

# Public Choice Through Vote Funds. A Model for Transactions

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## 1. Introduction

When a decision is made by voting at meetings, it is an accepted rule that those who have the right to vote can use the same number of votes on every issue. Usually each participant can use one vote, but not necessarily, and this is not relevant in the matter under discussion. To abstain from voting on a particular issue, if allowed, does not give one any privilege at a later voting. This form of voting implies that anyone who is entitled to vote possesses the same relative right to influence each individual issue. The view held by anyone with the right to vote is to some extent influenced by the fact that he wishes to pay respect to others at the assembly to whom he believes the issue is of particular interest. It is often expected that such respect will be mutual. In big established assemblies such paying of respect is secured by the setting up of formal consultation agencies in the form of committees representing all parties. On these grounds legislative assemblies in their entirety can be regarded as a coalition.

Assemblies are often divided into groups (parties), which inwardly try to ensure mutual respect and outwardly appear as a unified force. A group (party) will then become a coalition, and the individual groups or parties can among themselves form coalitions. The mutual respect is restricted to the coalition. The strongest indication of the limited nature of respect appears when one examines the arrangement of majority rule for governments. It is a well-known fact that this arrangement is practiced by most multi-party states, but is, for instance, also practiced by the municipalities in Iceland. Here it is an accepted rule that the parties that are in the majority in the Parliament of the country or in local government pay only little respect to the minority. Thus it is recognized that mutual respects are not paid in such arrangements, where some may take comfort in the fact that the differences will in the long run be leveled out when the majority is not constantly composed of the same members.

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Whether the coalitions constitute the whole assembly or only parts of it, one has not had any formal, recognized, and general arrangement in order to clarify and decide to what extent there is a balance in the mutual respects, but many have good reason to think that the possibilities for a member of an assembly or a group of members to influence the decisions of the assembly can vary greatly. The conditions for this variation have been systematically analyzed by Anthony Downs.<sup>1</sup>

In some countries the state gives limited authority to communes for the purpose of providing a chance for a more direct influence on the issues that concern them. The limits of the authority will be generally and arbitrarily determined with respect to changing circumstances, i.e. that the authority will be quite satisfactory for some communes, while for other local authorities the integration of many local authorities, of state and local authority, etc., will give a more direct channel of influence to those concerned. Regulation of local authority boundaries or role allocation reforms will hardly be able to improve on this as long as general rules are followed.

I have worked out a method that could be generally used to clarify and decide who has the right to make a decision on an issue in an agency with conflicting opinions that decides on a series of issues.<sup>2</sup> The method can be said to be a self-regulation of the right to make decisions, where the participants in joint decisions have a restricted right to make decisions in a series of issues, so that he who participates in a decision has fewer possibilities left to affect decisions in other issues. The method can be used without its results becoming binding. It can then serve as an opinion poll, and it is then up to those who wield the power of decision how much respect they are willing to pay to the results. This dissertation will principally be built on the basis that the method is evaluated so that the conclusions it produces are binding, but finally I shall discuss how important it may become as an opinion poll that is not formally binding. I call the method public choice through vote funds (abbreviated PVF), since the participants are allotted a fund of votes from which they can draw.

With reference to the published articles, PVF can be briefly illustrated by the following two examples. The members of an organization who are entitled to vote possess for a certain period of time a particular number of votes that they can spend on the issues that come to vote. A proposal has been put forward for decision; let us call it B. Automatically the other alternative in the voting is that there will be no decision. Let us call that alternative A. The participants give  $n$  votes for A and  $m$  votes for B from their total number of votes.  $n$  is bigger than  $m$ , which means that A wins. The price the winner must pay is the number of votes put forward for the rival alternative. Each of those who voted for A will be deprived of the number of votes they spent multiplied by  $m/n$ .

The method permits of the possibility that as many alternatives on an issue as one wishes are voted on at the same time. The process and the calculation are exemplified by the following, where three alternatives on an issue are proposed, two of which are B and C, while the third is the prescribed alternative A, that there is no decision. There are three participants in the voting: X, Y and Z. Their task is

to arrange the alternatives they will vote on; first the alternative they wish to cast the least number of votes for, but still some votes (they do not have to care about the alternatives they do not wish to vote on), and so on to the alternative that in their opinion deserves the greatest number of votes. They declare the number of votes they cast for the first alternative and then in the case of each alternative they declare the number of votes they wish it to receive in preference to the next before, thus: X wants C least of all to be adopted, offering 7 votes in order that A be adopted rather than C and one vote in order that B be adopted rather than A, whereas Y wishes A least of all to be adopted, offering 2 votes for B in proportion to A and 5 votes for C in proportion to B. Finally, Z casts 4 votes for C in proportion to A and B. To put it in the form of a table:

Voters	X	Y	Z
Votes offered	A 7	B 2	C 4
for each stage	B 1	C 5	

By the settlement of votes the alternatives are arranged in stages in proportion to the zero alternative, as follows:

	X	Y	Z
C 0	A 0	A 0	
A 7	B 2	B 0	
B 8	C 7	C 4	

Then the votes that are placed before each alternative are added up:

	X	Y	Z	Total
A	7	0	0	7
B	8	2	0	10
C	0	7	4	11

C is adopted because those who have the right to vote have as a whole been willing to offer for that alternative most of their possibilities of influencing subsequent decisions. Thereupon it is to be calculated how many of the votes that the voters have offered they shall be deprived of. Y and Z have voted on the adopted alternative. To find out how much the adopted alternative costs them, one compares the number of votes offered for the alternatives in pairs, C against A and C against B. The purpose of this is to deprive those who voted on the adopted alternative of the number of votes requisite for equalizing the votes that have been offered for other alternatives. At first C is compared with A. Y and Z possess a

total of 11 votes behind C. For these 11 votes both shall be deprived of 7 votes in order to equalize the number of votes behind A. The reduction is distributed between Y and Z as follows:

$$\begin{aligned} \text{Y receives } & 7 \times 7/11 = 49/11 \\ \text{and Z receives } & 4 \times 7/11 = 28/11. \end{aligned}$$

Then C is compared with B, where the numbers of votes are 11 against 10. Here it can be seen that Y has voted on both alternatives. Before we calculate the reduction, Y's votes are leveled down to 0 for the alternative that has less votes, in this case B, while there are 5 votes again from Y for C, thus:

		Voters			Total
		X	Y	Z	
C against B	B	8	0	0	8
after leveling	C	0	5	4	9

For every vote offered for C,  $8/9$  votes are taken away, i.e.  $5 \times 8/9 = 40/9$  from Y and  $4 \times 8/9 = 32/9$  from Z. In the settlement between C and A,  $49/11$  votes should be taken away from Y, but in the settlement between C and B,  $40/9$  votes.  $49/11$  is more than  $40/9$ . Therefore it is the first reduction that counts. The reduction as regards Z becomes, on the other hand, biggest in the settlement between C and B ( $32/9$  is more than  $28/11$ ) and is therefore valid. In other words: what counts is the reduction that costs the individual participant behind the victorious alternative most.

