CHAPTER 4

Political Equality in Decision Rules: Equality Implies Majority Rule

This chapter provides a justification for majority rule for democratic decision making. This might seem superfluous, arguing something that is obvious or at least unchallenged. Indeed Dahl (1956) begins his chapter on populist democracy with a series of quotes from Aristotle, Locke, Rousseau, Jefferson, Lincoln, and Tocqueville, all arguing that democracy essentially implies majority rule. However, there are three reasons for having to provide a justification for majority rule. First, most countries that are regarded as democracies do not use simple majority rule in their legislative process; rather they have systems of checks and balances or division of powers that effectively require more than a simple majority to pass legislation. Second, the results of social choice theory show that the conventional justification of democracy—that majority rule constitutes, or at least reveals, the "will of the people"—is deeply problematic. Third, as Dahl points out at the end of his chapter on populist democracy, in modern democracies we do not make decisions directly through majority rule but through representatives. This chapter argues that the traditional justification of democracy as posited by traditional democratic theory (but for the most part accepted by social choice theory, as was argued in chapter 2) needs to be replaced. Instead of viewing democracy as a process that takes the preferences of individuals and produces the popular will, democracy needs to be seen as a deliberative process structured by a social decision rule. The social decision rule is democratic insofar as it is procedurally fair, that is, conforming to the principle of political equality.

After a representative body has been chosen using a seat allocation rule, this body legislates using a social decision rule. This chapter considers what social decision rules respect the value of political equality. If we limit ourselves to parliamentary amendment procedures, then political equality implies simple majority rule as the decision-making rule. This excludes not only weighted voting and supermajority rule, but also divi-

sion of powers, presidentialism, and systems with checks and balances that are effectively supermajoritarian. However, this advantage comes at a cost. Majority rule is not transitive. That is, it allows cycling—situations where alternative *a* beats *b*, *b* beats *c*, but *c* beats *a*.

This result has led some to the skeptical conclusion that democracy can only be justified in the most minimal terms. Riker's *Liberalism Against Populism* (1982) is the most prominent statement of this view. However, although social choice does undermine a Rousseauian populist justification of democracy based on the existence of a unique general will, it does not lead to the skeptical conclusion of Riker that the only viable form of democratic justification is a minimal liberalism. If we abandon the constitutive/epistemic framework (that is, that democracy has to provide us with "the" will of the people), then there remain other justifications for democratic processes. It is possible to justify democratic institutions in terms of procedural fairness, which we consider in this chapter. It is also possible to give a deliberative-pragmatic justification, arguing that democratic institutions are justified by the fact that they encourage rational deliberation and social inquiry (see chapter 6). Social choice provides us with sharp tools for determining which institutions meet the criteria of procedural fairness. Indeed, although social choice undermines a populist justification of democracy, it actually recommends the rule preferred by populists—majority rule—as the only fair decision rule.

Following Cohen (1986) we can classify procedural justifications of democracy using Rawls's (1971/1999, 74–75, 176, 318) typology of procedural justice. One option is imperfect procedural justice. There still exists a general will, but we only have an imperfect procedure to find this, as elections only provide a fallible estimate of what the general will is. Cohen argues that the "epistemic populism" advocated by Coleman and Ferejohn (1986) is of this type. I will argue that the continuing existence of an objective general will in such circumstances is implausible. However, there are other possibilities. We can justify democracy on pure procedural grounds—there is no objectively correct answer, but the procedure for making the decision is procedurally fair. Alternatively we can provide a quasi-pure justification—the procedure selects one outcome from the set of outcomes that are normatively acceptable. I will argue that a plausible case can be made for both the pure and quasi-pure procedural lines of justification. I will also briefly consider pragmatist and deliberative justifications of democracy, to which I will return in chapter 6. First, however, we turn to the impact of the social choice results and Riker's interpretation of them.

1. The Impact of Social Choice Theory

Social choice theory gives us two key results relevant to democratic theory. First, making a decision democratically (in the sense of respecting political equality) requires us to use majority rule in practical legislative situations, or at the very least, it eliminates all the commonly used alternatives to majority rule. Second, majority rule does not typically produce a single, best outcome but rather allows cycling. On the basis of this Riker argues that the results of voting are meaningless. This section will lay out these results in intuitive form and show why Riker's conclusion does not hold.

The first result is a consequence of May's (1952) theorem, which proves that majority rule is the only binary social decision rule (i.e., the only social decision rule for deciding between two alternatives) that is anonymous, neutral, decisive, and positively responsive, as defined in chapter 2.[1] Anonymity and neutrality imply that if two alternatives get the same number of votes, the result must be a tie. Adding positive responsiveness to this implies that the alternative that gets more votes must win (i.e., majority rule). The political relevance of May's theorem is that if we diverge from majority rule, then we must either privilege some voters over others, or privilege some alternatives over others. If we use any form of weighted voting, we clearly advantage some voters. If we use a supermajoritarian voting system, we advantage the status quo (and those who like it) because in the event of neither alternative receiving (say) 60 percent of the votes, the status quo is chosen.

It might be argued that positive responsiveness is too strong a requirement. For example, Nurmi (1987, 67) argues that while positive responsiveness is a desirable quality, nonnegative responsiveness (if two alternatives are in a draw, and a voter switches to A, A does not lose as a result) is more essential. However, if we substitute nonnegative responsiveness for positive responsiveness, anonymity and neutrality still require a sticky form of majority rule—the alternative that wins the most votes must get at least a draw. Of course in politics draws are typically not possible, and the only way we can break a draw and still respect neutrality is to choose randomly. Contrary to the claim of Coleman and Ferejohn (1986, 18–19), relaxing positive responsiveness does not allow us to use supermajoritarian decision rules as this term is normally understood in politics—if we allow the status quo to stand in a case of a draw, we have violated neutrality, as the status quo is privileged. Rather we are simply allowed to use rules such as one that chooses the alternative that gets more than 60 percent of the vote and otherwise tosses a coin to decide, or indeed a rule that chooses completely at random. These rules are

all less responsive to preferences than majority rule. As shown by the results of Rae (1969), Taylor (1969), and Straffin (1977), majority rule is also the rule that maximizes responsiveness to people's preferences.

We argued earlier that binary independence should be required in social decision rules (chapter 2). This was justified by the fact that in a legislative setting it is possible to arbitrarily create new alternatives to manipulate the outcome. If we do not limit ourselves to binary rules, various anonymous and neutral ordinal procedures are possible, including the Borda count, the Copeland rule, and the Kemeny rule. However, even if the case for demanding binary independence is not accepted, this only weakens the argument made here slightly. Instead of political equality implying majority rule, it implies majority rule or some other nonbinary rule that satisfies anonymity and neutrality, such as the Borda count, the Copeland rule, or the Kemeny rule. Political equality still rules out weighted voting and supermajoritarian decision rules. Thus the demand of political equality eliminates all of the commonly used alternatives to majority rule.

