Democratic Theory and the Public Interest: Condorcet and Rousseau Revisited

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# DEMOCRATIC THEORY AND THE PUBLIC INTEREST: CONDORCET AND ROUSSEAU REVISITED

*B*ernard Grofman and Scott Feld argued in the June 1988 issue of this Review *that Jean-Jacques Rousseau's contributions to democratic political theory could be illuminated by invoking the theorizing of one of his eighteenth-century contemporaries, the Marquis de Condorcet, about individual and collective preferences or judgments. Grofman and Feld's claims about collective consciousness and the efficacy of the public interest provoke debate. One focus of discourse lies in the application of Condorcet's jury theorem to Rousseau's theory of the general will. In this controversy David M. Estlund and Jeremy Waldron in turn raise a variety of issues of theory and interpretation; Grofman and Feld then extend their argument, and propose clarifications.*

While few things are more controversial than the nature of democracy, there is nonetheless something of a received view, namely, that a proper democratic vote expresses the voter's preferences about the social choices in question and that these are to be combined in an outcome that pleases as many individuals as possible within the bounds of fairness. The consensus around this model of democratic voting is an odd thing, stemming as the model does from Arrow's well-known proof that no way of combining such votes can simultaneously satisfy several apparently reasonable criteria, a theorem rooted in the work of the Marquis de Condorcet, who first demonstrated the possibility of cyclical majorities. Condorcet, however, also produced an equally stunning but less well-known result, namely, that majority rule can make a group more likely to give correct answers than the average member or even than the most competent member.

These are landmark results, each pertinent to a different model of democracy. But Condorcet's famous result about a *preference conception* of democracy, the paradox of cyclical majorities, is negative; it is a problem for that model, which becomes clearest in Arrow's (1963) masterful elaboration. Condorcet's other landmark result, the jury theorem, is a positive result for the other conception of democracy, what we might call the *epistemic conception* (following Cohen 1986; Coleman and Ferejohn 1986). It is surprising that the epistemic conception of democracy has not been pursued and developed in light of this promise, while the preference conception has come to dominate democratic theory despite (or, perversely, because of?) its long-known problems.

The imbalance is beginning to be redressed in two ways. In the first place, researchers have recently rediscovered and vastly extended Condorcet's jury theorem results. In the second place, there is a growing appreciation of the contributions to an epistemic conception of democracy that were made by Condorcet's great contemporary, Rousseau. These two lines of work have been recently brought together in a fascinating Condorcetian reading of Rousseau by Grofman and Feld, "Rousseau's General Will: A Condorcetian Perspective" (1988). I wish to raise some

questions about their interpretation of Rousseau and then consider whether the epistemic model of democracy can easily avoid the Arrowian difficulties faced by preference models.

## Rousseau and Condorcet

Grofman and Feld's central interpretive point seems indisputable. Rousseau conceived voters as giving their opinion on an independent matter of fact—the content of the general will—and held that the answer receiving a majority of votes under certain circumstances was guaranteed to be correct. This feature of Rousseau cries out for a Condorcetian interpretation. However, the issue arises whether more of Rousseau's views can also be covered by the Condorcetian umbrella.[1]

For example, Grofman and Feld interpret Rousseau's worries about factionalization as owing to the Condorcetian consideration of reducing the effective number of voters. If individuals vote in blocks, the effective number of voters is reduced from the number of individuals to the number of blocks, and this reduces the competence of the group, other things being equal. In particular, the reduction of group competence depends on the assumption that the competences of block voters will not be greater than their competences if they had voted independently. For example, if a faction chooses to follow an opinion leader rather than vote independently, the assumption is that the competence of the opinion leader is either always or on average no higher than the average competence of the other members of the group if they were independent. Condorcet's theorem shows that group competence increases or decreases with the number of independent voters if average competence is the same. If the opinion leaders of all factions are, in effect, made the only voters, then if the average competence of the voters in the general proce-

dure is the same as it would be with all independent voters, group competence is reduced.

But if, instead, the "party line" within groups is determined by majority rule within the faction, the Condorcet jury theorem can perhaps be brought to bear to show that group competence can exceed the average individual competence. For example, the opinion leader may be chosen by majority rule, in which case the opinion leader may, on average, have a higher-than-average competence for Condorcetian reasons. Indeed, the faction need not even choose to defer to one of its members; and under certain conditions and in relatively small groups, the faction's competence can even exceed that of the most competent member (Grofman 1978). Would this situation still reduce group competence?

On the contrary, it might seem that group competence must simply be *increased*. After all, the competence of every individual becomes just that of the group itself; and this is higher than average or even higher than *any* individual's competence. So many or all individuals increase their competence in such cases, and no one's competence is decreased. Apparently, then, the average competence within each faction—and so in the group as a whole—is increased. Since the number of voters is unchanged, the Condorcet theorem should say that group competence is higher than it would have been without these democratic factions.

However, this line of reasoning neglects the fact that block voting, where there is correlation among individual votes beyond what would normally be expected simply from similar independent competences, effectively reduces the number of voters (Owen 1986). The problem is in determining whether this competence-reducing factor is more powerful than the competence-increasing factor of the higher competence of such democratic factions. Which group is more competent: one with

a larger effective number of voters of a certain competence or one with a smaller effective number of voters of higher competence? Obviously, it depends on the differences in numbers and the differences in competences, but this question has not, to my knowledge, been thoroughly studied.[2] Until there is further study of democratic factions, it cannot be assumed that factionalization, as such, reduces group competence. All that can be said is that nondemocratic factions tend to reduce group competence.

Now this would be enough for Grofman and Feld's interpretive purposes if the factions Rousseau is concerned with were internally nondemocratic. Are they? Rousseau says, "When intrigues and partial associations come into being at the expense of the large association, the will of each of these associations becomes general in relation to its members and particular with in relation to the state" (*Social Contract* 2.3). If the factions have their own general wills, as he says, then his view must be, as it is with a whole community, that the general will is best discovered by majority rule. This might seem to favor the mini-democracy view of factions over the Grofman-Feld interpretation of deference to opinion leaders.

However, the minidemocracy version presented above depended on everyone's addressing him- or herself to the issue of the common interest of the whole society. Only then can the faction's deliberation raise the faction's competence *on the common interest of the whole society* above the average member's. Rousseau's view of factions is clearly different. The question factionalized voters address is, What is in *our* [the faction's] common interest? And when a party line is drawn and toed in the general voting procedure, the same interpretation of factionalized votes is appropriate: "*X* is in the common interest of my faction." This counts against interpreting Rousseau in the minidemocracy way discussed above, but it also counts

against Grofman and Feld's interpretation. The problem is not—at least not *solely*—that the number of voters is effectively reduced. It is at least as important that factionalized voters are not addressing the proper issue. This is clear in the words "general in relation to its members, *and particular in relation to the state.*" Elsewhere Rousseau discusses the advanced stages of factionalization and decay: "Everyone, guided by secret motives, no more express their opinions as citizens than if the state had never existed; and iniquitous decrees having as their sole purpose the private interest are falsely passed under the name of laws" (*Social Contract* 4.1). And in the extreme case of deference to another, selling one's vote for money, "The error he commits is that of changing the thrust of the question and answering a different question from the one he was asked. Thus, instead of saying through his vote *it is advantageous to the state, he says it is advantageous to this man or that party that this or that view should pass*" (4.1). The dichotomous choice between states of affairs *S* and *T* is not sufficient to determine what judgment is expressed by a vote. *S* is not a judgment "*S* is in the common interest" is a judgment. If a jury model, that is, a Condorcet model, is appropriate, the dichotomous choice voters face is between judgments. Rousseau claims that the judgment choice that factionalized voters address is different from that faced by others. Where most are addressing "*S* is in the common interest of the whole society" versus "*S* is not in the common interest of the whole society," members of faction *F* are addressing "*S* is in the common interest of *F*" versus "*S* is not in the common interest of *F*." Clearly, where individuals are not addressing the same issue, Condorcetian considerations do not apply, and there is no pooling of wisdom. The problem is not mainly the reduced number of effective voters; it is the failure of the voters to address the same issue. At

least this is the most defensible difficulty with factionalization until the effects of democratic factions are better understood.[3]