In short, the settlement can be illustrated as follows: Before it is calculated how many votes the decision costs, the one of the alternatives with less votes is leveled down to 0 in the calculation for the participants who possess votes behind both of the collocated alternatives. The collocation in pairs is regarded as a repeated voting on the victorious alternative and the votes cast for it recurrent.

As already stated, this solution allows for as many alternatives on an issue as one wishes without each individual participant having to trouble to put forward other alternatives than those which he wishes to vote on. That one or the others he can ignore.

As regards the necessity of keeping the vote offers secret until votes are counted, and as regards the danger of parasitic voting, I must refer to former articles that describe the method more thoroughly.<sup>2</sup> (There I used tactical voting instead of parasitic voting.)

When it is a question of evaluating the different conceivable forms of collective decisions, it is possible to do so by making the ideal demands that may seem natural, and then examine if the actual methods satisfy the demands. The extensive literature on collective decisions, which often starts with a reference to Arrow's thesis on the possibilities of making a social welfare function, possesses such a frame of reference.<sup>3</sup> This discussion has undoubtedly proved important for

clarifying the conditions of deriving a collective decision from the preferences of individual participants. Economists term this aggregation of preferences. In this article I am not primarily going to examine whether PVF satisfies conceivable ideal demands, but rather compare the method with the commonest arrangement of voting in my own country and other countries with a similar social system. I shall above all discuss three fields of social organization which PVF seems to involve in the light of what present arrangements of voting imply. To me it has seemed natural to evaluate PVF in connection with actual existing arrangements rather than in relation to some ideal demands about collective decisions. Finally, I am going to discuss the conditions for introducing the method.

Some readers will probably understand better the importance of the present work if I briefly account for its origin. The work started as a survey on a socio-anthropological basis of two local communities in Iceland. I was seized with the idea of finding an arrangement by which to deal with decisions that concerned these communities, as regarded issues in which they were sure to have certain special interests. It did not solve their problems to disengage themselves from the district or the rest of the country; they were so dependent on co-ordination and joint initiative, and at the same time it might have become quite uncertain how they could have maintained their interests if they had incorporated without conditions with a larger unit. In brief: How could a minority attain a reasonable share in the decisions? PVF is a method that I worked out as a possible answer to this question. A part of the implications of PVF that will be discussed here is something that can be deducted from the method without any deliberate intention on my part. A collective government instead of a government subject to a majority rule is an inevitable consequence of PVF; the permanent control of rights must be made use of if the method can be claimed to be of general application, whereas the representation forms are possibilities resulting from the method.

## 2. Collective Leadership Instead of Majority Rule

In the case of PVF one will, as in contemporary coalitions, whether they be formal or not, continue having occasion and reasons for paying reasonable respect mutually. The method does not require one to make one's vote offers alone, independently and without paying respect. On the other side, one will not be able to make a coalition that is permanently in the majority and in charge of the assembly. The reason for this is that victories cost votes, so that those who for some reason or other lost at votings repeatedly get ever bigger resources of votes to dispose of in proportion to those who have won. PVF does not render a strategic integration of issues that lead to common ends superfluous, but it replaces the balancing of interests and the distribution of limited resources, which constitute an important part of the objectives of a coalition. Under PVF therefore, the control as exercised by the coalitions will be slackened. In the kind of society I have in mind, one will be now in the majority, now in the minority in individual

issues – one may go along with the same participants no matter whether one ends up in the minority or the majority, but not as regularly as one did before.

It cannot, however, become a basis for the same sort of government as now exists in the Scandinavian countries. If a group tried to rule on that basis, it would sooner or later not have sufficient resources to achieve majority for its issues. Under PVF every participant will sooner or later determine the results of a voting.

Governments are still at present an executive agency, i.e. an agency with the task of having decisions carried out. The interest that governments arouse as political agencies is, however, to a less extent bound up with their duty as executive agencies. Actually the execution is mainly carried out by public officials. The interest for the governments is based on the fact that the leadership of the reigning coalition in the Parliament of the country is politically the most important role of the government, i.e. legislative power is vested in the government.<sup>4</sup> It is difficult to see how a government leading a coalition with legislative power can function in a PVF system, unless the coalition comprises the whole assembly. The co-ordination of decisions which a country requires or benefits from must be carried out by means of a leadership representing the whole assembly, whether this happens through a permanent or temporary appointment of managing directors or through an executive committee, as in a Norwegian commune, while conflicting interests are balanced by the voting system.

It is not unnatural to ask if this does not mean an Eldorado for special interests with no feeling for common interests. It is clear that PVF offers quite different possibilities for demonstrating special viewpoints from those available at present, and the possibilities offered by the arrangement of voting for having as many alternative proposals in an issue as one wishes will encourage people to show the real number of separate attitudes because the system renders it meaningful and profitable. PVF does not, however, pave the way for campaigns for separate issues without paying respect to anything because it will invariably cost votes to win issues against the will of others. The respect that those who try to further special interests have to pay therefore signifies a recognition of the limits of their own resources of votes. This also means that it becomes easier to get 'responsible' special claims fulfilled – they can be called responsible because by their vote offers during the voting those concerned display their readiness to lose influence on subsequent issues if they get their present wishes through. Many people today regard the public authorities as a threat against private interests because they feel themselves in their own individual issues as a vulnerable minority. In self-defense they therefore form and try to maintain the principle to put limits to the public sector. PVF seems to have the prerequisites for changing this. For just as PVF gives a more direct access for those who live under special circumstances to use the public authorities for the purpose of binding people in accordance with their own interest, it also becomes simple for people in a divergent situation to defend themselves against impositions that otherwise are generally considered fit for use.

It is principle for a cabinet to be in power at the mercy of the majority even if it is called a minority government. That is the idea of the parliamentary system. What seems to be lost with the permanent majority rule through the adoption of PVF is first and foremost the government monopoly of decisions. Jens Arup Seip terms the concentration process at the top of the organizations as *Caesarism* and *Stalinism*.<sup>5</sup> PVF impairs the chances of such a concentration process, as PVF and not the executives is in charge of the integration. The executives will not be in such a good position as now to demand solidarity from the members and loyalty towards them. They will, however, continue having the possibility of demanding a vote of confidence. Leaders will be relieved of the duty of holding views preferably on all issues, because they no longer keep the final responsibility in all issues. Under PVF a view will be graded by the size of the vote offer among the individual alternatives. For a leader who wishes to be freed of the responsibility of balancing the interests and views of the members (the balancing is what a leader normally calls his opinion), it is easiest to give the members a free choice in offering votes. By that they make the balancing themselves.