The second social choice result of relevance to us is that majority rule does not necessarily produce a single best outcome if there are more than two alternatives, but rather allows cycling (a situation where a majority prefers alternative 1 to alternative 2, alternative 2 to alternative 3, but alternative 3 to alternative 1). The possibility of majority-rule cycling has been recognized since Pliny the Younger (see Farquharson 1969; McLean and Urken 1995, 67–70). The phenomenon was rediscovered in modern times and given a rigorous exposition by Condorcet (1788/1995, 113–50) then independently rediscovered by Dodgson (1876/1995) and Black (1948). The simplest example of voting cycling is the familiar Condorcet cycle, as illustrated with the preference profile in table 4.1.

If voter 1 prefers candidate a to candidate b to candidate c, and voters 2 and 3 have the preferences given in the figure, then a majority of the voters prefer candidate a to candidate b, and a majority prefer candidate b to candidate c. However, a majority also prefer candidate c to candidate a, producing a cycle. Arrow's (1951/1963) theorem is essentially a generalization of this. If the rule is nondictatorial and is based only on pairwise comparisons between a and b (satisfies independence of

TABLE 4.1. The Condorcet Cycle

Voter 1	**Voter 2**	**Voter 3**
a	b	c
b	c	a
c	a	b

irrelevant alternatives), then we can find some preference profile that produces cycling.

The Black-Arrow results only show that cycling will exist under some preference profiles. The results of Black and Newing (1951/1998), Plott (1967), McKelvey (1976, 1979), and Schofield (1978) show that if we are dealing with multiple issues or an issue that has more than one dimension, then cycles will nearly always occur. This result has been proved using powerful mathematical tools, although it is possible to present it geometrically, as demonstrated by Enelow and Hinich (1984), Feld and Grofman (1987), and N. Miller, Grofman, and Feld (1989). (See Austen-Smith and Barks 2000 for a comprehensive, technical exposition.) The basic intuition is that there are always overlapping winning coalitions, so any winning coalition can be broken. Consider a three-person divide-the-dollar game where the players decide by majority rule as shown in figure 4.1. Point A represents player A taking the whole dollar, point B represents player 2 taking the whole dollar, and so forth. A point halfway between A and B represents players A and B splitting the dollar between them and giving none to C, while a point in the middle of the triangle represents a three-way split. Suppose the first proposal is a three-way split. Player A can then propose to player B that they split the dollar between just themselves, and both of them will vote for this as they can both get more than with a three-way split. However, player C can then go to player B and propose giving player B 60 cents, while taking the remaining 40 cents himself. Players B and C will both vote for this over the previous split, as they are both better off. However, player A can adopt the same strategy, offering player C 60 cents. This cycle can continue indefinitely. Of course, in practice the players may decide to split the dollar three ways to avoid the negotiation costs involved and the risk of being the one excluded (especially if the game is repeated many times), but this does not reduce the importance of the potential for cycling. If they come to a compromise, it is under the conditions of the threat of cycling. Majority rule does not produce a single outcome that cannot be defeated. In technical language, the core (the set of alternatives that cannot be beaten) is empty. It is always possible to split the winning coalition by offering one of its members a better deal.

This model can be generalized to policy choice. Instead of the players dividing a dollar, they have to decide a policy on two issues, say economic policy (high or low taxes and spending) and abortion (how permissive or restrictive the policy should be). Let us assume that each player has an ideal set of policies and prefers that the eventual outcome be as close to that as possible. This assumption (that preferences are related to a distance function) is actually not required to prove the cycling

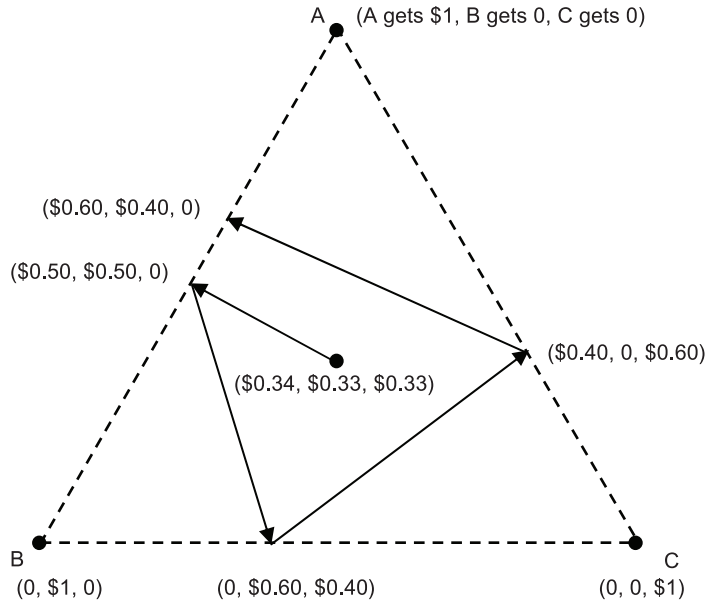

Fig. 4.1. Cycling in a three-person majority-rule divide-the-dollar game

theorem—all that is required is that preferences be continuous.[2] However, having preferences based on distances allows us to use simple geometry instead of algebraic topology. Thus in figure 4.2 we assume player B is left-wing on economic policy and permissive on abortion, while player C is right-wing on economics, but also permissive on abortion. Player A is moderate on economic policy and restrictive on abortion. In this context, we can construct the same kind of cycling behavior in policy choice as we found with the divide-the-dollar game. There are always multiple potential winning coalitions, as any coalition of two players can overturn the current outcome.