Still, Rousseau does mention that under factionalization "there are no longer as many voters as there are men" (*Social Contract* 2.3). Its relevance, however, may be that since there is a pervasive tendency to err in the direction of particularity—to bias one's vote in the direction of one's private interest—these small errors can be overwhelmed by large numbers of others with countervailing biases.[4] Factionalization, especially at an advanced stage with only a few factions, precludes this corrective influence.[5]

## Public Deliberation

Grofman and Feld's claim that the effective reduction of the number of voters reduces group competence ought to be limited to (internally) nondemocratic factions, as I have argued. This adjustment calls for a further adjustment in their interpretation of Rousseau. Grofman and Feld seem to misinterpret the following remark of Rousseau's: "If, when a sufficiently informed populace deliberates, the citizens were to have no communication among themselves, the general will would always result" (*Social Contract* 2.3). Rousseau is held by Grofman and Feld to see "the 'deliberative process' as one taking place within individuals rather than in terms of a process of group debate" (1988, 569). And they say, "Each voter is polled about his independently reached choice, without any group deliberation" (p. 570). Their text is not entirely determinate on this point, but there is some reason to think Grofman and Feld may have taken Rousseau to be claiming that voters *ought not* to have any communication among themselves regarding the issues to be voted on. This would seem to concede too much to the totalitarian, anti-civil liberties, interpretations of Rousseau.[6] *Too*

*much* because it is not demanded by the text. Rousseau says only that *if* there were no communication (and other conditions are met), the procedure would be infallible. This does not imply that noncommunication is a necessary condition for discovery of the general will. In fact, it does not even imply that it is necessary for *infallibility* of the discovery process, though Rousseau may well believe this. We saw above that there is no Condorcetian basis for the claim that factionalization is detrimental but only for the claim that a certain kind of deference is. Similarly here, deference is the culprit, not communication. The notion of deference is hard to make precise; but where there is no communication, there certainly can be no deference nor any of its ill effects. However, if deference can be avoided, communication would seem to have advantages from a Condorcetian perspective. Increasing the information of a nondeferential voter would tend to increase the voter's competence, and this can only increase the chances of the group's ascertaining the general will. A Condorcetian reading would be embarrassed if Rousseau had criticized public deliberation about voting. Fortunately for Grofman and Feld, these comments about communication are not such a criticism. As mentioned, it is not entirely clear how Grofman and Feld read Rousseau on this point. In fairness, they do once gloss him in an unobjectionable way: "Thus, each voter is seen as seeking to reach an *individual and independent* judgment about alternatives" (p. 569, emphasis added). Admittedly, a Rousseauian theory must place great weight on individual independence; but if it is to remain Rousseauian, independence must be distinguished from asociality.[7]

## Rousseau and Arrow's Conditions

Grofman and Feld point out that the Condorcet-Rousseau interpretation of

votes as judgments rather than expressions of preference is an important alternative to the dominance of preference interpretations of voting at least since Arrow (1963). One might legitimately wonder, then, whether Arrow's proof about the impossibility of an acceptable aggregation procedure can be avoided on this alternative view. Grofman and Feld believe that the common view that Arrow's work casts doubt on claims involving such concepts as the common good or the general will "is simply wrong. Our position, like Rousseau's, is that the general will may exist but that the outcome of any voting process is but an imperfect reflection of it" (1988, 574, n. 17).

Their view seems to be that Arrow's problem affects only voting procedures; so that while attempts to constitute or discover a common good, general will, and so on through voting procedures are rendered problematic, the *notions* of common good, general will, and so on are not. However, the application of Arrow's work is not limited to voting procedures. There is no *function* from individual rankings to an aggregate ranking that meets Arrow's conditions. Therefore, doubt *is* cast on those notions insofar as they are taken to be *functions* of individual rankings.

Rousseauian theory in particular does not take the general will to be a function of actual individual *votes*, but it may yet—and I believe does—take the general will to be a function of individual *rankings*, namely, interest rankings. It is not necessary to take up the issue of Rousseau interpretation here. The point can be made by merely raising this possibility. Suppose the content of the general will is the common interest (on socially significant issues). Surely the common interest must be some function of individual interests, probably representing what is in the interest of *every citizen*.[8] The general point is that if it is any function of individual rankings, Arrow's arguments apply. More particularly, if the function in question is the common interest function, Arrow's conditions are likely to be violated in the fact that no matter how "in $S$'s interest" is interpreted, some sets of individual interest rankings will not exhibit any common interest, in violation of the Arrowian condition of unrestricted domain. This, then, is an application of Arrow's theorem not to a voting procedure but to an account of the relation between the common good and individual goods. The general will, the common good, and so on are not insulated from Arrow's problem unless they are not defined as functions of individual rankings; but Grofman and Feld have not made any such case.

It would be hasty to disabuse political thought of these notions on that basis alone, however, since there is room for debate about whether Arrow's conditions must be accepted in this context. For example, suppose certain profiles of individual rankings were inconsistent with their all being members of a genuine political community. Then it would be nonsense to say that the difficulty of aggregating profiles of noncommunity rankings shows that there is no such thing as the good of a community. This is just an example of how the application of Arrow to the common good itself rather than to voting procedures might open new challenges to the conditions he imposes. In this hypothetical case, the challenge would be to the condition of unrestricted domain, which requires that a function return an outcome for absolutely any set of individual rankings. Why suppose that the notion of the common good depends on the possibility of a procedure that could aggregate *any* profile, even a noncommunity profile of individual rankings? Of course, this is not a substantial challenge unless some account of the difference between community and noncommunity profiles has been provided. It is meant here only as an example.

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While my remarks have been largely critical, I have only offered them because of the promise of Grofman and Feld's approach to democratic theory. The work of these two authors and others along Condorcetian lines is potentially momentous for democratic theory; and the Condorcetian reading of Rousseau is, I believe, accurate in important respects. The recent elaborations of Condorcet's work on the competence of groups is a significant advance toward Rousseau's goal of governing communities according to the truth despite the absence of any philosopher-king to reveal it.

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Grofman and Feld (1988) have outlined an exciting and illuminating interpretation of Rousseau's theory of the general will. They argue that many of the things Rousseau says in *Social Contract* about how the general will can emerge from popular voting may be understood along the lines of Condorcet's jury theorem. That theorem holds that if voters are addressing a common question with two answers, one correct and one incorrect (e.g., whether someone is guilty or innocent or which of two alternatives better promotes the general good) and if the average probability of each voter choosing the correct answer is greater than .5, the probability that the answer chosen by a majority of them will be the correct one increases to certainty as the size of the group increases (Condorcet 1976, 33–70).

For brevity of discussion, I define *competence* as follows: the competence of a person or group with regard to some pair of answers to a question (one correct, one not) is just the probability that given a choice, the person or the group will choose the correct alternative. So the theorem simply asserts a mathematical

relation between member competence and group competence: if the average competence of members of a group is greater than .5, the competence of the group deciding by a simple majority (majority competence) approaches 1 as the number of members increases.

I want to point out one or two difficulties in the use of Condorcet's theorem as an interpretation of Rousseau's theory of the general will, and indicate how that interpretation might be supplemented to provide a more realistic and attractive image of Rousseau's politics along Condorcetian lines.

Though I shall be pointing out some features of Rousseau's theory that are not especially congenial to this approach, I should emphasize that this should not be taken as a criticism of Grofman and Feld's suggestion. *Social Contract* is a complex and paradoxical work, and there is probably no chance of fitting everything Rousseau says into the framework of a single, coherent theory. We can only examine whether the features of Rousseau's thought that are independently attractive and theoretically important are best understood along the lines that Grofman and Feld suggest. In other words, the question to ask is whether the Condorcetian suggestion helps us to *interpret* Rousseau's theory of politics by making it the best it can be (see Dworkin 1986, 52–53).

The first thing to note about the Condorcet theorem is the importance of the assumption that average voter competence is greater than .5. The theorem does *not* make group competence an increasing function of average member competence for *any* value of the latter. The same reasoning that yields Condorcetian optimism about the general will also yields the conclusion that if average voter competence dips below .5, majority competence tends towards zero as group size increases. In other words, the theorem is one that faces two ways: it provides reason for optimism about voting if individual voters are

on average more likely to be correct than not; but it provides reason for pessimism if on average they are more likely to choose incorrectly.