The permanent opposition will disappear in the same way as the basis for a majority to prevail over the minority permanently by constituting the government and occupying all the ministerial seats. Nowadays they will through their mere existence, their opposition and criticism, have an influence on the resolutions that the governmental majority wishes to pass. PVF will not provide a basis for the so-called irresponsible demonstrative politics, where the opposition is accused of proposing partial solutions with no respect for the whole and of appropriating the majority's issues, which the latter during their opposition period made people believe they would proceed with if they came to be in the majority.

Under PVF it will be natural for a government to propose alternative solutions, in ordinary issues, in big annual issues such as decisions on the state's revenue and expenditure, and in cases of emergency such as volcanic eruptions, oil blockade, or a drastic fall in the prices of export goods. Nowadays the government must explore the ground before presenting the proposal it must fight for and be prepared for criticism from the opposition, which can put forward its proposal afterwards and is therefore in a better position to criticize. This can be an exhausting and thankless task for the leaders. This discussion about the difference between majority rule as practiced in the Scandinavian countries and the type of collective rule, which PVF seems to cover, must not be understood as a polemic in favor of collective rule and against majority rule under prevailing voting conditions.<sup>6</sup>

It must be regarded as an established fact that the governments of the Scandinavian countries are coalitions, whether they be composed of one or more parties. The individual members of the government get little occasion to assert themselves publicly. The opposition, on the other hand, is in a good position to do so. It puts forward the counteralternatives. The show which the conflict between the government and the opposition is makes it difficult to conclude what the opposition will do if it takes over, among other things because then circumstances to be considered may have become objectively different. So it is a question of observations



which are based on something quite different and are weaker than demanded by a scientific experiment. The opposition can thus suggest an alternative, although it cannot be controlled how safe it is as an alternative. In the case of PVF, on the other hand, every vote settlement will show the available alternatives and how many votes they would have cost.

Nowadays most people feel when they elect representatives that they are lending their support to a complex of issues where the representatives and the party have not made it sufficiently clear which of the issues in the complex have priority, and it is still more doubtful after the election what the voters concerned expected most from the representatives. The most difficult task of representatives and organizations will be to assert themselves in the eyes of electors and members. This task may require more energy than the issues that they are expected to concentrate most on. So the main problem can be said to be that of choosing a way for the organization to show which way it will follow, so that society will go the right way. This is not what is called to go straight to the point. A good example of this problem is the almost interminable discussion in Norway about 'non-socialist cooperation' or 'left-wing unity'. PVF seems to make the choice of such strategy a minor problem. In PVF the representatives (the parties) can simply refer to the vote accounts, which clearly indicate how much they have offered and sacrificed for the individual issues that have won, and how much they have offered for the defeated issues.

According to PVF the control of executive power seems in itself to assume a different form from its present one. The task of executive power will most likely continue to be to put decisions into practice, but with the difference that it has been registered in the vote settlement which, so to speak, possesses the decision. At ordinary votings it is not necessarily a secret how the individual participants have voted, but as the votes are known to fall in accordance with coalitions and compromises, it is not always easy to declare who really possesses the decision. Thus, PVF involves a kind of separate ownership of decisions. It also gives occasion for acquiring a permanent control of decisions. This is the subject of the next section.

In this section I have often referred to conditions in a state and a country. It will be clear that the same conditions will manifest themselves in local authorities, and in fact also in other organizations to a larger or smaller extent.

### 3. The Allotting of a Permanent Control of Decisions

In the voting arrangements that are being employed, the participant who has won possesses just as many votes after the voting as he did before. If the same issue comes to the vote again, the arrangement of voting itself does not therefore lead to a different conclusion. One maintains the control of the votes in full, which means that the control of the issues can remain unchanged. Under PVF each victory deprives the winning participants of votes. If no precautions are taken, par-

ticipants may therefore be deprived of votes by means of repeated votings on the same issue, while those who lose keep their votes. Through precautions the control of the decision may be stabilized to a greater or lesser extent by a special allotting of votes. This can occur in such a way that as part of a proposal it is prescribed that the votes that the alternative costs, if it wins, will keep their validity for a certain period of time. This solution is similar to the important condition for the settlement of vote costs that the collocating in pairs of the losing alternatives with the winning alternative shall be regarded as a repeated voting, where the votes behind the winning alternative keep their validity. By making the votes sacrificed by the winner permanent, subsequent votings, where the victorious alternative enters, shall be considered as parallel votings with more than one counteralternative on the issue, but subsequent votings may, however, be able to change the vote reduction for the decision, even though the decision remains unchanged.

There are many possible ways of ensuring a more permanent control of the decisions without constantly having to expend more votes. Generally these ways will be of the kind that, as regards individual proposals to be decided on, it will be stipulated that in votings concerning the decision (it may be specified what kind of proposals shall cause the stipulation to take effect), more closely specified parties shall possess a special number of votes that can be used for a certain period of time. The most extensive permanence will be achieved by fixing votes to a point of view so that the votes cannot be withdrawn. This can be illustrated by the following hypothetical example of a proposal: Iceland is led by a president who is elected every fourth year. To this decision there is restricted just the same number of votes as was used in total in the country the year before, when a proposal concerning the decision is to be voted on (e.g. a proposal of introducing kingdom again). The result of this stipulation is that the decision about a republic cannot be altered unless an amendment receives at least more votes than those used in total in the whole country the preceding year.

Another kind of security is attained in the following way: At a voting on a proposal of constructing a new airfield, the votes for those who live within a certain distance from the place in question shall count ten times more than other votes. A third type of security is a reaction to a proposal of constructing a power plant. Decisions on the construction of power plants are such that when the construction is completed there is hardly any way back, while there are less material reasons that prevent a modification of decisions on the conservation of the watercourse. The reaction to proposals of construction can be as follows: The river in question shall remain unimpaired till 1983 and the votes that are taken from participants for this decision can be used again at votings on proposals concerning this decision without their being more often deprived of votes for it. Regarding the airfield issue, those most affected get a revaluation of their votes, in this case it is those engaged in a particular alternative whose control in the issue will be secured, while those concerned can in both cases adopt any opinion of possible proposals. It should be unnecessary to point out that one is not compelled to introduce this kind of permanent control of decisions, but PVF paves the way for

proposing such decisions and the voting on them according to the general rules of PVF. It is clear that the value of such transfers of votes can be modified through other transfers of votes in various directions, resulting in a limited inflation or deflation in the vote system. It is possible to counteract the reduction of the value of specially transferred votes by inserting in the vote-restricting-stipulation concerned a provision that automatically regulates the number of the transferred votes according to an appropriate index, e.g. an index for the current supply of votes or the use of votes relevant to the issue.