Indeed, we can find far more radical cycling. In figure 4.1, the cycling was limited to the triangle defined by the players (the players distributed all the money among themselves). However, in figure 4.2, it is possible to create agendas that can take us beyond the triangle to any alternative we choose. Suppose we start with alternative 1 in the center of the triangle. Suppose that alternative 2 is proposed as an alternative. Both players B and C prefer alternative 2 to alternative 1, as it is (marginally) closer to their ideal points, so alternative 2 is adopted. Now suppose alternative 3 is proposed against alternative 2. Both players A and B will vote for it, so it will be adopted. Likewise, alternative 4 will be adopted over alternative

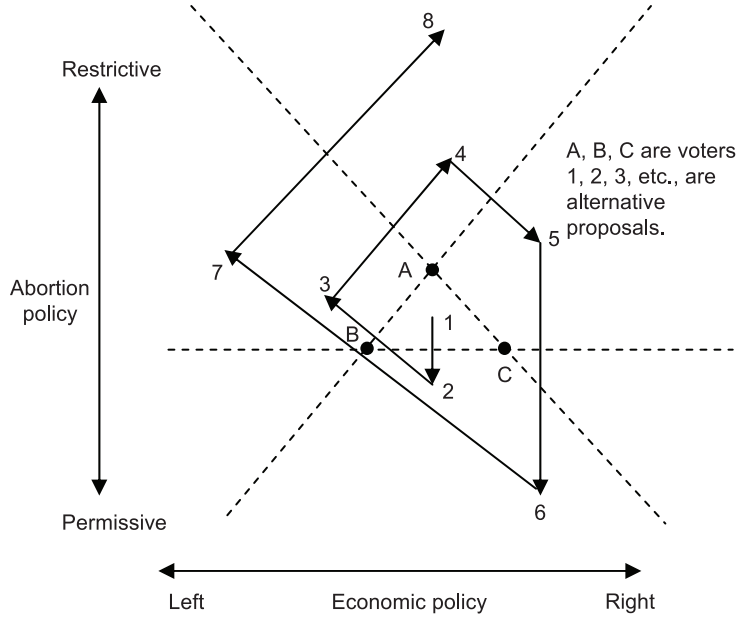

Fig. 4.2. Global cycling in policy space

3 with the support of players A and C. We can continue like this indefinitely, each time proposing an alternative that two of the players support over the previous one, but which is farther from the center of the triangle. This is the essence of the global cycling result. We can construct an agenda that will get us to any alternative through a series of votes, even alternatives that are ludicrously far from the ideal points of every voter.

A possible objection is that it is unnecessary to consider the two issues together, and that we could avoid cycling if we took separate votes on each issue. Some writers (D. Miller 1992; Dryzek and List 2003) have suggested that deliberation may allow us to disaggregate issues in this way. This objection is misguided. First, as Knight and Johnson (1994) argue, deliberation may allow us to disaggregate decisions, or it may have exactly the opposite effect, uncovering new dimensions and interdependencies. Second, and more important, many policy choices are intrinsically multidimensional and interconnected. If we take individual votes on such issues, the combined outcome may be one that nobody would support as an overall outcome considered together (see Anscombe 1976; Saari and Sieberg 2001; Lacy and Niou 2000). Indeed the outcome may even be logically or practically impossible. It would make no sense to de-

sign an aircraft by taking independent votes on the choice of wing, fuselage, wheel, and so on. Similarly, it makes little sense to talk about policy on education spending, for example, without considering other government programs that might receive the same money. A great deal of policy-making is about the relative weight we give to different objectives. Such problems are by their very nature multidimensional.

A better objection would be that the extreme outcome 8 in figure 4.2 would never occur in practical politics. This is probably the case—cycling is likely to be limited. An alternative far beyond the central triangle of A, B, and C, such as alternative 8, will be unanimously beaten by *any* alternative in the central triangle. In order to move far beyond the central triangle, the agenda setter would have to exclude all central alternatives after the very early rounds. Thus an alternative far from the central triangle would be unlikely to be chosen with a random agenda, as every time a central alternative was proposed it would win and pull us back to the center (see Kramer 1977; Ferejohn, McKelvey, and Packel 1984 for rigorous expositions of this intuition). Neither is it likely that we would get far from the center with an open agenda, as anyone unhappy with the extreme outcome could pull it back by proposing a central alternative. Strategic voting could also prevent the agenda setter's plan—if the players knew that the agenda would eventually lead to a very undesirable outcome, they could vote against every proposal. Thus in practice we are unlikely to find the kind of indeterminacy that drives Riker's argument that the results of majority rule are meaningless. Rather, the results of majority rule are likely to be confined to a limited central area. However, the problem of cycling within this area remains, so social choice still poses significant questions for democratic theory.

Nicholas Miller's (1980) concept of the uncovered set allows us to formalize the conclusion that cycling is likely to occur, but that it will be limited to a small, central set. An alternative is defined as covered if there is another alternative that beats it (by majority rule) and beats every alternative that the first alternative beats. The uncovered set is the set of alternatives that are not covered in this sense. Miller shows that most common majority-rule institutions (open amendment, closed amendment with strategic voting, two-party competition) produce outcomes in the uncovered set and speculates that the uncovered set tends to be small and centrally located. McKelvey (1986) shows that this is indeed the case when preferences are spatial (outcomes are preferred the closer they are to a player's ideal point) and provides limits for the size of the uncovered set. Schofield (1999) provides a more general characterization of the uncovered set.[3] Feld et al. (1987), Feld, Grofman, and N. Miller (1988, 1989), and N. Miller, Grofman, and Feld (1989) provide

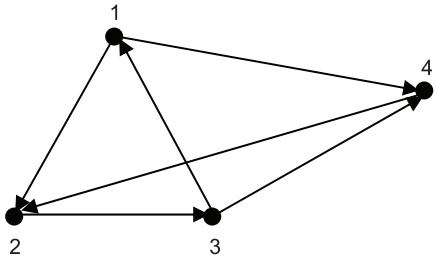

Fig. 4.3. The covering relation

geometric interpretations of the uncovered set, and they show that it becomes small as the number of voters becomes large.

The uncovered set can be seen as the set of alternatives that could be reasonably chosen by a group of people deliberating. Conversely, a covered alternative could never be a reasonable choice. Figure 4.3 illustrates this intuition. Suppose we have four alternatives: 1, 2, 3, and 4. An arrow in the figure means that one alternative is majority-rule preferred to another. Thus alternative 1 is majority-rule preferred to 2 and 4, but 3 is preferred to 1. Alternative 4 is covered. Alternative 1 beats alternative 4, and it also beats everything that alternative 4 beats. Thus there is no good reason to propose alternative 4 as a group choice. True, alternative 4 beats alternative 2, but so does alternative 1, and alternative 1 is preferred to 4. No matter what alternative it is compared to, alternative 1 does at least as well as (and sometimes better than) alternative 4. The same is not true for alternative 2, and alternative 2 could be reasonably proposed in deliberation. Indeed, if alternative 3 was the other alternative under consideration, alternative 2 is the only one that can beat it. With these majority-rule preferences, it is not clear whether alternative 1, 2, or 3 should be chosen, but it is clear that 4 should not be.

It has proven difficult to determine exactly how large the uncovered set will be in practice. However, it appears likely that it will include a nontrivial part of the alternative space even with a large number of voters. Hartley and Kilgour (1987) show that with three voters and Euclidean preferences, the uncovered set is equal to the Pareto set (the set of alternatives that are not unanimously defeated by another alternative) when the voters are equidistant. Epstein (1998) shows that in distributive games, the uncovered set is essentially the Pareto set. Bianco, Jeliazkov, and Sened (2004) calculate the uncovered set for the U.S. House using Poole and Rosenthal's (1995) NOMINATE scores. They find that the un-

covered set accounts for a considerable amount of the space between the median Democrat and the median Republican. Thus it appears that while the uncovered set eliminates a great deal of the policy space, there is still a considerable amount of space left for bargaining.