It may be thought odd that a voter's competence could be less than .5. After all, even a voter who chooses at random should choose correctly half the time. Unfortunately, as Condorcet himself pointed out, randomness is not the worst we can expect: "In effect, when the probability of the truth of a voter's opinion falls below 1/2, there must be a reason why he decides less well than one would at random. The reason can only be found in the prejudices to which this voter is subject" (1976, 62). It is a well-known theme in the critique of democratic politics that correct decisions are often those that seem counterintuitive or run contrary to the preconceptions with which the common man approaches ordinary decisions (e.g., Plato, *Republic* 487b–502c). So it is quite possible for unenlightened people, who (naturally enough) employ their preconceptions and intuitions in political decision making, to do worse than randomizers.

Now although Grofman and Feld mention Rousseau's belief that popular voting on matter of the general good will occasionally be mistaken (*Social Contract* 2.3), they offer Condorcet's theorem as an interpretation of what they take to be his confidence that in *most* cases the vote of a popular assembly will coincide with the general will (1958, 569). But since, as I have pointed out, the Condorcet theorem faces both ways, it cannot by itself provide an interpretation of this confidence unless there is reason to attribute to Rousseau an independently grounded belief that average voter confidence in a citizen assembly will be higher than .5.

As a matter of fact, it seems that Rousseau did not hold such a belief. Certainly, he was pessimistic about the chances of citizens' being able competently to address questions of the general good in large and populous societies (*Social Contract* 2.9). There are good reasons for this pessimism.

First, the more populous a country, the more complex the issues that arise and the less clear and evident the solutions. The point made earlier about preconceptions obviously applies more acutely the more complex the social problems that have to be faced are.

Secondly, Rousseau suggests that an increase in size may make it difficult for voters to identify with the general good in such a way as to prevent their decision making from being distorted by bias and self-interest: "Each individual, having no taste for any other plan of government than that which suits his particular interest, finds it difficult to realize the advantages he might hope to draw from the continual privations good laws impose" (*Social Contract* 2.7).

It is no use, by the way, responding to this that the Condorcet theorem already presupposes that citizens are voting for the general good as they see it and not on the basis of self-interest. The disjunction between the general good and the interest of individuals is too easily exaggerated in Rousseau exegesis. The general will really is supposed to will a good that is *common to all*, a good that serves the individual interest of *everyone*. That is the basis of Rousseau's contractarianism (*Social Contract* 1.7, 2.4). Moreover, distortion caused by uninformed self-interest is, on the Rousseauian view, one of the prime causes of voter incompetence. A competent decision maker is guided by the aspects of personal interest that correspond to the interests of everyone else in society; an incompetent one is guided by aspects of personal interest that are socially dissonant. If increasing population size makes it more difficult for voters, with the best will in the world, to discern which of their interests are common to their fellow citizens and which are not, it is all the more likely that they will come

up with incorrect answers when they (think they) are addressing themselves to questions of the general good.

The first two points suggest that voter competence might be inversely correlated with the size of the population whose interests are to be taken into account in answering questions about the general good. A third reason looks more closely at the composition of the decision-making body itself. For a country of a given population, it is likely that the larger the popular assembly, the lower the average level of education and enlightenment among its participants. This is not an a priori truth; it rests, however, on the politically realistic assumption that those who have the vote in a restricted franchise are likely to be more educated than those admitted to it when the franchise is extended (Mill 1975). The point is one that Rousseau hinted at in his remarks about 'the common herd' (*Social Contract* 2.7). Intriguingly, it is also a point that Condorcet emphasized in his presentation of the theorem:

> This conclusion leads first of all to a rather important observation. A very numerous assembly cannot be composed of very enlightened men. It is even probable that those comprising this assembly will on many matters combine great ignorance with many prejudices. Thus there will be a great number of questions on which the probability of the truth of each voter will be below 1/2. It follows that the more numerous the assembly, the more it will be exposed to the risk of making false decisions. (1976, 49)

This, of course, is most interesting. The Condorcet theorem states that where average voter competence exceeds .5, the more numerous the assembly, the greater the probability that a majority decision will be right. But the present observation tells us that the more numerous the assembly, the lower the competence of voters on average is likely to be. Although there is no reason to think that mathematically, the two factors exactly cancel one another out, still, it is worth noting that the very thing that enhances majority competence,

given a fair level of average competence, tends also and independently to reduce average competence.

There are good reasons, then, for being pessimistic rather than optimistic about the application of the Condorcet theorem to a political assembly in a society of any size. And, in fact, Rousseau did not exhibit the wholehearted optimism about majoritarian outcomes that Grofman and Feld impute to him. By definition, the general will is always correct; but even when they turn their attention purely to that end, the people, on Rousseau's account, are unlikely to get it right:

> The people, being subject to the laws, ought to be their author: the conditions of the society ought to be regulated by those who come together to form it. But how are they to regulate them? Is it to be by common agreement, by a sudden inspiration? . . . How can a blind multitude, which often does not know what it wills, because it rarely knows what is good for it, carry out for itself so great and difficult an enterprise as a system of legislation? *Of itself the people wills always the good, but of itself it by no means always sees it.* The general will is always upright, but the judgment which guides it is not always enlightened. (*Social Contract* 2.6, emphasis added)

The sentence emphasized makes it clear, I think, that the source of error is *not* that voters are asking themselves the wrong question (and therefore coming up with, say, the will of all rather than the general will), they are asking themselves the right question (What is for the general good?). But Rousseau simply has no confidence that real-world voters addressing this question will come up with the right answers.

How might this difficulty be dealt with? Does this Rousseauian pessimism about voter competence not undermine the theory of the general will precisely on Condorcetian grounds? To mitigate the pessimism we have to consider whether there is any way voter competence might be enhanced in a Rousseauian polity. Four possible strategies spring to mind.

# Democratic Theory and the Public Interest

The first is to limit the range of questions that are put to a popular vote: the larger the population, the more limited the range of questions. This was Condorcet's solution:

> Now since these prejudices and this ignorance can exist in relation to very important matters, it is clear that it can be dangerous to give a democratic constitution to an unenlightened people. A pure democracy, indeed, would only be appropriate to a people much more enlightened, much freer from prejudices than any of those known to history. For every other nation, this form of assemblies becomes harmful, unless the assemblies are limited in the exercise of their power to decisions directly relating to the maintenance of security, liberty, and property: matters upon which a direct personal interest can adequately enlighten all minds. (1976, 49)

As we noted earlier, the competence of a voter on an issue of the general good is likely to be greater in cases where there is a direct and evident connection between the general good and personal self-interest.

Something rather along these lines is involved in Rousseau's insistence that it is the task of the government (i.e., the magistry, the administration), not the sovereign (i.e., the people), to make decisions about particular persons and events (*Social Contract* 3.1). The people as a whole are to deal only with matters that are universal in character and that therefore touch them all because in the state's dealings with any particular person or event, the competence of everyone but the party immediately affected is likely to be limited (2.6).

The second strategy (also proposed by Condorcet) is less likely to be congenial to Rousseau. It is that the political participation of the common people should be limited to the choice of representatives:

> But it can be observed that in the majority of matters submitted to the decision of an assembly, the same voters whose opinions have such a small probability of being true can be enlightened enough—certainly not to pronounce with some probability of truth as to which man among a great number has the most merit—but

to choose, as the most enlightened, one of those whose opinions will have a large enough probability of being true. Thus a numerous assembly who are not very enlightened could be usefully employed only to choose the members of a less numerous assembly to whom the decision on other matters would then be entrusted. (1976, 61)

Of course, even this will work only if the masses can be relied on to choose representatives more enlightened than themselves and not to be induced to vote for those who share the prejudices that constitute their own incompetence.

In any case, Rousseau would have no truck with such a strategy, given his well-known opinion that representation is the end of freedom and that 'every law the people has not ratified in person is null and void' (*Social Contract* 3.15).