This is no systematically exhaustive description but rather an indication of the existing possibilities of allotting permanent control of decisions. It is then for the participants to evaluate how much they need such allotting of votes, what interests this serves or counteracts, and then they express their judgement in the form of proposals and voting. It is often reasonable that the votes that the decision has cost keep their validity until the decision is carried out. In some cases permanent, irrevocable votes will be wished for, e.g. with claims for a compensation for the expropriation of property. The many private interests (owners' interests) will risk being in the minority if the expropriations are made in each issue (e.g. each individual car or each individual flat in the country), while they will jointly represent general interests. In this case, there will be no security in votes that can be withdrawn or spent on alternative proposals. Then the following might occur: There exists a general law on compensation in the case of expropriation, by means of votes with permanent validity controlled by different parties. Somebody wishes to expropriate property A (it may be a private or municipal property). To make the expropriation more inexpensive, a proposal is made on altering the law in such a way that compensation is demanded in the case of the expropriation of all property except property A. If those who are in charge of property A do not have an easy access to votes on the issue, the permanent votes will be of little use. In this instance the security seems to have to take place by permanently restricted votes, as in the case of republics and kingdoms, or by the owners receiving a revaluation of their votes in issues concerning their property, as did the neighbors in the airfield alternatives in a previous example. It is not necessarily only the registered owners that receive a revaluation of their votes in such cases, e.g. when it is a question of a firm, then it may apply to those who because of their work are dependent on the firm and to their families as well. In the airfield example it was not a question of the type of property, which usually can be registered, but a kind of property in the environment.

The solution presented here by allotting special and permanent votes to control decisions is the result of my reaction to a problem caused by PVF, a problem that does not arise under ordinary voting arrangements. This solution then causes one in an unexpected way to deal with an important social feature, i.e. *social predictability*, in a political context. In organized societies like Iceland and Norway, it is customary for Parliament to consider in such a way when laws are made that one may have a feeling of political predictability. An example to explain this is the resolution passed by the Norwegian Parliament in the spring

of 1973 on the protection of watercourses, both a ten-year and permanent protection. There do not exist formal regulations to prevent Parliament from altering this plan, but it creates expectations of predictability in this field. The political predictability is further confirmed by the constitution, which it is not a very time-consuming or otherwise a formally difficult task to change but it is rather unlikely to happen. The constitution serves as a connecting link between the numerous special interests which would risk being in the minority in each case but they are protected by the universal provisions of the constitution. This applies, for example, to the freedom of speech and of assembly as well as the prohibition of appropriating property. The most important and common predictability is achieved through property ownership. The proprietary right is employed for this purpose by private people, local authorities and of course by the state.

PVF seems to open unknown possibilities of varying the relationship between private and public control of property. The right to use and to take over or transfer property is normally restricted by various laws. The type of property under discussion is the one that can be registered. Here PVF will render it possible to decide how big, lasting, and costly an influence those directly concerned are to exercise at votings on the property, proportionately to other participants, in the various legal spheres.

Closely connected with the right to use the property are decisions about conditions to which the right-of-use holders have to adapt themselves, among which are taxes, prices, and wage agreements. Here is the same need for predictability that by means of PVF can be achieved by the allotting of special votes of more or less permanent validity. On the whole, PVF seems to be likely to remove much of what has been understood as distinguishing private matters from public matters. This will be better clarified by the discussion of representation in the next chapter. The wish for predictability extends far beyond the direct conditions for the right of use of the type of property which it has been possible to register. The right to control one's environment, the right to employment, and the right to a certain standard of consumption (usually realized by public authorities through social security benefits) are all matters that can be solved specially by PVF. The right of environment has already been discussed. The right to work and consumption can be secured for districts, groups, and individuals that are faced with specified (difficult) situation receiving by means of a permanent decision a definite number of votes, either generally or in specific cases. This becomes in fact PVF security benefits.

#### 4. The Kind of Organization of Society PVF Seems to Involve and the Relationship Between Ordinary Voters and Their Representation

As regards voters belonging to an organization using PVF, *the rules of the game* seem somewhat different from those of an organization where each participant possesses the same number of votes in each issue. PVF does not seem to alter the fact that one will consider it a benefit to co-ordinate one's motions with those of

other members. One will still wish to plead one's case, request, and pay respect to others and, generally speaking, to refer to the rewards or sanctions that one can or should expect in reply to individual viewpoints. To avoid giving information that may make parasitic voting profitable, one will avoid indicating in figures how one is going to vote. PVF affords an easy access to many alternative motions where, e.g., the possibilities of permanent votes stimulate variation. The variation reduces the possibilities of predicting in advance the number of votes for individual proposals. This should render it less risky for individual members to state their preference with different emphasis. A greater support of a proposal or a reduced opposition to it will secure a possible decision or render it less costly. Therefore, under PVF one will benefit, as regards votes, in each individual issue, by a closer co-operation of the members. When a member has adopted a viewpoint of the motions where his viewpoint is determined by the different respects he will pay, the tug-of-war between members can start with their submitting their votes. The difference from prevailing conditions seems therefore to be that one will benefit less by indicating before a voting exactly how one is going to vote and that a more substantial part of the tug-of-war takes place through the voting. When the tug-of-war, or whatever one likes to call it, is largely transferred to the voting itself, it follows that members will not enjoy *this* benefit of sitting together.

Nowadays it is not always easy for the chosen representatives to make themselves felt. They have made all kinds of compromise in the coalitions they belong to or which they enter. Their own votes do not necessarily (in themselves) indicate how their participation has affected the decisions. They try to make up for this by, among other things, participating in the public debates before the voting. Under PVF the vote settlement will show more clearly what results the representative has affected and how different the result would have been if he had distributed his votes differently. The vote settlement will not tell *everything* about the representative's influence on the results, because part of his influence will, as before, depend on how active he has been in co-ordinating motions and on how much he has influenced the voting of others.