This bargaining is normatively important. The fact that the legislators are forced to bargain can reveal cardinal utility information. That is, it can reveal not only which alternatives legislators prefer but also the intensity of their preferences. As Buchanan and Tullock (1962) argue, legislators can trade their support on issue dimensions they care little about, for support on issues that are of crucial importance to them. These choices reveal information about intensity of preferences. Thus the outcome of a majority-rule bargaining game reveals information unavailable to us if we only considered the legislators' preference orderings. Indeed, this may lead to better outcomes than those produced by a (transitive) social welfare function (the conditions under which this is the case are considered in chapter 6). However, legislative bargaining and vote trading cannot overcome the problem of cycling or Arrow's theorem, as Tullock (in Buchanan and Tullock 1962, 338–39) argues it does. Rather, vote trading typically implies unstable outcomes (see Park 1967; Bernholz 1973; Oppenheimer 1975; N. Miller 1975, 1977a). Instead we can argue in the manner of N. Miller (1983) that cycling may not be such a bad thing after all.

In practice, parliamentary government typically involves electing a government by majority rule and then allowing this government to pass its program on party line votes, subject to the possibility of majority-rule votes of no confidence. This amounts to a comprehensive negotiated outcome, and it satisfies anonymity and neutrality. Instead of thinking of the legislature as making a succession of decisions on individual issues, with legislators trading votes across issues, we have one grand bargain at the beginning of the legislative session that encompasses all issues. (Indeed in many European democracies, the agreement between coalition partners is often a long, exhaustive document taking months to negotiate.) This grand bargain has the added advantage that all costs of the bargain are internalized (see chapter 6). There is no possibility of a series of votes that are individually majority supported but are not supported when considered as a package. Thus the inefficiency associated with the "paradox of vote trading" (Riker and Brams 1973) cannot occur.

Thus we can see that cycling is almost inevitable with majority rule. With any decision of any complexity (that is, any decision that cannot be reduced to a single dimension), there will be multiple, overlapping winning coalitions. However, this cycling does not produce the radical effects claimed by Riker. While there will be some indeterminacy, cycling will be

limited to the uncovered set. Thus the results of majority rule are neither arbitrary nor empty, but rather reduce to a centrally located set of alternatives. This conclusion—that cycling is ubiquitous but limited—leads us to the conclusion that democratic theory needs to be rethought, but that the normative value of majority rule can be defended against Riker. The next three sections consider various ways this may be accomplished.

The fact that intransitive social preferences are likely to be pervasive in legislatures, together with the fact that the uncovered set is likely to be nontrivial in size, forces us to rethink how a legislative procedure can be neutral and anonymous. Majority rule produces cycling, but a legislative procedure has to produce one outcome. Therefore the process by which the agenda is set also has to be neutral and anonymous. As Nurmi (1987) points out, an amendment process with a set agenda is not neutral even if it uses majority rule, as there is a bias in favor of outcomes that are not considered until the end (see also N. Miller 1995). Similarly, a process where one player gets to choose the agenda is not anonymous, as that player can manipulate the agenda. However, an open agenda process using majority rule would satisfy anonymity and neutrality. Still, such a decentralized procedure might be extremely unstable, and is rarely used (at least for government-sponsored legislation). A legislative rule where the agenda is set by an agent that is subject to a majority-rule vote of no confidence satisfies anonymity and neutrality, providing any member can propose a no-confidence motion. This is the procedure used in many parliamentary democracies.

Excursus: Convincing a Skeptic that Cycling Exists in Practice

We can show theoretically that the existence of majority-rule cycles (at least in the limited form explained here) is virtually inevitable. Even three self-interested people dividing a dollar by majority rule face one. However, there is widespread skepticism among political scientists that cycles have any relevance for practical politics. This may in part be due to the extremely technical way in which the results have been presented or to the drastic empirical predictions that accompanied early accounts of the results—predictions of chaos and instability that did not seem in line with observed reality. It may also be due in part to fact that the normative claims that were drawn from the results were unpalatable to many, notably Riker's claim that majority-rule cycling undermined traditional democratic theory. I will argue that while the drastic empirical predictions and skeptical normative implications of cycling were generally unjustified, majority-rule cycling is practically significant and forces us to

rethink democratic theory. However, we should not expect to observe cycling in chaotic behavior or dramatic Machiavellian manipulation of the public, but rather in mundane phenomena such as coalition negotiations and logrolling.

What empirical evidence is there for majority-rule cycling? The answer is that we observe the effects of cycling in pervasive phenomena such as legislative logrolling and coalition negotiation, which are difficult—if not impossible—to explain without cyclical or at least intransitive social preferences. We cannot directly observe cyclical social preferences, because we cannot make windows into people's souls to observe their complete preference orderings. On the other hand, neither can we directly observe an electron; we can only observe effects that cannot be explained without the existence of such a particle.

One place we can observe the effects of cycling is in coalition negotiations. Indeed, the best way to think about cycling is as the existence of multiple overlapping winning coalitions. Whichever coalition currently makes up the winning majority, there is always the potential for some of the minority to join with some members of the current majority coalition to create a new majority, just like in the three-person divide-the-dollar game in figure 4.1. Thus any majority coalition can be replaced. This is typically the case in countries with multiparty parliamentary government, such as the Netherlands or Norway. In fact, in the Netherlands, most combinations of the main parties have been tried in the last fifty years (Christian-Socialist, Christian-Liberal, Socialist-Liberal). Note that government in such countries is typically not unstable. However, the threat of cycling has profound effects on political behavior and outcomes, in that there is always an alternative government coalition waiting in the wings.