This makes it surprising that the third strategy (which Rousseau *does* propose) seems to involve an even more substantial derogation from participatory politics than the choice of representatives would involve. The solution he favors is the introduction into politics of "a superior intelligence . . . beholding all the passions of men without experiencing any of them," a "sublime reason" with recourse to "an authority capable of constraining without violence and persuading without convincing"—a lawgiver on the model of Moses or Solon or Lycurgus to set the agenda for legislation and organize the people into a state (*Social Contract* 2.7). This is not the place to comment on Rousseau's interpolation of such a deus ex machina save to say that it seems to move his theorizing into a mythic dimension where it is no longer clear whether he is genuinely attempting to address the issue of citizen competence as a problem in real world politics.

The fourth strategy is one that Rousseau toys with. It is very prominent elsewhere in the tradition of participatory democracy, but its relation to the Condorcet Theorem is not very well understood and is misstated, in my opinion, by Grofman and Feld. This is the role that

may be played by debate and discussion among the citizens in enhancing the competence of those who participate.

The Condorcet Theorem requires that the votes cast by participating citizens be *independent* of one another. (If they were not, one would, roughly speaking, have to multiply voters' competences to calculate group competence, diminishing the probability of a correct majority decision for any average competence less than 1.) Grofman and Feld interpret this independence condition as follows: "A group of size $N$ chooses between any two alternatives by means of a majority vote in which each voter is polled about his or her independently reached choice, without any group deliberation" (1988, 570). They maintain that this corresponds to Rousseau's view of "the deliberative process as one taking place within individuals rather than in terms of a process of group debate" (p. 569).

In fact, Rousseau is ambivalent on this. The passage they cite is translated as follows: "If, when the people, being furnished with adequate information, held its deliberations, the citizens had no communication one with another, the grand total of the small differences would always give the general will, and the decision would always be good" (*Social Contract* 2.3). But *communication* here may not mean what we understand by participatory dialogue and debate. In the immediately following sentence, deliberation without communication is contrasted not with discussion as such but with intrigues and the formation of factions. In other words, *communication* in this passage may mean something akin to what *conversation* means in phrases like *criminal conversation*—a suspect and unhealthy connection of selfish interests rather than high-minded political dialogue. It is true that later in the work Rousseau suggests that "long debates, discussions, and tumult proclaim the ascendancy of particular interests and the decline of the State"

(4.2). But this can be read in context as a pathology of dialectic intractability rather than as a pessimism about discussion as such. Elsewhere he talks happily enough of "public deliberation" (1.7) and "common deliberations" (2.4); and it is hard to see why an actual *assembly* of the people in one place (as opposed to a poll that might be conducted door-to-door) would be thought necessary if discussion were dangerous or unimportant (3.12–15).

Moreover, if the Condorcetian approach precludes discussion, it is entirely at odds with the spirit of the participatory tradition in which Rousseau's political theory is usually located. Since Aristotle's dictum, "Nature . . . does nothing without some purpose; and for the purpose of making man a political animal she has endowed him alone among the animals with the power of reasoned speech" (*Politics* 1253), the participatory tradition has placed great emphasis on dialogue among citizens both as an intrinsic good and as a way of improving the likelihood that they will decide wisely on the issues they are addressing. In fact Aristotle provides an early version of the Condorcet theorem in what he calls 'the argument of the collective intelligence of the masses, so long as they do not fall below a certain standard. Each individually will be a worse judge than the experts, but when all work together, they are better, or at any rate, no worse' (1282a).

How does discussion among citizens enhance voter competence? More importantly, can it do so in a way that does not undermine the independence condition of Condorcet's theorem?

There are various ways in which the first question might be answered. One answer rests on an optimism about the impact of those who are enlightened. Even if the average competence of the members of a group is below .5, it is likely that there will be some members whose competence is much higher. If so, they may be able to persuade those of lesser

competence to abandon their prejudices and show them why (for example) an apparently counterintuitive proposal is not as inimical to the general good as it might seem. Their arguments may be accorded some respect by the less-competent, in part for the reasons Condorcet identified in the second strategy (representation): people can often recognize others more competent to solve a problem than they are. Condorcet thought this an argument for isolating the more competent in a special assembly. But exactly similar reasoning yields the possibility of their being able to improve the average competence of those who would be at least sufficiently enlightened to choose them as representatives.

That apart, there is also the possibility that if one source of average incompetence is unfamiliarity with the range and complexity of a problem, bringing citizens together in an assembly where they can be exposed in discussion to a range of perspectives other than their own may make it more likely that reason rather than prejudice will prevail as they address the problems of a large society (Mill 1975, 197–88).

Finally, there is simply the optimistic assumption that prejudice fares less well than reason in open debate. If people are at all open to argument, we would expect discussion to diminish the probability that voters would subsequently do less well in choosing between alternatives than they would if they chose randomly. (But admittedly, this *is* optimistic; we are equally familiar with the way prejudices can be confirmed and compounded in discussion).

*If* there is a chance that discussion among the citizenry enhances average competence, does that nevertheless undermine the Condorcet result by compromising its condition of voter independence? Unlike Grofman and Feld, I think the answer is *no*.

We must remember that dependence and independence are, in this context, mathematical ideas; and not everything we call interaction or lack of interaction in politics can be taken as an interpretation of them. The sort of interaction between voters that would compromise independence would be interaction in which voter X decided in favor of a given option just because voter Y did. Grofman and Feld rightly recognize that the formation of factions and retinues—a process Rousseau deplored (*Social Contract* 2.3)—would have this effect (1988, 571). But X's being persuaded by Y in argument or holding itself open to such persuasion does not in itself involve X's deciding to vote one way rather than another *because of* the way Y is voting.

Grofman and Feld suggest that independence is vitiated by *any* positive correlation among individual choices beyond the correlation to be expected from similarities in competence alone (1988, 571). That is ambiguous. It is too strong if it requires the individual competences to be independent of one another (nothing in Condorcet's reasoning presupposes *that*). But if it categorizes the impact of one person's arguments on another as a (developed) similarity in competence, it does not preclude the possibility of mutual enhancement of competence through discussion.

It does not matter, for Condorcet's argument, whether or not individual *competences* are independent of one another. His theorem makes group competence a function of average individual competence irrespective of how the latter is generated. There is an obvious sense in which the competences of individual voters cannot possibly be independent of one another if they are members of the same society. They read the same newspapers, argue in the streets and coffee shops, and so on. What matters, for the purposes of independence, is what happens when the competence is exercised. In order to apply Condorcet's theorem to predict majority competence, we are going to have to

decide the point at which the average competence will be calculated. For best results, it is obvious enough that it should be calculated at the moment just before the vote is taken. Now it is almost trivially true that if we allow discussion to take place between the time average competence is calculated and the time the vote is taken, our application of the theorem may go awry. But that has nothing whatever to do with independence. It is simply that average competence may change in the meantime, and we will have to do our calculations of majority competence over again using new values for the variables. Independence is a condition on the way competence is expressed in voting, not a condition on the way competence is generated. If average voter competence is calculated *after* a discussion in the assembly has taken place, one cannot object to a Condorcetian prediction *based on that calculation* on the grounds that the competence of some voters was affected by that of others.

I conclude, then, that Grofman and Feld have exaggerated the atomism of voter deliberation required for a Condorcetian interpretation of Rousseau's political theory. By misinterpreting the independence condition, they make Rousseauian politics, on this interpretation, look much less attractive as a conception of collective choice than it has to. The background difficulty remains, of course: even though competence-enhancing discussion is not ruled out, there is no guarantee that it will carry average competence to a level where majority voting produces positive results. Still, I think it a happy coincidence that restoring the interactive dimension of participation offers the best hope that the Rousseauian theory of politics may get the benefit rather than the detriment of Condorcet's two-faced theorem.

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In the light of the issues raised by Estlund and Waldron, we are pleased to have the opportunity to clarify and expand upon our discussion (Grofman and Feld 1988) of what has been called the "epistemic" concept of democracy (Cohen 1986; Coleman and Ferejohn 1986) and of the links between the views of Rousseau and those of Condorcet. We share with Estlund and Waldron the view that the proper questions to address are not esoteric points about textual exegesis but rather fundamental questions central to political theory, such as, What is the public interest and how can we design institutions that will serve it?