The vote settlement affords *control of the representatives*, a control that seems to indicate more than the applied vote settlement about the distribution of influence. Another way to control the representatives occasioned by PVF is simply that the voters vote themselves when they wish. Actually this is a technical possibility also under prevailing arrangements of voting. It will not be discussed here why the theory of limited authority has not been generally practiced. I refer to the outline given by Jens A. Christophersen on the subject.<sup>7</sup> In connection with PVF I will state two reasons for discussing voters' possibility of controlling the voting directly. The first is that PVF can hardly operate in practice without electronic data processing. The EDB programs for PVF will in themselves be quite simple, and it will not require any extra equipment to give those represented an opportunity for direct participation in the voting. The second reason for discussing the restriction of mandates more seriously in connection with PVF than otherwise is that some of the objection to a restricted mandate of the

systems of voting and representation used is that it is necessary to co-ordinate issues and viewpoints in an *assembly*, i.e. where people meet, explore the ground, and try to co-operate and make decisions for the general good of all. As pointed out before, PVF helps to give a picture of the whole by every vote outlay implying the balancing of interests, where one, through the settlement, is constantly reminded of the limitations of one's influence through voting. This involves the fact that the participants' gathering means less as a guarantee that the viewpoints and the decisions form a possible whole. For this reason it is less harmless if more than the chosen representatives participate in a voting. It will be used as an objection to referendums and in fact to the use of opinion polls that the voters will not be in the same position as a regular assembly of representatives to adopt an attitude on a basis of totality. It is assumed that people with their viewpoints will want to have their cake and eat it.<sup>8</sup> PVF seems to be able to teach people that they cannot have the cake and eat it.

At this point I am not going to recommend that mandates should be restricted under PVF. Instead I shall describe how the restriction can take place and what channels for the assessment of viewpoints it can provide. If the ordinary voter is to have occasion to forestall the representative's voting it is arranged as follows: Choosing a representative implies that the voter transfers a certain number of votes to a representative. It is registered by means of a code in the EDB system, where the votes come from. When the representative votes, his votes are taken from those who have transferred votes over to him, proportionately to the number of votes that remains from each one. There is, in fact, nothing against the representative drawing on the transferred votes in a different proportion if he has the possibility and reasons for doing so in a concrete issue. If one of the ordinary voters casts his voting paper (ballot) it is his voting and not the representative's that is valid as far as he is concerned. The representative is excluded from having the voter's share in the voting on the actual issue. The ordinary voter can, if he so wishes, cast a blank ballot. Thereby he indicates that his votes are zero on all the alternatives of the issue.

The transfer of votes can occur by stages. One can transfer votes to a representative in the neighborhood, in the street, in the firm, or in the trade union. These in turn can transfer the votes that have been transferred to them to a representative for the party in the district, in the trade union association, and so on, all the way up. The right to withdraw votes can be reserved step by step in a reverse order, so that the ordinary voter is fully entitled to withdraw the right to use votes on a concrete issue from all those to whom votes were transferred; the representative in the street can withdraw the votes from all those who received votes from him, but not from the one from whom he received the transfer. Technically speaking, there is nothing against changing transfers, not only blocking votes in a concrete issue, but transferring the votes from one representative to another. There may be special reason for doing this because of the death of the representative or because of other important changes in his condition in the game, but should it not be a sufficient reason that one simply considers oneself to be

better represented by another? There seems to be no objection to dividing the transfers, offering a part of one's votes to a neighbor, another part to a representative of the family association, and the third part to a representative of the party in the trade union or to the trade union in the party. This can also occur at higher levels. Representatives at lower levels can, if they so wish, inform of how they intend to transfer votes further, and they can even offer more alternatives for relative transfers in order to simplify the procedure for the members concerned. This shows that PVF offers a flexible combination of what has been termed a numerical – democratic and a corporative – pluralistic representation. The representatives of the local authority and those of the furniture manufacturers may then become people with transferred votes who can join directly in the votings among the final representatives in Parliament. This type of vote management seems to give a more direct access to influence than the methods normally employed by organizations, and, besides, the vote settlement will reveal who among those entitled to vote decides the results. The hierarchic transfer of votes and control of votes implies that it will become even more difficult to estimate in advance a difference of votes for individual alternatives on an issue. It reduces, in other words, the possibilities of parasitic voting, and one is further obliged to use one's own preferences at votings.

It is a thing apart to determine the number of representatives. It seems natural that they really become as many as one wishes where it becomes an economic burden when there are few people per representative. The voting arrangement does not require the ordinary normal practice of a reserved seat for everyone as practiced by established assemblies that gather for long periods.

*The position of the political parties in a PVF society* deserves attention. It seems to have to become their main task to put in their manifestos, explain and propagate for their ideal social system, and co-ordinate an offensive in accordance with that. Much of the tug-of-war arranged inside the parties can be passed over to PVF. A party can, in fact, apply PVF to an internal settlement among its confidential agents, who then can appear as a united force in the final settlement. The agents will have to keep the results of an internal settlement secret, so that others will not be able to practice parasitic voting. This can occur by the party's secretary becoming the supreme representative of the agents. Then they transfer their votes to him and make him distribute votes according to the results of the internal settlement. It will not change the final results, but it will preserve the outward unity of the party, which might be of interest to somebody. Without a co-ordination of the voting among the agents possessing a PVF right, the parties seem to be likely to develop along similar lines as ideal organizations, in and for which actual representatives work. The new premises created by PVF for the conflict between centralized power and minority control and between the private and the public sector are probably of greater importance than this for the future of the ideological political parties.

*The allocation of roles between state and the local authorities* has called for close attention. Mancur Olson is one of those who have discussed how to find an

ideal size of political units, so that those who are made to carry the burdens will reap the benefits.<sup>9</sup> A stepwise transfer of votes and control of votes together with the significant characteristic of PVF that a minority attaching great importance to its issues can expect to defeat a majority with contrary viewpoints, if every member of the majority is relatively indifferent, denotes that the inhabitants of a separate local authority can determine the results of their own issues, although the issues are transacted as affairs of state. It is, in other words, not so important for a district to be independent in its issues, as seems to be the case at present. It then becomes a thing in itself to decide what executive institutions are to be entrusted with the decisions. Nowadays it is quite usual for local authorities to be given the role of functioning as executive agencies for the state. It seems reasonable that this can continue under PVF, but in addition to that one may, under PVF, be confronted with the situation that an issue that has definitely been settled with votes from a local authority shall be executed by the state.