Another place we can observe the effects of cycling is in legislative logrolling (a situation where legislators support measures they do not like as part of a deal to get measures they do like passed). Indeed, Oppenheimer (1975) shows that logrolling is logically related to the phenomenon described in Downs (1957) where a "coalition of minorities" can defeat issue-by-issue majorities. Bernholz (1973) and N. Miller (1975, 1977a) show that logrolling logically implies the presence of cycling or at least intransitive social preferences (roughly speaking, an intransitivity can be thought of as a cycle that includes some ties).[4]

As far as I am aware, no legislative specialist has disputed the importance of logrolling in legislatures where a single, cohesive party does not control a majority. It may take a decentralized form in candidate-centered legislatures such as the U.S. Congress, or it may take the form of a single, grand coalition agreement by parties at the beginning of the

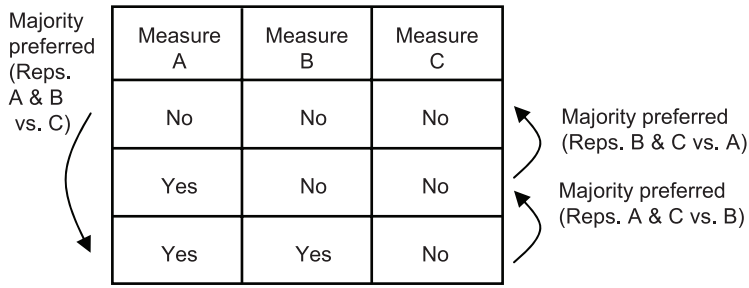

Fig. 4.4. Logrolling implies intransitivity.

legislative term, as is common in Europe. In both cases, normal politics could not go on without some form of logrolling, and thus without some form of cycling or intransitivity. As N. Miller (1975, 110) puts it: "We may note in conclusion that there is some irony in the fact that students of the American political process, on the one hand, have very typically emphasized the importance of logrolling and coalition formation, but, on the other hand, have very typically dismissed the 'Arrow paradox' as little more than a mathematical curiosity or have ignored it entirely. We see that the two phenomena are logically bound together."

The intuition behind the argument that logrolling implies cycling (or at least intransitivity) can be demonstrated simply using the example in figure 4.4. Let us assume the simplest possible example of majority-rule logrolling. Let us assume a three-person legislature, with representatives A, B, and C. Each wishes to pass a measure bearing his or her name. Representative A's measure would benefit A's constituents greatly, but not the constituents of B and C, while it would be paid for by everyone. Similarly the measures proposed by B and C exclusively benefit their constituents. Let us also assume that the three proposed measures are efficient—the total social benefits exceed the costs. Although all three measures are socially beneficial, each will fail in a majority-rule vote, because they only benefit the constituents of one representative, while they impose costs on two. However, if representatives A and B come to a deal, they can pass both their measures and are both better off. Thus passing A and B is majority-preferred to passing nothing. However, representatives A and C could then come to an agreement to repeal measure B. This would make them both better off. If this happens, B and C can then get together and pass a measure to repeal measure A, and we are back where we started. Now any two representatives can make a deal to pass their measures, and the cycle starts over again. (It would be possible to

have a unanimous vote to pass A, B, and C, but then any two representatives would be able to cut a deal to cut out the third.)

We should note that the structure of this problem is similar to that in the divide-the-dollar game in figure 4.1. Any two players can join to claim all the gains, but the third player can split this coalition by offering one of the members even more, and so on. Bernholz (1973) and N. Miller (1975, 1977a) show that any example of logrolling implies the presence of this kind of intransitivity. Therefore, to the extent that logrolling and coalition negotiation are central to politics, so is cycling.

It has been argued that it is possible to create logrolling situations without cycles (Bernholz 1975). However, this relies on agents having a very particular kind of nonseparable preferences (without knowing the outcomes of other issues, people cannot say whether they like or dislike a measure), so the situations defined are not actually logrolling as defined by N. Miller (1975, 1977a) or indeed Bernholz (1973).[5] Furthermore, this should offer little comfort to advocates of a populist conception of democracy. In fact the widespread existence of nonseparable preferences is every bit as problematic for populist democratic theory as cycling. If preferences are in general nonseparable, then a vote on an issue cannot reveal the will of the people about that issue. Rather, the most it can reveal is the will of the people conditional on the way every other issue is resolved. Furthermore, the votes on which the first vote is conditional are themselves conditional on all the other votes. Thus even though there *may* be a single outcome (that is, a collection of decisions) that is majority-preferred to all others, we will never know if we have found it. The only way to know this is to compare every conceivable combination of outcomes, something that is clearly practically impossible in a legislative setting. If preferences are nonseparable, it may still be possible to defend democracy as a reasonable way of negotiating our way through all the independencies between issues (this is compatible with the case made in section 4 of this chapter). However, it is not possible to argue that the collection of votes taken reveal an unconditional popular will.

If we are only seeking situations of intransitivity, as opposed to strict cycling, then it can be shown that this can be produced by a simple collective-action problem. Suppose the familiar Prisoner's Dilemma game in figure 4.5. Let us label the four possible outcomes [A], [B], [C], and [D]. Clearly outcome [D] is majority-preferred to outcome [A]. However, when we compare [A] to [B], the result is a draw, with one player preferring each outcome. When we compare [B] with [D], again we get a draw. However, this violates transitivity, because by transitivity, if [D] is preferred to [A], and we are indifferent between [A] and [B], then we must prefer [D] to [B]. Therefore if collective action problems exist (and

		Player 2			
		Defect		Cooperate	
Player 1	Defect	0, 0	[A]	−5, 10	[C]
	Cooperate	10, −5	[B]	5, 5	[D]

$[D] \rightarrow [A] \sim [B] \sim [D]$

Fig. 4.5. A Prisoner's Dilemma game (player 1's payoffs first)

I am unaware of anyone who claims they do not), then we should also expect problems of intransitive social preferences.

There is a recent body of literature that, while accepting that cycling may theoretically occur, argues that it is unlikely to happen in practice, or at least will not have normatively troubling results (Regenwetter et al. forthcoming; Mackie 2003; Dryzek and List 2003). Although many of the claims made by these authors are convincing, they do not refute the basic point that cycling is pervasive in legislative situations. All three authors challenge Riker's (1982) democratic skepticism. However, from a normative point of view, I believe that they all give too much ground to Riker, in that they accept that the widespread existence of cycling would undermine democracy. Rather than challenging the significance of cycling, I believe a more fruitful strategy is to show that cycling does not undermine the case for democratic institutions such as majority rule, but instead is an essential part of democracy.

Regenwetter et al.'s *Foundations of Behavioral Social Choice Research* (forthcoming) argues that cycles are unlikely to be encountered in elections with a finite, limited number of candidates, as is the case with virtually all candidate elections. The authors argue that previous estimates of the probability of cycling based on the assumption of an "impartial culture" (the assumption that all preference profiles are equally likely) are misleading. If we make more realistic assumptions about preferences, the probability of cycling rapidly falls. Using a Bayesian procedure, the authors also estimate the probability of cycling in actual elections using survey and electoral data, and find it small. As a result, the authors conclude that electoral procedures producing misleading outcomes (failing to select a Condorcet winner—an alternative that beats every other alternative in a head-to-head race) is far more likely to be a problem than cycling.