We, Estlund, and Waldron are in agreement on many other points. In particular, we agree that—in Estlund's phrasing—"Rousseau conceived voters as giving their opinion on an independent matter of fact, the content of the general will, and held that the answer receiving a majority of votes under certain circumstances was guaranteed to be correct"; and these authors agree with us that the Condorcet jury theorem can be used to provide insight into how and when majority decision making can be used to ascertain the general will. We are also in agreement that members of the group majority can go wrong in two ways: by addressing the wrong question (i.e., concerning themselves with their own particularized interest rather than the general interest) or by lacking sufficient competence to discern the general will despite the best intentions.

Estlund emphasizes the difficulties posed for a Condorcetian view of Rousseau's general will posed by the first type of error; Waldron emphasizes the need to clarify the circumstances under which errors of the second type can be avoided. Both Estlund and Waldron provide a number of salient quotes from the writings of Condorcet and Rousseau that help to clarify the relationship between the ideas of these two figures of the enlightenment. Both call attention to areas where

the discussion in our earlier essay needs to be more clearly stated and elaborated. We see this response less as a rebuttal than as an expansion of points that were either omitted or left obscure in our previous article.

The Estlund essay makes three important claims: The first is that an epistemic concept of democracy (i.e., one that is judgment-based rather than preference-based) does not avoid the problem of potential inconsistencies in group decision making posed by Arrow's famous impossibility theorem. The second is that the existence of cohesive subgroups (factions) actually might, under some circumstances, improve the reliability of group decision making rather than making it worse. The third is that group deliberation might make group decision making more accurate than what would be expected from the purely "statistical" effect of the Condorcet jury theorem, which is a variant of what in probability theory is known as "the law of large numbers."

Waldron, like Estlund, raises the issue of the effect of group deliberation on group judgmental accuracy, but he also raises an important fourth question not considered in our earlier essay: Can we specify the conditions under which (mean) group competence can be expected to be above one-half? We find Waldron's observations about this question to be both useful and provocative. Moreover, he closely ties his discussion of this question to points raised by Rousseau and Condorcet themselves.

## The General Will Revisited

The concept of the public interest has come under critical challenge from economists in the past several decades. Buchanan and Tullock (1962) make the claim for a methodological individualism within whose framework the idea of a public interest distinct from some aggregation of individual preferences can only be viewed

as nonsensical. For Buchanan, the only legitimacy that can be attached to social institutions arises from their being instantiated as part of a package (constitution) that has been given unanimous consent. After the work of Paul Samuelson (1947) economists (with the possible exception of those in the cost-benefit tradition) have eschewed interpersonal comparisons of utility and opted for an ordinalist foundation to social welfare theory. Advocates of the criterion of (Pareto) efficiency often reject any attempt to choose among points on the Pareto frontier in terms of other normative standards.

However, it is Arrow's impossibility theorem that is widely seen as the finishing blow to the claim that the public interest can be meaningfully defined. Roughly speaking, Arrow (1963) demonstrates that no rule for the resolution of conflicting individual preferences among a set of three or more alternatives that is based on ordinal preference rankings and is responsive to changes in individual preferences in a sensible (monotonic) fashion can guarantee that group preferences among the alternatives will be transitively ordered unless we impose constraints on what preference orderings voters are allowed to have. (For a clear and relatively nontechnical introduction to Arrow's theorem, see Riker 1982; see also Plott 1976.)

Estlund asserts, "Surely the common interest must be some function of individual interests, probably representing what is in the interest of *every citizen*. The general point is that if it is any function of individual rankings, Arrow's arguments apply." In note 8 Estlund calls attention to a relevant quote from *Social Contract* (2.1), a quote we also cited: "Were there no point of agreement among all these [private] interests, no society could exist." Similarly, Waldron asserts, "The disjunction between the general good and the interest of individuals is too easily exaggerated in Rousseauian exegesis. The general will really is supposed to will a good that

is *common to all*, a good that serves the individual interest of *everyone.*"

This line of argument, which treats the public interest as the interest that is in common among individuals, is very similar to the Runciman and Sen (1965) approach, which looks at the public interest as the cooperative solution to an *n*-person prisoner's dilemma game. While we regard this as a plausible interpretation of the general will, we do not regard it as the whole story (as we noted in passing in our previous essay) for three main reasons.

First, the public interest may be other than the commonality of interests among the particular set of individuals who presently comprise a society. We take seriously Burke's remark about society's being a contract "between those who are living, those who are dead, and those who are to be born."

Second, and even more importantly, we believe that it is possible for individuals to address the question, What is the common good? not by thinking about consequences for themselves but rather by focusing on the abstract properties of systems of rules (or equivalently, systems of institutions). This, for example, we take to be the heart of the Rawlsian enterprise.[9] In this context we would, however, emphasize that the search for a general will presupposes a minimal commonality of basic values as well as what we might normally think of as common interests. Without such commonality the quest for a common Rawlsian "reflective equilibrium" is doomed to be futile. Moreover, Barry (1964, 14) reminds us that in Rousseau's view there were "a number of requirements that had to be met before it (the general will) applied at all: political virtue (reinforced by a civil religion), smallness of state, and rough economic equality among the citizens."[10]

Third, and relatedly, we agree with the point made by Rousseau (and reiterated by Waldron) that the general will may only be defined for certain (very limited)

types of choices, namely, those dealing "with matters that are universal in character" (*Social Contract* 2.6). Barry (1964, 14) correctly points out that in Rousseau's view, "if only some are affected by a matter the General Will cannot operate." As Waldron reminds us, Rousseau insisted that "it is the task of government (i.e., the magistracy, the administration), not the sovereign (i.e., the people), to make decisions about particular persons and events" (*Social Contract* 3.1).

Of course, in practice, it may be very difficult to distinguish between rule creation and rule application, since few rules (laws) are apt to cover all eventualities. And as was evident in the last revision of the income tax code, rules that seem general may in fact be tailor-made to apply only to one individual (or corporation) or a handful of individuals (or corporations). Nonetheless, it seems sensible to us to emphasize the connection between the public interest, constitutional design, and the rule of law (see Redford 1958) but to reject the claim that the public interest can be defined in all choice situations.

As yet, however, we have not addressed the heart of Estlund's claim that appeal to a public interest, however defined, cannot really get us out of the problems for social choice posed by Arrow's impossibility theorem. To do so we must explicate the link between our notion of the public interest and transitive collective choice.

For situations in which we can posit that individuals are by and large seeking to implement some common notion of the public good (or some other widely held value) in deciding among alternatives, we specify properties of a matrix of margins that are likely to arise even if individuals differ in their competence at correctly perceiving which of any two alternatives is higher on the criterion variable. For reasons of space we only sketch the nature of the argument. When these matrix conditions are satisfied, choice will be transitive.

A matrix is said to satisfy *Borda margins* if there is a way of ordering alternatives such that in every row, above the main diagonal, margins increase (or at least do not decrease) as we move to the right and such that in every column, above the main diagonal, margins increase (or at least do not decrease) as we move from the entry in the bottom row upward. We expect the Borda margins condition to be (approximately) satisfied in situations involving judgments because the greater the difference in "value" between two alternatives, the greater, on average, the plurality of voters who will prefer one to the other.