There are more important sides of the relationship between state and local authorities that PVF seems to affect. As pointed out in the beginning of the article, it is quite customary for the state to decide on prescriptions and prohibitions for the local authorities. These must have been of quite a general kind and have therefore not been equally suitable for the conditions in each individual district. The state could also try to attain the same objectives by having state representatives in the local governments. If the main issues of the districts shall continue to be decided on by representatives chosen by the inhabitants of the district, the state representatives will have to be in the minority. When it is a question of issues characterized by a polarization between representatives appointed by the state and representatives chosen by the district, the state will be in the minority at votings. It is customary to secure minority interests through transactions and coalitions. It is difficult to see how state representatives in local authorities, with definite directives, will, under prevailing voting arrangements, be able to utilize their minority position for transactions that provide them with the majority in some of the issues they are commissioned to further. In the case of a PVF district, on the other hand, where it is decided by the state that the state is to possess a certain number of votes in proportion to the district representatives, the state votes, which in their entirety can be in the minority, will be able to secure the intended influence of the state. This situation is of general validity when two parties with the same rights to make decisions shall jointly settle issues, where they regard the situation in such a way that they form polarized fronts. PVF can arrange the distribution of decisions proportionately without abolishing the fronts.

To illustrate further what kind of relationship between state and local authorities it is possible to arrange in the flexible PVF system and that it does not only concern the interests for small municipalities and communes, I am going to take the capital of Iceland as an example. As the town of Reykjavik is a capital, the planning of the town is certain to concern many others than the town's inhabitants. On the other hand, the town's inhabitants have, among other things, spe-



cial interests in conservation outside the boundaries of the town. These interests can be canalized by placing the town planning as well as the conservation under complete state control or, if people in Reykjavik by means of elections regulated by the government provide themselves with limited vote resources in the local conservation committees, and by the state appointing representatives with votes at their disposal in the elected bodies of the capital.

These are examples of how an organization is placed under control by those who are not members of the organization concerned. In addition, PVF affords possibilities of *control in two or more identical organizations through a full membership in both or all*. This can be clarified by the following hypothetical examples: People in Oslo own huts in Hemsedal. It is therefore of great interest to the owners of the huts what the Hemsedal commune does regarding the control of the mountain, but they take only a limited interest in other matters of the commune. Through a governmental decision the owners of the huts as well as some of their relatives become members of the Hemsedal commune and receive full rights and obligations. PVF enables people to control their participation in an organization in such a way that in this case full membership does not necessarily impose the same obligations on the Oslo members as on the Hemsedal people. Nor does it imply that possibilities of obliging others will be utilized equally by both parties. The Oslo members can use a limited part of their vote resources to influence the results of the control of the mountain, while they can use the rest of the votes, if they so desire, to evade as much as possible of the local taxes. (I assume here that the commune is relatively free to determine the imposition of taxes on the inhabitants and the members.) This example gives rise to a short general description of how PVF can regulate social control. In an extreme case one can use one's votes in an organization for decisions relieving one of the obligations of being a member of the organization, or one can use the votes in an extreme case of an opposite nature to influence decisions that oblige others as much as possible without wanting to vote against decisions that bind oneself. If we compare two members, both of whom try to remain free of the obligation of membership, a member possessing large means may expect to be more affected by membership than a poor member, because the other members will place their votes to a larger extent on proposals that bind the rich member. When it is a question of double membership in organizations, it may happen that, in addition to what has already been stated, *an organization is a member of another* and brings into it defined and limited resources. Thus nothing seems to prevent a commune from collectively registering members, by means of governmental decisions, into another commune as well as registering other resources with a definite number of votes. This can occasion a very special, formally organized contact between town and country, where people from a town district participate in the affairs of a rural district with a view to employment and holidays in the country for children and adults from the town and the rural people take part in the administration of the town in order to arrange for rural people getting employment, education, and care during the winter.

As will be seen, PVF renders it easier for a small group to further its issues in an organization where it is in the minority than is the case concerning the voting arrangements now practiced. Sovereignty through secession will under PVF continue to be the surest way to complete internal control. PVF in itself does not draw clear-cut lines for sovereignty within an organization. It is the circumstances of the issue and the attitude to them that determine who is to settle individual cases. Secession, on the other hand, has the known drawbacks that one does not always know beforehand which fields of issues it will be appropriate to administer independently and separately and in which fields of issues one will benefit by co-ordination. In other words, PVF affords a more flexible co-ordination of groups with different preferences than has previously been possible. On the other hand, PVF removes part of the premises on which the wish for extensive integration rests. What I have in mind is that in small communities there are to be found different minority groups that are so small and weak that they are in no position to hold their ground. It has therefore been felt that their rights must be secured by a joint contribution from a higher organization that puts the small communities under control, either in a specific field by means of separate resolutions or simply by abolishing all direct self-government in the small community. This way of securing the interests of the weak, whether by a gradual or complete abolition of the small community's direct government, implies something that was neither intended nor welcomed by some, namely the abolition of a direct common destiny of a person and his neighbor. To explain briefly what I mean by the abolition of a direct common destiny, I refer to the well-known description given by Homans of the social disintegration in Hilltown.<sup>10</sup> PVF seems to facilitate the maintaining or founding of small communities which will ensure the rights of weak minority groups (possibly so small and weak as to consist only of sick lone wolves). I have two kinds of circumstances in mind which I have already touched on. The first is that it is PVF's essential characteristic how it simultaneously secures and restricts minority interests, among other things, by means of secured (permanent) votes in specified conditions. The second is the occasion given to provide outsiders, by means of decisions from a more authoritative party, such as a commune, a county or a state, superior to a neighborhood organization, a street union, a family club or another type of a sociopolitical affiliating organization, firm or place of work, with votes for participating in the decisions of the small society for the purpose of securing the interests of the weakest: the sick, the old and young, and the abnormal. PVF will in that way not only serve to give the abnormal and the weak a feeling of sharing interests with others, but it will also benefit others who are not officially registered as needy. This applies to people with higher education or other divergent inclinations who settle among ordinary people, in isolation from others similar to themselves, and who because of their peculiarities have difficulty in adapting themselves to their nearest group. If they are members of an organization formed by this group they will, through PVF, have more equal reasons to join those most closely connected to them and at the same time in some degree be

able by means of their votes to remain deviant, but of course only at the expense of their possibilities to influence decisions that do not concern their divergent position and attitude.

## 5. Some General Considerations

PVF is based on the assumption that contradictions are always to be found among the participants. Those who anticipate the abolishment of the contradictions in society are therefore unlikely to place any hope in PVF as a prospective arrangement. The system regulates the contradictions automatically. If a participant persuades another participant to remain neutral in an issue and this reduces the vote cost of the decision, the result will be that the contradiction in the voting, which is thereby abolished, becomes reserved votes for later contradictions. The reserved votes are of no value unless contradictions arise. Other forms of voting have, like PVF, their justification in the possibility that disagreement may arise. PVF is different in the respect that he who wants to assert himself in a voting must expect that the results will cost him votes and strengthen the opponent's position at later votings. Under PVF, disagreement is in the long run a balanced disagreement. This is likely to make it acceptable to express disagreement, because disagreement is accepted in a strong relationship of mutual trust, while disagreement between those who are not closely bound is easily considered as hostility and can lead to the breaking up and the dissolution of the interdependence.

