routinizes" many day-to-day choices that he makes: that is to say, he adopts or chooses a "rule" which dictates his behavior for many single choices. This method reduces the costs of individual decision-making since it requires conscious effort, investment, only when an existing behavior rule is to be broken or modified in some way. Presumably the rational individual himself goes through a "constitutional" choice process when he chooses this basic behavior pattern, and this process can in one sense be regarded as analogous to the more complex one examined in this book. The individual may be assumed to try to extend investment in decision-making to the point where the marginal benefits no longer exceed the marginal costs.