When a matrix satisfies the Borda margins condition, group majority choice will be transitive, and alternatives will be ordered in accordance with their Borda scores. Moreover, in a group whose preferences satisfy the Borda margins condition, as long as the group's mean competence is above .5, the Borda winner can be taken to be an indicator of the general will for that group (or to represent the probable highest value on whatever other criterion variable the group's members can be taken as trying to implement [see Young 1986, 1988]). When the Borda margins condition is satisfied we avoid the intransitivities that are the heart of the Arrowian impossibility result.[11]

In work now in progress we are looking at data on voter preference orderings in single transferable vote elections in labor unions and other organizations to determine whether votes satisfy either the Borda margins condition or the condition of ideological margins.[12] It is our belief that in many voting situations, it is reasonable to treat voters as if they were, on balance, trying, albeit imperfectly, to find the choice that is "best" with respect to some shared set of values. This can be true even if some voters completely lack this motivation and no voters have only this motivation. Our ongoing work on Borda margins is intended to provide both

a theoretical and an empirical meaning to the idea of "judgmental" decision making even in contexts where relatively few voters can be viewed as exclusively oriented toward a search for the common interest. This work parallels our earlier efforts to define a notion of collective ideological consistency that is distinct from simply counting how many individuals see the world primarily in ideological terms (Feld and Grofman 1986a; 1986b; 1988).[13]

## Factions within Groups and the Search for the General Will

Estlund suggests the possibility that especially when each subgroup's vote is decided by a majority vote within the subgroup, it may be preferable for a group to allow subgroups to influence the votes of their members. "After all," says Estlund, "the competence of every individual becomes just that of the [sub] group itself; and this is higher than average, or [perhaps] even higher than *any* individual's competence." Estlund is raising an important point: under what circumstances will some other rule than a simple majority decision maximize the group's judgmental competence? This is a complicated topic about which we have written extensively (Feld and Grofman 1984; Grofman 1975, 1978, 1979; Grofman and Feld 1984, 1986; Grofman, Feld, and Owen 1982; Grofman, Owen, and Feld 1983; and Shapley and Grofman 1984; see also Nitzan and Paroush 1982, 1985; Owen 1986; Urken and Traflett 1984; Young 1986, 1988). Here we will summarize the practical import of some little-known technical results and work out a nine-voter example in detail.

The key result is one due independently to Shapley and Grofman (1984) and Nitzan and Paroush (1982, 1985) but mathematically identical to a well-known result in the electrical engineering literature. Let

the $i$th voter have competence $p_i$, then (among the very large class of voting rules that can be represented as weighted voting games) the decision rule that optimizes group judgmental competence when voters are choosing independently is one that assigns weights to each voter proportional to the log-odds of that voter's competence (i.e., if $p$ is the probability of a correct judgment, the log-odds ratio is log $[p/1 - p]$). (This can result in negative weights for those with competence less than .5, but we shall act as if everyone has at least a chance probability of being correct.)

We consider the effects of factions, first in terms of groups whose members have identical voter competence, then in terms of groups whose members vary in competence. We focus on one particular type of factional decision making within subgroups, an internal majority rule process within subgroups, that is, situations where subgroups use majority rule for decisions within the subgroup and then subgroup members vote as a bloc.

Consider situations with all voters having identical competence, $p$, with $p > .5$. If there are nine voters, divided into three subgroups, Estlund would suggest that in this situation, because the three-member subgroups have increased their competence, this gain in competence may be enough to compensate for the reduction of the "effective" number of decision makers from nine to three. By using the Shapley-Nitzan-Grofman-Paroush log-odds theorem, we can see that Estlund's proposition is necessarily false. For groups whose members have identical competencies, if $p > .5$, simple majority rule (i.e., equal weighting) is optimal. However, the reduction in overall competence that comes from using what Owen (1986) refers to as "indirect" majority rule (i.e., majority rule both within and between subgroups) will, in this example, be relatively small—a maximum difference of slightly over two percentage points.[14]

Other forms of subgroup decision making fare even worse than the division of groups into three-member subgroups considered above. In particular, if there is a (democratic) majority faction, the judgmental competence of the group becomes identical to that of the majority faction. Especially for small groups, cutting the effective size of the group nearly in two can have substantial consequences. For example, for $p = .6$, in a nine-member group the difference in competence between simple majority rule and rule by a (democratic) majority faction is .051 (.7334 − .6826), while for $p = .8$, the gap is .04 (.9814 − .9420).

However, the worst effect of factionalism comes when there are cabals within cabals, pyramiding to majority control. In this worst-case scenario, a group of two can control a subgroup of three that in turn controls a subgroup of size five that can control a group of size nine, and so on. Here the majority competence of the group is reduced to the average competence of its members, no matter how large the group.

For the case where all voters have identical $p$ values, our discussion emphasizes the competence-reducing possibilities of factionalization. In addition, we strongly agree with the point made by Estlund (citing Rousseau) that, to the extent that there are subgroups, the focus of decision making may shift from the general will to the will of parts of society. Even if these parts are large—indeed even if one of them is a majority faction—subgroup interests and those of the larger society need not coincide (as Madison pointed out in *Federalist* 10). We also share Waldron's view that the worst evil of subgroup decision making is that it is likely to shift the focus of concern from the general will to the will of all.[15]

As noted above, when a group's members have identical values of $p$, if $p$ is greater than one-half, simple majority rule will always be preferred to any form

of subgroup voting. The situation is more complex when the members of the group differ in their competencies. The Shapley-Nitzan-Grofman-Paroush log-odds result tells us that simple majority rule is generally not the optimal rule for groups whose members vary in their competence. Nonetheless, the optimal group decision rule is likely to be only a slight improvement on simple majority except for small groups in which there is a considerable variance in the competence of the group's members.

One such example is a nine-member group, three of whose members have a competence of .9 and six of whom have a competence of .6. In this example, simple majority rule has a competence of .91—considerably lower than the .97 competence of the group under the optimal rule that assigns a weight of 2.20 (ln[.9/.1]) to the members with .9 competence and a weight of .41 (ln[.6/.1]) to the members with .6 competence. Only a unanimous vote of the six members with .6 competence should be allowed to overturn a 2–1 vote of the members with .9 competence.

Of course, if the most competent member of the group is much more competent than the average member, deference is often sensible. For example in a nine-member group with eight members of competence .6 and one of competence .9, the eight should defer to the one unless *at least six* of the eight feel otherwise.

In general, a multistage process will lead to better choices only under the special condition when it leads to (effectively) greater weights for more competent individuals. In the next-to-last example above, if the three most competent individuals formed a majority coalition with two of the others, the overall competence of the group would be .94, better than simple majority. However, most factional arrangements would only hurt the group competence. For example, if five of the less-competent members form the majority coalition, the group would only have a competence of .68.

## Group Deliberation

When group members differ in their competencies, simple deference to the most competent member or members of a group may not be appropriate (as we have seen), in that a weighting of votes that gives some (reduced but nonzero) weight to the less-competent group members may actually yield a higher overall competence for the group. These examples bring us naturally to the question of the effects of group deliberation on group judgmental accuracy.[16]

Deliberation can have a number of effects. It provides information about who holds what preferences and diffuses information about why people hold the preferences that they do. In the process of discussion, motivations toward either a public-regarding or a private-regarding ethos can be enhanced. From discussion we may learn that others are (or are not) looking primarily to their own self-interest, which may motivate us to do likewise. Learning which preferences given individuals hold, we may use this information as a cue to what is truly in our own (or the common) interest (see Grofman and Norrander n.d.).

Group deliberation raises a number of questions that take us into empirical issues beyond what we can deal with here. To what extent are individual perceptions of their own competence accurate? To what extent can individuals identify those who are more knowledgeable than themselves? Are there particular types of issues in which judgment-improving forms of deferences are more likely? On decisions where individuals see themselves as not competent to judge, how likely are they simply to abstain? Is there an optimum size for deliberating groups?[17] and perhaps most importantly, To what extent can the sharing of information through the process of group discussion led to improvements in individual accuracy[18] and are there ways to structure the

deliberative process (e.g., via a "Delphi"-type interaction like that investigated by Dalkey and his colleagues at RAND, [Dalkey 1969a, 1969b] or related procedures like the nominal interactive method [Gustafson, Lebeq, and Walster 1973]) that can significantly improve the accuracy of group decision making? The one thing that we can be sure of is that there is a broad social consensus that deliberation is desirable in the democratic process, although we must also recognize that sometimes group deliberation is only a charade (as it often is when legislators pontificate before empty chambers solely for the record or witnesses testify at hearings before legislators who have already made up their minds).[19]

## Mean Group Competence

Waldron correctly points out that the more-heads-are-better-than-one expectation that can be drawn from the Condorcet jury theorem is tied to the assumption that (mean) group competence is above .5. Competence values above .5 are important more generally. Implementing the Shapley-Nitzan-Grofman-Paroush optimal weights requires us to be able to specify the competencies of the group's members with the expectation of higher weights for the more competent members of the group. Even if exact competencies are unknown, as long as negative weights are prohibited, we would optimally be assigning positive weights only to those believed to have a competence value above .5. What reasons do we have to believe that groups will have mean competence above .5 or, indeed, any members with competence significantly above .5?