Regenwetter et al., however, only cover candidate elections, as opposed to legislative bargaining. (It should be noted that justifying populist democracy is not the main goal of Regenwetter et al.'s book, although they argue that their findings should counter the pessimism of

scholars such as Riker [1982] and should allow the conclusion that democratic decision making is possible.) It should not surprise us that cycling is unlikely in candidate elections. It is not possible to order candidates tailor-made to exploit cycling opportunities or to beat certain other candidates. Furthermore, parties may well have a monopoly over candidates of a certain ideological type and restrict their competition (see Aldrich 1995). However, in a legislative setting, it is possible to create new alternatives at will. As argued earlier, it is here that we would expect to observe cycling. Indeed, it is in legislatures that we see the clearest empirical evidence of cyclical social preferences in the form of logrolling and coalition negotiation behavior.

Mackie's *Democracy Defended* (2003) deals with Riker's interpretation of social choice head-on. The goal of the work is explicitly normative, challenging what the author describes as Riker's (1982) "antipopulist" agenda. After arguing that the results of social choice theory do not imply that democratic choice is meaningless, Mackie challenges many of the examples Riker gives of cycling and agenda manipulation, such as the Powell and Depew amendments, the Wilmot Proviso, and the 1860 U.S. presidential election. Many of these examples concern manipulation by an agenda setter strategically contriving cycles, rather than the type of cycling I have discussed. Of course, it is not possible for Mackie to conclusively disprove Riker's interpretation of these events, because it is not possible to know for sure the complete preferences of the agents. (Mackie 2003, 37–38, criticizes Riker on precisely this point.) What Mackie provides is a series of alternative interpretations that do not involve Rikerian manipulation. On the basis of this, he argues that Riker's claim that democratic outcomes are essentially the result of arbitrary manipulation by elites is false.

Once again, this does not refute the claim that cycling is pervasive in legislatures, or make a populist conception of democracy viable. Mackie may well be right that agenda manipulation is far harder to accomplish and less common than Riker (1982) would have us believe; and he is certainly correct in arguing that it is likely to be extremely difficult to manipulate majority-rule procedures to produce outcomes far away from the central group of voters. However a populist conception of democracy demands that a determinate "will of the people" be revealed. In legislatures we observe the effects of cycling in phenomena such as logrolling and coalition negotiation. Given that a different logrolling agreement or a different coalition could have been equally well negotiated, we cannot argue that the outcome that happened was the "will of the people." Rather it was just the agreement that was made. It may well be the case that the degree of indeterminacy in these negotiations exists

within fairly narrow bounds (as argued earlier), but this indeterminacy is normatively important. Indeed it will be argued that it is normatively desirable, allowing minorities to retain some influence and forcing majorities to be reasonable.

Dryzek and List (2003) argue that deliberation can overcome the consequence of cycling. This argument is dealt with in detail in chapter 6. In brief, I argue that deliberation cannot overcome the phenomenon of cycling, but rather that cycling creates the context in which democratic deliberation is likely to take place.

Thus we find evidence for majority-rule cycling in commonplace phenomena such as coalition negotiations, logrolling, and collective action problems. This, however, does not imply dramatic empirical consequences, such as chaos and instability. Neither does the presence of cycling imply Riker's (1982) conclusion that elections have no value except to restrain elites somewhat by throwing the rascals out periodically. It is to Riker's use of the cycling results that we turn next.

2. Riker and His Critics—Majority Rule as Imperfect Procedural Justice

Cohen (1986) argues that Riker's rejection of populism is actually a rejection of populism as pure procedural justice, to use Rawls's terminology. That is, the populism that Riker refutes assumes that the outcome of majority rule itself constitutes the popular will. Cohen argues against Riker that it is possible to defend populism as a form of imperfect procedural justice—there is an objective, correct outcome, but there is no infallible procedure to find it. The "epistemic populism" proposed by Coleman and Ferejohn (1986) is an argument of this type. I will argue in the two sections that follow this that majority rule can better be justified as pure or quasi-pure procedural justice—that is, as a fair procedure or as a procedure that selects one out of the set of acceptable outcomes. This section deals with Riker's critique and the populist response to it.

Riker's interpretation of the social choice results leads to two logically separate conclusions. The first concerns justifications for democracy, and states that populism is untenable as a justification for democracy. The second concerns institutions, and states that the failure of populism implies that majority rule is not normatively privileged over any other institution that occasionally removes governments, even "unfair voting methods" (Riker 1982, 246). Riker conflates the two conclusions because he identifies populism with the argument that majority rule is privileged. However, the two arguments are logically separate.

This gives us two possible responses to Riker. First, Riker can be challenged on the level of justification—the conclusion that populism is untenable can be questioned. This is the route taken by the epistemic populists. Second, regardless of whether we accept Riker's argument about populism being untenable, we can challenge the conclusion that this implies that majority rule does not have normative priority. This is the route I take in the following two sections.

Riker (1982, 238) defines populism as the propositions that government policy should be what the people want and that the people are free when their wishes are law. Populism is rejected by Riker because the social choice results show that majority rule cannot tell us what the will of the people is. Thus Riker (239) does not challenge the normative content of populism—that the government ought to do what the people want—but rather argues that we cannot know what the people want because different voting systems produce different outcomes and the same voting system may produce different outcomes at different times. Riker (241) then proceeds with the crucial assumption that liberalism and populism exhaust all the possibilities for democratic theory. Thus liberalism, defined as the doctrine that voting does no more than provide a means to remove elected officials and prevent tyranny, is the only remaining option. Riker argues that liberalism survives the social choice results because it demands far less of voting, asking only that elections periodically remove officials—possibly in a perverse or random manner. Riker (14) identifies the idea that majority rule has normative value with populism, so when populism falls, so does the normative priority of majority rule. Liberalism does not privilege majority rule, and indeed Riker (250) argues that it prefers institutions (such as division of powers and checks and balances) that restrain majority rule.

Thus Riker provides an argument for both a liberal interpretation of democracy and for liberal (i.e., nonmajority-rule) institutions. However, there are several key assumptions that can be challenged. First, Riker assumes that liberalism and populism are the exclusive alternatives for democratic theory. Nowhere does Riker defend this assumption; it is simply asserted as if self-evident (1982, 241). This assumption is crucial to the practical side of Riker's argument. If there are other alternatives, the failure of populism would not imply rejection of the normative priority of majority rule. There might be other ways to justify majority rule, and I will argue that this indeed is the case. As Knight and Johnson (1994) put it, Rousseau and Schumpeter do not exhaust the possibilities of democratic theory.