The constant contradictions and the way they are expressed through the voting mean that in the second round everyone will have it certified what control he has exercised over public authorities by his participation in individual decisions. (I assume all the time that PVF is employed in public organizations, but of course it can also be used, e.g. in joint-stock companies or in co-operative societies.) One can almost indicate who possesses the decisions. It will no doubt cause implications regarding the interest in control of the execution of decisions. It will not be directly a kind of private ownership of decisions, but it will certainly be interpreted as something one has obtained through one's own outlay, and thereby one develops an attitude to decisions that is different from one's attitude when decisions are made through the diffuse channels that people can now employ for their preferences. It is almost like maintaining a specific registered ownership right.

I have stressed the similarity between PVF and the monetary system. This has not been done for the purpose of copying the monetary system, but there are two principles in both systems that serve the same purpose. One is the self-regulation of responsibility, which implies that one can expect that the use of means for purchase or decisions in one field will reduce the possibilities of other purchases or decisions. The other principle is that one is given a common denominator for the different values that are presented, the money for what is in the market and the

votes for what is to be decided. There has been wanting a common denominator or a conversion dimension for group decisions including political decisions. For lack of a conversion dimension a recordable likeness in a special sign has been a conspicuous frame of reference in the Scandinavian countries. To illustrate the importance of having a single conversion dimension in the political decision-making, I present two examples of how unsatisfactory the recordable likeness in a special sign has been for measuring and realizing real equality. By that I am not indicating how far that kind of endeavor towards equality has generally failed.

Ottar Brox has analyzed the fisheries politics for northern Norway.<sup>11</sup> The fisheries could either be based on the historical-material conditions in the coastal districts in connection with other resources, such as farming and a molded neighborhood, or be developed from bigger places under typical capitalistic proletarian conditions. In the latter case the money income tended to become a good deal higher, but quite many still preferred the former situation, also, according to Brox, from the point of view of general welfare. The men who for a certain period of time after 1950 formulated a fisheries policy on behalf of the highest authorities of the country had only one criterion for welfare comparison in northern Norway, i.e. money income. To further the interests of the coastal population they made proposals that would most benefit the method of operation that brought the highest money income. They must have been in a strong position, for instance because the sign on which their evaluation was invariably based was the same as the one favored most by the coastal population. In their judgement, however, the coastal population took for their part more things into consideration, which as a whole afforded a different conclusion. There was no method of registering the various considerations and weighing them using a common denominator. It was therefore quite understandable that the opposition of the coastal population to the leaders' proposals came to be regarded as irresponsible. In the eyes of the authorities the case became to a small extent the balancing of different viewpoints, but mainly a dismissal of viewpoints other than pecuniary ones. It strengthened the conviction of the authorities that the pecuniary viewpoint was to a still larger extent accepted as the best one in their environment. There the money factor in the economy was even more predominant than on the coast of northern Norway. PVF would have brought about a more just balancing of these different viewpoints if the coastal population had been allowed to take a direct part in the balancing. The money would lose the advantage owing to the fact that it is more easily registered than other considerations and is understood by people in different conditions. One can also discuss this problem in economic terms. If the leaders of the country were interested in reforms in fisheries in northern Norway producing maximal results, one should evaluate the alternative considerations in a similar way so that one would end up in an optimal situation where the individual considerations would balance marginally. At such a point of adaptation a small transfer of means from one consideration to another will be evaluated as equal by those concerned. PVF is based on such a marginal balancing of considerations and values.

Education in modern societies seems to be the decisive factor as regards people's social status in their adult lives. People's possibilities of determining their destiny by means of education have differed very much. It has been a policy of achieving equality by aiming at leveling out people's success through education. This has been done by placing school children and youths in situations as similar as possible in the school. This policy has failed more or less, as illustrated by Anton Hoëm, because 'one has concentrated on external improvements and overlooked the fact that a social and cultural leveling out denotes the same possibility of the development and the ennobling of cultural and social forms on their own terms, and not the right for everybody to develop on the counterpart's terms'.<sup>12</sup> Here the need to measure and further equality by means of a special sign is expressed on two levels. Firstly, the possibility is ignored that education may cost individuals values that would have given them more by a different conversion (use). Secondly, the school system is standardized (e.g. town-country), and thereby the different possibilities of those who enter the school system are not utilized. PVF affords occasion to convert values to and from the school as well as within the school system by marginal considerations, so that it will become apparent to what extent the external equality objectives are, according to Hoëm, something that suppresses the introduction of real equality.

This should suffice to account for how PVF can diminish the need to approve of an external sign of equality in the struggle for real equality. In the past and outside Scandinavia it has been customary for the people to support distant leaders who should represent general interests, and it still occurs in the Scandinavian countries that people entrust decisions to representatives who subscribe to certain principles (party programs), while they themselves live in conditions quite different from those representative of people in general. Nowadays and according to prevailing forms of decisions, the leaders have the advantage of ordinary people that they have certain qualifications by which to balance the different considerations of ordinary people, while ordinary people live today under so heavily variable circumstances that each individual cannot be said to represent satisfactorily anything else but his home, his place of work, his family status, his age group, etc. In my opinion, PVF will give ordinary people a greater opportunity to represent their manifold special considerations through the balancing of considerations offered by the form of voting, and thus deprive the leaders of some of the privileges they enjoy.

In continuation of this it is natural to discuss briefly the equality of status politics within a PVF society. PVF *does not secure* equal conditions. People of small resources will require extra PVF votes to bring them up to the level of others. Nowadays it is true that those who have small resources need extra influence to reach the level of others. The criteria of people's prosperity may in a PVF society vary much but not necessarily be different from present societies. The difference for the equality of status strategy seems principally to be that the quickest way of improving the conditions of separate groups or individuals is to transfer votes to those concerned. In that way those concerned are free to choose

between the resources of society. It will bring greater satisfaction than giving people specified rights in the same way as it is assumed that social security benefit (in money) will be more useful to the recipients than will ration cards.

The right of voting in parliamentary elections is considered as one of the most important human rights. Nevertheless it may happen that those entitled to vote divide themselves among parties in the proportion that the non-voter party will become a considerably big party without any organized electoral campaigning persuading people to abstain from voting. In comparison with the monetary system, let us assume that money was distributed among all adults in Scandinavia, and that a few millions of them squandered it in the same way that Bør Børson, Jr., smoked it up in his days of prosperity. Bør did it in order to show that he had more than enough money. Few of the non-voters are of the opinion, one would think, that they have more than enough influence in their society.