Waldron offers a number of different plausible solutions to this problem. For example, he suggests (following Condorcet) that we might limit the operations of sovereign democratic decision making to areas where individuals may be expected to be both motivated and competent to discern the public interest or (following Rousseau) that we might limit the sovereign to matters that are universal in scope where particularized interests will have least play (as we have previously noted). We find these suggestions quite plausible.

Also, Waldron believes that deliberation may improve individual judgmental accuracies to the point that assuming a mean competence of .5 may not be unreasonable. While we, too, find this line of reasoning quite plausible, we have to express our fears that there is only limited empirical evidence that deliberation improves outcomes beyond the purely statistical effect produced by the law of large numbers when initial mean competence in the group exceeds one-half. As noted above, deliberation can have a variety of effects, some positive and some negative.[20]

Another option considered by Waldron to improve judgmental accuracy (also suggested by Condorcet) is to use the voting process not to make choices among alternatives but to select a subgroup of individuals more competent than the voters themselves. Certainly, it seems reasonable to believe that in many circumstances voters can identify others more competent than themselves to judge certain issues.[21]

A fourth line of attack is to emphasize the need to train citizens to make informed judgments on public issues and to be loyal to certain shared values and identity. As noted in our previous essay, Rousseau's view that voting could lead to the general will was dependent on (1) the voters being informed and (2) voters subordinating their self-interests to a search for what is in the common interest. Although no one would wish to rely on civic virtue alone, few (even among economists) would wish to live in a society whose members had been raised with no moral beliefs other than the belief that no moral (or patriotic) claim should be permitted to outweigh self-interest narrowly defined.

Both Rousseau and Condorcet, in their writings, expressed great concern for this moral dimension of citizenship. Rousseau discusses this topic in *Emile* as well as in his essay *The Government of Poland*; Condorcet does so in a number of essays, some of which have not been yet translated into English. Shklar 1969 is a useful reference for a discussion of Rousseau's views on this point, while Kintzler 1984 is devoted entirely to explicating Condorcet's views about public education and citizenship. Both Rousseau and Condorcet (especially the former) can be thought of as advocates for what has been called a "civil religion."

## Justifying Representative Democracy

While *representative* democracy can be justified in terms of the practical impossibility of a pure democratic form or by the sorts of fears about mob rule that motivated many of the founding fathers and led them to devise a government whose powers were divided, limited, and balanced, our approach leads us to emphasize the benefits of bringing the specialized skills of knowledgeable individuals to bear on society's problems. In Condorcetian terms—in some situations the most useful voting that can be done by a large assembly is to select a smaller and more competent subgroup to decide matters. Even if we conceive of the public interest as some aggregation of the interests of society's parts, it may still be the case that judgment is needed to ascertain those subgroup interests as well.

As Estlund correctly points out, the "received view" of democracy is "that a proper democratic vote expresses the voter's preferences about the social choices in question, and that these are to be combined in an outcome that pleases as many people as possible within the bounds of fairness." It is this preference-based notion of social choice that is reflected in Arrow's theorem and the vast literature that has sprung up from it, all of which can trace its lineage back to Condorcet's 1785 *Essay* and the paradox of cyclical majorities there first identified. We have argued that a judgment-based notion of choice is an appropriate complement to the preference-based perspective.

We certainly do not wish to make the absurd claim that the interests of individuals in a society never conflict or that all, or even most of, politics is about the search for the public interest. Rather, much of the normal process of government deals with the reconciliation of conflicting preferences (see Mansbridge 1980, 1981). However, we do wish to rebut the claim that politics is only about the search for power or advantage. A vision of politics (and politicians) that is blind to the shared values in a society can never hope to explain the course of history.[22]

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## Notes

1. Grofman and Feld broach the subject of possible historical influences between Condorcet and Rousseau. They point out that Condorcet's *Essay on the Application of Mathematics to the Theory of Decision-making* makes no mention of Rousseau and suggest that Rousseau might have had access to Condorcet's ideas by way of their mutual friend D'Alembert. But there is evidence Rousseau influenced Condorcet rather than the other way around. The doctrine of the general will, including the central respects in which it is susceptible of Condorcetian analysis, was present in Rousseau's 1755 article in Diderot's *Encyclopedia* on the subject of moral and political economy (known now as the *Third Discourse* or *Discourse on Political Economy*). The relevant doctrines are scattered throughout that article, but much can be found in paragraph 23. It implies that the general will can be

known in the right conditions by assembling the people. Even though *Political Economy* contains no explicit discussion of voting (and so none of majority rule), we may presume that that would be the point of such public assemblies and their "deliberations." The same paragraph includes the doctrine that the decision of the assembly can fail to be the general will; and elsewhere in *Political Economy* (esp. par. 16) the reason is said to be that citizens often substitute private or partial interests for the common good in their deliberations. This suggests that the correct answer is objective in the way a Condorcetian analysis would require. The relevant Condorcetian elements are, then, already present in this early article.

Rousseau's *Social Contract* appeared in 1762. Rousseau could not have known of Condorcet via D'Alembert until those two became associated in 1765, three years after the appearance of *Social Contract* and ten years after *Political Economy* (Baker 1976, xxix).

Condorcet, on the other hand, definitely knew of Rousseau's work by 1785 at the latest. In that year (or before) he published some anonymous notes and an introduction to a speech he had given in 1781 accepting induction to the French Academy. In those notes he mentions Rousseau with approval, though he cites no specific doctrines (see his note E in Condorcet 1976, 20). Seventeen eighty-five is also the year of the *Essay*, 30 years after Rousseau's *Political Economy*, 23 years after *Social Contract*, 7 years after Rousseau's death, and 4 years after the appearance of the *Confessions*, whose posthumous appearance inspired a popular cult in France (see Miller). An active intellectual like Condorcet was most likely aware of the *Social Contract* well *before* the 1785 notes, but by themselves the notes establish the possibility of Rousseau's influence on the *Essay*.

Since Rousseau could not have known of Condorcet through D'Alembert before the *Social Contract*, since Condorcet almost certainly knew of the *Political Economy* and the *Social Contract* long before the *Essay* and absolutely certainly knew of his work in the year of the *Essay*, and since there is an extraordinary affinity between the *Social Contract* and the *Essay* (demonstrated by Grofman and Feld), it seems highly likely that Rousseau was an important influence on the topic and argument of the *Essay*.

2. See, however, Grofman 1975 for some discussion of related issues.

3. In Estlund n.d. I argue that interpretations of votes as expressions of individual preferences fail to account for the requirement of the idea of democratic voting that all address some single issue. So the desirability of addressing the same issue stems not just from Condorcetian considerations but also from constraints on what should *count* as democratic voting.

4. This may provide an alternative to Grofman and Feld's reading of the vexing "pluses and minuses

cancel each other out" passage of Rousseau's (1988, 572).

5. Grofman and Feld are aware of this point about factions' addressing the wrong question (1988, 573, n. 5, 12), but they underemphasize it. They interpret Rousseau's worries about factionalization wholly in Condorcetian terms when the failure of factionalized voters to address the common good is at least as good an explanation.