Second, Riker's interpretation of the social choice results is questionable. Riker argues from the global cycling result that the results of

majority rule are arbitrary. However, the social choice results summarized in the previous section (many of which, to be fair, are more recent than Riker's book) do not indicate this. It is true that majority rule does not produce a single determinate outcome, but the result is likely to be drawn from a small, central set of alternatives. Thus majority rule does provide a great deal of information about which alternatives are reasonable choices. This opens the door both to a revised form of populism (such as the epistemic populism of Coleman and Ferejohn) and to procedural justifications of democracy that do not depend on the concept of a popular will.

Finally, if we accept Riker's reading of the social choice results, it can be questioned whether liberalism actually survives any better than populism. This is the critique provided by Coleman and Ferejohn (1986, 21–23). They argue that Riker's interpretation of the cycling results is as fatal to Riker's instrumental justification of liberalism as it is to populism. Riker argues that the only justification elections can have, given the social choice results, is the instrumental liberal one of checking the oppressive tendencies of government. However, if the results of majority rule are completely arbitrary, voting cannot fulfill this function. If removal from office is completely random (like being struck by lightning), then elections will have no effect on the behavior of government. For elections to check the behavior of governments, they need to remove bad governments more often than good governments.[6] However, if they do this, then they provide some information as to whether the government is in line with the public will or not. This allows for a weaker (epistemic) form of populism. However, Przeworski (1999) provides an answer to this objection, giving a convincing justification of the value of minimalist democracy, even if the results of elections are essentially random.[7]

Coleman and Ferejohn give a social choice–informed alternative to Riker, but, as Knight and Johnson (1994, 281) argue, they retain Riker's definition of the problem. That is, they accept that the key question is whether government decisions can be determined by the popular will. Riker argues that populism is untenable because majority rule cannot tell us what the popular will is. Coleman and Ferejohn (1986, 15–19) challenge the assumption that indeterminacy in voting results means that voting cannot reveal the popular will. They put forward a modified version of populism—epistemic populism—in which the popular will is assumed to exist, but is imperfectly known. Voting does not define the popular will but only provides information about what it is—hence the qualifier epistemic. Voting is privileged as the best source of information about what the popular will is. This assumes that the results of voting are not completely arbitrary. Ferejohn and Coleman refer to the social choice results

outlined in section 1 to argue that this is the case. Voting produces results that are to some degree indeterminate, but cycling is confined within certain bounds, so voting can still inform us about the popular will.

There are problems with epistemic populism, however. Most notable is the failure to provide any justification for the existence of a popular will independent of the results of voting. Coleman and Ferejohn indeed do not even attempt to defend the existence of a popular will but merely state it as an assumption that there needs to be an objectively correct policy. This is especially problematic as we do not simply need objectively correct principles but actual policies. We need to argue that there are objectively correct policies on (say) tax exemptions for colleges. By comparison, by the time we get to this level of detail, Rawls (1971/1999, 176, 318) has long since abandoned imperfect procedural justice, arguing that we can only select one alternative from the set of policies that are roughly compatible with the principles of justice.

A second problem is the need for votes to be interpreted as judgments and not expressions of interests. For democracy to have epistemic value, votes have to represent considered judgments of what the correct policy is. However, political philosophers do not get to tell voters how to use their votes. The need for votes to be disinterested judgments thus severely limits the applicability of epistemic populism.

A final reason for abandoning epistemic populism is that we can get the same practical results without the unnecessary metaphysical weight of an objectively correct set of policies. The practical implications of epistemic populism are virtually identical with those of the procedural justifications of majority rule laid out in the next two sections. Epistemic populism gives majority rule normative priority as the best means of finding the correct policies, although it acknowledges that this method is fallible. Justifications of majority rule as pure or quasi-pure procedural justice do not claim to produce an objectively correct policy, but still give normative priority to majority rule either as a fair procedure or as a procedure that produces reasonable outcomes. Thus we get the same practical results—majority rule is justified but by no means infallible. The advantage of the pure and quasi-pure justifications is that they may be convincing to people who are not willing to accept the metaphysical assumptions demanded by epistemic populism.

Thus Riker's argument that the results of social choice theory force us to accept minimal liberalism and constitutionally restrained democracy can be challenged without accepting a populist justification of democracy. First, the results of majority rule are far less indeterminate than Riker argued, a point made far more clear by research published since Riker's book. Second, the assumption that populism and minimal

liberalism are the only logically possible alternatives is untenable. Riker makes no argument for this assumption, but without it Riker's normative argument crumbles. Strangely, many of Riker's critics do not challenge this assumption but try instead to justify some form of populism. However, if other alternatives are possible, we can abandon populism without being reduced to minimal liberalism. Most significant, we can abandon a populist justification for democracy, while still arguing for the institution that populists favor—majority rule. Thus majority-rule democracy can be defended, but not in populist terms. Rather than defending democracy as revealing the will of the people, we can defend it in procedural terms as a fair procedure for reaching reasonable agreements. The next two sections provide such arguments.

3. Majority Rule as Pure Procedural Justice

Given that the results of majority rule are not completely arbitrary, we can provide a pure procedural justification for majority rule based on its intrinsic fairness. Rawls defines pure procedural justice as a situation where justice is defined purely in terms of the fairness of the institution and not in terms of the outcome. An example of this would be a fair lottery. There is no reason why anyone deserves to win more than anyone else, but we can say that if the lottery is fair, then it satisfies the requirements of pure procedural justice. We can provide a similar justification for majority rule. Even if we remain agnostic about what the correct outcomes are, we can still demand that the procedure be fair. One way of thinking of this is in terms of distributive justice. We could argue that influence over collective decisions is a good that is desirable for everyone and demand that it be distributed fairly. Of course, the degree of influence a person exercises depends on things like skill and personality that we cannot distribute. However, we can insist that political resources be distributed fairly. Distributing political resources fairly clearly requires that votes are distributed equally. However, it also requires that the procedures for turning votes into decisions are not systematically biased in favor of certain voters or certain alternatives.

Social choice theory gives us very strict prescriptions for which institutions are fair, at least if we define fairness in terms of political equality. As stated earlier, May's (1952) theorem shows that the only determinate procedure for choosing between two alternatives that satisfies political equality is majority rule. This eliminates all the commonly used alternatives to majority rule, as any other nonrandom binary procedure privileges either some voters or some alternative (and thus the voters who like

it). Random procedures (such as a pure lottery) may also satisfy political equality, but majority rule is the procedure that is most responsive to voters' preferences and thus makes most use of the information we have about what people want. Thus if we have representative democracy, political equality implies that these representatives use majority rule to produce collective decisions. In terms of the rule to elect representatives, chapter 3 showed that the only single-vote electoral system that satisfies political equality is proportional representation.

It should be noted that Rawls does not consider majority rule as an example of pure procedural justice, as it sometimes produces unjust outcomes. Rawls, of course, is assuming that justice has an independent definition in the form of the two principles he has deduced. Chapter 2 has already provided arguments why the value of political equality needs to be applied directly to political institutions and not to a hypothetical choice situation.