Secret voting is another right. It does not prevent those who wish to from being able to keep a very reliable file of how most of the voters have voted. It does not, however, mean that many may not find it very important to have occasion to vote secretly. The many who reveal in some way or other how they vote will become in that context responsible citizens. It reduces for those few the value of keeping the secrecy, because they will, as different from others, be regarded as irresponsible in that context, and therefore also possibly in other contexts. On the other hand, it hardly ever happens in a country with as big constituencies as those in the Scandinavian countries that a voter can remark after an election: It was my vote that tipped the scale. He will also hardly see any reason to say: My vote counted. Nevertheless he shows up and votes, which many regard as a significant act. The significance seems to consist in the fact that one is proving to oneself by making one's choice that one feels responsible for society, and shows others by attending that he is a responsible member of society.

It is considered profane to maintain that the right to vote can be converted to other values, that one is able to sell one's vote. Secret voting renders it impossible to control the selling of votes. The myth of the right to vote, the conception that the vote is something sacred, is maintained despite the accepted view that candidates offer, if elected, the conversion of the votes into other resources. They promise for instance, if they are elected, to protect people against income tax or to increase social security benefits and subsidies. The myth about the right to vote owes some of its existence to the fact that the electing of representatives and a party is largely a submission to forces whose consequences one cannot predict. As pointed out in the introduction to this dissertation, the election cannot be judged on anything resembling an experimental basis.

By means of PVF it will be easy to see to what decisions the votes have been converted. The votes of the individual voter will not become a diffuse value. They will form part of the basis for a constantly renewed social contract, where the formal contributions (the votes) to the renewal can be read. The voting right from the bottom can be kept secret, if one wishes, but there is every reason to believe that one will catch sight of the votes, which is fairly similar to that of

money today, i.e. that the votes are values that one is at liberty to convert, buy, and sell, and that one can also disclose how one has used the votes, exactly as it is accepted that one can disclose what one has used the money for. One is actually forced to disclose how one uses the money because selling and buying usually takes place with two parties familiar with the case. It is fully accepted that one transfers monetary values to others, for example real property which one authorizes somebody to manage or which one sells. Will people in a PVF community not come to evaluate the votes in a similar way? He who expects to receive a more valuable conversion by selling the votes for money to obtain values similar to those that are in the market today will then be allowed to do so on condition that he give up the possibilities of influencing decisions, e.g. those regarding traffic in his own town district, while the one who buys the votes does it because he may have the greatest interest in participating in deciding the speed limit in the streets and for that purpose is willing to give up some of his purchasing power on the traditional market.

These are suppositions how under PVF it will be possible to evaluate the right to vote. However, as already pointed out, one will be able to maintain secrecy about the voting for all levels of the voting, except for the highest if one so desires.

## 6. Introduction of PVF

This dissertation is *science fiction*. It deals with a constructed process and how it produces (generates) the organization of decisions and social forms on the whole. It will then be a special task to explain how PVF can be introduced. To illustrate the conditions about the introduction, I refer to the example in a former article regarding the distribution of a particular number of fishing licences. If this was the first time PVF was used and there was no knowing what issues could then come to be treated, one would be in the dark about the value of the individual viewpoints in the actual issue. It would be somewhat comparable to the immediate introduction of a monetary system for all trade. This was not done in the past. Money gradually replaced the exchange of goods. In Iceland this was effected through the introduction of permanent, easily transferable media of exchange that were above all of practical value, i.e. silver, skins, woollen goods, etc. Although they were not used in the actual trade, they laid the foundation of evaluations as a reference in the second round. The references developed into public tables for the terms of trade concerning goods in all districts of the country. These were renewed until a few years ago, as they hardly had practical value any more. It took this long a time to make the direct exchange of goods by money unnecessary. The introduction of PVF seems to have to be carried out by stages. This can occur simply by using PVF as a non-decisive opinion poll. There is reason to expect that the participants' evaluation of the (vote) prices will be gradually stabilized, and the conventional voting arrangements will control what is-

sues are to be evaluated. I have come to the conclusion that every participant would benefit from participating in PVF as an opinion poll with fairly similar responsibility, as if PVF were decisive. When the results seem to start being reliable they will be of the greatest importance for reference when it is a question of a reasonable distribution of decisions. He who in decisive voting refuses to pay respect to the results of the PVF opinion poll because it went against him will in return risk being ignored in the same way by others in subsequent issues. It is possible that the community will develop in such a way that it will in reality be PVF opinion polls that determine the decisions except for the situations that had been difficult to predict and where the traditional votings are more flexible. PVF will as an opinion poll be able to solve the problems that arise when there are more than two alternatives to be voted on, problems whose solutions are sought through the elimination method or the series method, but which one prefers to avoid by bringing only two alternatives to the vote.

PVF as an opinion poll seems to further the kind of development of organizations that is illustrated in this dissertation. It can also be used as an opinion poll to lay the foundation of new organizations. What I have in mind are the wishes which, mostly for sociopolitical, ecological, and natural-resources policy reasons, arise for establishing political institutions for individual local communities (town districts, villages, fishing stations, parishes, and neighborhoods), which can lead to the local communities becoming better provided with and more self-sufficient in human relations and material products than has recently been aimed at. If one wishes to proceed with caution one may start with a democratically chosen consultative organ. The board can use opinion polls as a basis for its consultation. Traditional opinion polls, where each individual opinion is of equal importance in every issue, can gradually develop among the members a conception of a reasonable distribution of decisions and a sense of solidarity. PVF, however, seems to hasten such development. One can then wait for the time when it is believed to be worthwhile giving the new organization the right to make obligatory decisions, possibly by means of PVF. This concerned a case where the actual members used to have a more distant institution that made obligatory decisions for them. Another instance is when the parties participate in transactions without having in advance any joint institution above them. The regulation of herring fisheries in the North-Atlantic is an example. As always under PVF, the participants have to decide beforehand their mutual proportion of the number of votes and on what categories of matters they are to vote. Then they can begin with PVF. They can, if they like, carry out more votings on the same issue in order to see how the vote offers are stabilized. A condition for this simulation as for any other use of PVF is that it is a question of relatively many issues, each of which can be voted on. Otherwise the participants will have difficulty in evaluating the proposals while keeping in mind that they may miss the opportunity of using up the votes. In this way transactions can occur through PVF simulation and then one must wait and see if the results are so meaningful that they can become a guidance for an agreement.



## NOTES

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