6. Grofman and Feld rightly criticize certain traditional interpretations of Rousseau which hold that he subordinates the importance of individuals to the greater social whole. There is an explicit text that supports Grofman and Feld's position in this important long-standing controversy:

> Is the welfare of a citizen any less the common cause than the welfare of the entire state? If someone were to tell us that it is good that one person should perish for all, I would admire this saying when it comes from the lips of a worthy and virtuous patriot who dedicates himself willingly and out of duty to die for the welfare of his country. But if this means that the government is permitted to sacrifice an innocent person for the welfare of the multitude, I hold this maxim to be one of the most despicable that tyranny has ever invented, the most false that one might propose, the most dangerous one might accept, and the most directly opposed to the fundamental laws of society. (*Political Economy* 31)

7. Beyond the fact that the passage does not require that reading, there is some positive evidence that Rousseau *advocated* prevote discussion in 1764 in "Letters from the Mountain." (I am grateful to Joshua Cohen for suggesting that support could be found there.) For example,

> In a republican state where French is spoken it is necessary to make a separate language for government. For example, *to deliberate, to opine, to vote*, are three very different things that the French do not sufficiently distinguish. *To deliberate* is to weigh the pros and cons. *To opine* is to state one's view [dire son avis] and give reasons for it. *To vote* is one's suffrage, when nothing remains but to count the voices. One begins by putting the matter under deliberation. The first time around, one opines; finally, one votes. (Rousseau 1964, p. 833, n.; translation mind, with help from Meg Denton)

It is unclear whether *deliberer* means collective or individual weighing of pros and cons. Like the English *deliberation*, it can mean either. Notice that Rousseau does not say that one begins by deliberating, which would be the closest parallel to *one opines* and *one votes*. Instead, he says "one begins by putting the matter under deliberation," suggesting that the deliberation is not individual but collective. In any case, he explicitly says that one states and motivates one's view before voting, enough to constitute pre-vote communication. Still, it is a central challenge for a Rousseauian philosophy of democracy to account for public discussion and majority rule in a

way consistent with individuals' thinking for themselves, one of Rousseau's central and persistent concerns.

8. See *Social Contract* 2.1: "Were there no point of agreement among all these [private] interests, no society could exist. For it is utterly on the basis of this common interest that society ought to be governed."

9. There is, however, a question of whether Rousseau would permit consideration of the public interest to take place behind a Rawlsian veil of ignorance. According to Barry (1964, 13) Rousseau insists that the policy's effect on the voter "must actually be in prospect."

10. However, we, like Barry, believe that a meaningful concept of public interest can be defined even in the context of the large, modern nation-state, not just for a city-state such as Rousseau's Geneva.

11. It is well known that Arrow (following Black 1958) proved a possibility theorem for single-peaked preferences. Sen (1966) specified a set of restrictions on individual preference orderings necessary and sufficient to guarantee transitivity of social choice. Gaertner and Heinecke (1978) and Feld and Grofman (1986a, 1986b) have, in effect, restated those conditions in terms of what the latter refer to as "net preferences." In the Gaertner and Heinecke and Feld and Grofman approach, it is not necessary that any type of preference ordering be excluded. What is necessary is that preferences over any set of three alternatives cancel each other out so that the only preferences orderings that remain (the net preferences) give rise to a transitive ordering.

Feld and Grofman (1986a, 1986b, 1988) show that voter preferences over a set of four possible presidential candidates in 1980 satisfied the net preference condition and gave rise to orderings that were single-peaked with respect to an underlying left-right continuum: Kennedy-Carter-Ford-Reagan. A sufficient condition for what we call "net single-peakedness" is the ideological margins condition. It requires that the matrix showing the margin by which alternative $i$ would defeat alternative $j$ in a paired contest between only those two alternatives (negative if $j$ loses to $i$) has the properties that there is a way of ordering alternatives such that in every row, above the main diagonal, margins increase (or at least do not decrease) as we move to the right *and* such that in every column, above the main diagonal, margins increase (or at least do not decrease) as we move from the entry in the top row downward. This line of research on ideological margins parallels, for preferences as opposed to judgment, our work on Borda margins.

12. See n. 11.

13. Also see n. 11.

14. The only circumstance under which the outcome of majority voting among the three groups of three and simple majority among the nine voters can differ is when fewer than five voters shape the outcome of indirect majority rule. But this can occur only when the votes within the three subgroups are 2-1, 2-1 and 0-3. The probability of this split occurring if indirect majority rule reaches the wrong answer is $27p^4 (1 - p)^5$; the probability of this split occurring if indirect majority rule reaches the correct answer is $27 (1 - p)^4 p^5$. Thus, after some arithmetic, we see that the advantage of simple majority rule over indirect majority rule (three groups of three), for the nine-voter case with identical $p$ values is simply $27p^4 (1 - p)^4 (2p - 1)$. For $p$ greater than one-half this expression will be positive, but it will be relatively small (equalling zero, of course, if $p$ equals one-half or if $p$ equals one). For $p = .6$ the value of this expression is .017; for $p = .7$, it equals .022; for $p = .75$, it equals .016; while for $p = .9$, it equals .002.

This example may provide some insight into Supreme Court decision making when the Court is seeking to "interpret" statutory language or the language of the U.S. Constitution itself, or if we look at cases where the Supreme Court has attempted to enunciate a notion of the public interest (see, e.g., *Federal Power Commission* v. *Hope Natural Gas* 1944 and discussion in Redford 1958).

15. Effectively this is the main point made by Ted Lowi (1964) in his attack on "interest group liberalism."

16. The view that Rousseau was antideliberative, which Estlund wrongly attributes to us, does seem to be held by Walzer (1983). The "intent of Rousseau's argument" that the citizens would always reach a good decision if, "being furnished with adequate information, . . . [they] had no communication with one another," Walzer states, is to "eliminate meetings altogether and ban the clubs and parties that politicians organize to make their persuasiveness effective. . . . Then, each individual would think 'only his own thoughts.' There would be no room for persuasion or organization, no premium on speechmaking and committee skills, instead of an aristocracy of orators, genuine democracy of citizens would take shape" (p. 306). But Walzer then goes to reject this view as impractical, noting that information adequate for judgment cannot be provided except by allowing communication. "Even if we don't talk with one another, someone must talk to all of us, not only supplying facts and figures, but also defending positions" (p. 306).

17. The claim is frequently made that above or below a certain group size, group processes tend to break down. This is a claim made by Madison in *Federalist* 55 (see also *Federalist* 58).

Sixty or seventy men may be more properly trusted with a given degree of power than six or seven. But it does not follow that six or seven would be proportionately a better depository. And if we carry on the supposition to six or seven thousand, the whole reasoning ought to be reversed. The truth is, that in all cases a certain number

at least seems to be necessary to secure the benefits of free consultation and discussion, and to guard against too easy a combination for improper purposes; as, on the other hand, the number ought at most to be kept within certain limits in order to avoid the confusion and intemperance of a multitude.

A related argument can be drawn from the logic of the free-rider problem (Olson 1965). If shirking falls off more than linearly with group size, the gain in competence with group size identified in the Condorcet jury theorem may be outweighed by other social-psychological effects (cf. Grofman 1974).

18. One relevant model is that for tasks where different actors possess different pieces of knowledge or different types of skills. In such circumstances, deliberation and coordination is needed. Without communication, groups will fail. Metaphorically, in this model, we may think of the public interest as a kind of jigsaw puzzle. We do need to clarify one point, the meaning of the term *independent choices*. As we use that term, it has a technical meaning, namely, that the probability that voter $i$ makes a correct choice will not be affected by whether or not voter $j$ has made (or will make) a correct choice. It does not mean what it might mean in ordinary usage, to wit, that members of the group lack a shared background of knowledge or values. Nor does independence, per se, imply the absence of communication. Our discussion of voter independence was not as clear as it might have been. We do not actually hold some of the views Waldron takes us to task for.

19. There is a literature in social psychology that touches on these questions. A useful review is found in Hastie 1986. Bordley (1986) and Dalkey (1986) review modeling issues related to these questions, as does Grofman (1980; see esp. the references to the work of James Davis and associates on models of conformity and persuasion in jury decision making). The general problem of optimizing judgmental accuracy of groups in situations where voter choices are nonindependent is beyond our scope here. For some efforts along that line see Owen 1986, Shapley and Grofman 1984, and Grofman 1980.

20. For the special case where the formal voting rule is supramajoritarian, Grofman (1979) has shown that group deliberation can reduce group judgmental accuracy if it takes the group away from de facto majority rule. See also n. 11.

21. We do not dispute Waldron's claim that Rousseau was hostile to indirect democracy. There are important parallels between the views of Rousseau and those of Condorcet, but certainly their views of democracy are not identical.

22. If there are widely endorsed norms of citizenship, we do not need to rely solely on internal moral imperatives to motivate their implementation. Social processes can provide private incentives to reinforce norms (Axelrod 1986). Also, in a representative democracy, even if norms of citizenship weaken, norms of what is appropriate behavior for legislators, administrators, or jurists may remain strong. For such individuals, knowledgeable pursuit of the public good remains the norm even if only observed in the breach.

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