If we are to treat democratic justice as a form of distributive justice, it is necessary that political resources be a desirable good. Political resources are a desirable good if they make a difference to the outcome.[8] If it were the case, as Riker asserts, that the results of majority rule were arbitrary, it would not matter whether I am fairly represented or whether the procedure is biased against me. The results would simply depend on the guile of agenda-manipulating politicians. Questions of procedural fairness would be moot. Therefore, first it is necessary to show that the results of majority rule are not completely arbitrary, but that preferences actually affect outcomes. This follows in a straightforward manner from the social choice results summarized in section 1. The outcomes under majority rule will fall in the uncovered set, which is typically a small, centrally located set of alternatives. The location and size of the uncovered set depends on which outcomes are majority-rule preferred to others, and thus depends on the preferences of voters.

Second, it is necessary to show that if the voting procedure is biased against me, my interests suffer. It seems obvious that if the voting procedure is biased against me so that my vote and the votes of people like me do not get full weight, then the outcome is less likely to be favorable to me. This is indeed the case. If the votes of my group are underweighted enough, then the number of coalitions we can form with other players that can change the outcome falls. We are less able to form coalitions to overturn outcomes that we do not like. Furthermore our bargaining power falls. The number of coalitions where we make the difference between winning and losing decreases (and of course falls to zero if our votes are completely discounted).[9] We cannot be better off, and may well be worse off.[10] The procedure can be biased against us in other ways. If

the procedure is biased in favor of some outcome, this may disadvantage me if I do not like this outcome. All supermajoritarian voting systems are biased in that they favor the status quo, as will be demonstrated at length in the next chapter. Therefore we have an interest in making sure we get our fair share of voting weight, and that the procedure is not biased in favor of an outcome we find undesirable.

Thus I have every reason to believe that if I do not receive my fair share of political resources—if my vote is underweighted or if the voting procedure is biased against me—then my interests are likely to be harmed. Therefore we can apply the principles of distributive justice to political institutions, arguing that justice consists of distributing political resources equally. We can thus justify majority rule as the only decision rule that treats every voter and every alternative equally.

4. Majority Rule as Quasi-Pure Procedural Justice

The justification of majority rule as pure procedural justice in the last section makes no reference to the qualities of the outcomes produced by majority rule. Indeed this is why I refer to the justification as being pure in terms of the procedure. Majority rule is democratic because the outcome is the result of a fair game in which no voter and no alternative is unduly advantaged. While this can justify majority rule as being democratic in the narrow sense of satisfying political equality, it should leave us slightly uneasy. It does not justify majority rule as a way of reaching reasonable collective decisions.

However, majority rule can be justified as producing reasonable outcomes. We have seen that majority rule produces outcomes in the uncovered set. This set of alternatives is the set that could be reached by reasonable deliberation. Put another way, any alternative that is covered cannot be reasonably defended. If alternative a covers alternative b, then a is preferred to b, and to everything b is preferred to. There is no good reason to propose b in discussion, because a could be substituted for it and would do at least as well, no matter what it is compared to. Furthermore, the uncovered set is typically a small, centrally located set of alternatives, so majority rule is an effective means of eliminating most conceivable alternatives.

Using Rawls's terminology, we may label this a quasi-pure procedural justification of majority rule. The procedure picks one outcome out of the set of reasonable outcomes, thus producing one outcome within the acceptable range. Rawls also justifies majority rule as quasi-pure procedural justice, but his argument is rather different from that presented

here. For Rawls (1971/1999, 318), the acceptable range of outcomes is defined independently by the two principles of justice, which he derives from hypothetical deliberation behind a veil of ignorance. Thus a law is just "if the law actually voted is, so far as one can ascertain, within the range of those that could reasonably be favored by rational legislators conscientiously trying to follow the principles of justice." By contrast, I define the acceptable range of reasonable outcomes in terms of the outcome of an actual deliberative procedure. An outcome is reasonable because it is possible to make a case for it, and there is not another outcome that is unambiguously preferable to it (that is, it is not covered).

Majority-rule deliberation serves as an effective means for identifying a selection from the uncovered set. Calculating the entire uncovered set is actually extremely difficult. To do this, we would need to know everyone's preference over every conceivable alternative. While we can map the uncovered set in highly simplified hypothetical examples, the amount of information required to calculate it in practice with real preferences is prohibitive. However, we know that the outcome of majority-rule deliberation will lie within the uncovered set. Thus majority rule gives us a practical way to identify an acceptable outcome.

Thus although majority rule cannot give us a single "best" outcome, it gives us a great deal of information about which alternatives are reasonable choices and which are not. Thus Riker is correct to argue that a Rousseauian populism that requires the identification of "the" general will—a single alternative unambiguously preferred by the population—is not viable in light of the social choice results. However, it is incorrect to claim on this basis that the outcome of majority rule is arbitrary or meaningless. Majority rule, after all, gives us a social preference between any two alternatives. While we do not have a single social preference, we do have a mass of preference relations.[11] From this information we can distinguish which alternatives may be reasonable choices, and which can never be.

5. Other Justifications for Majority Rule

The two justifications of majority rule that I have just given are not exhaustive. If we abandon the constitutive/epistemic framework (the idea that majority rule reveals the general will in a populist fashion), it is also possible to defend majority rule in a pragmatist or deliberative manner. That is to say, majority rule is justified in that it produces reasonable discussion that constructs an outcome that represents the public interest. I believe that this line of justification is viable. However, the level of proof

is far higher than that required for the procedural argument. That is, it is necessary to argue empirically that majority rule produces reasonable deliberation and defensible outcomes. Furthermore, I believe that the defense of democracy in terms of political equality has value, even if the pragmatist/deliberative justification is accepted. As argued in chapter 2, political equality is a sine qua non for democracy—a procedurally unequal system is not democratic, no matter how reasonable the outcomes it produces are. However, it should be noted that the procedural justification is generally compatible with the pragmatist/deliberative justification. Indeed, the pragmatist and deliberative justifications require a procedural argument. Pragmatism requires unforced social inquiry (Dewey 1927/1946; Knight and Johnson 1996, 1999), and deliberative democracy requires unforced agreement. This, in turn, requires procedural fairness. I take this argument up again in chapters 6 and 7.

Conclusion

This chapter has provided an alternative justification for majority rule as a democratically defensible decision rule. It is true that the results of social choice theory force us to rethink democratic theory. Riker is correct that a theory of democracy that relies on the discovery of the one true "will of the people" is no longer viable. Given cyclical social preferences, no reasonable procedure can logically exist that can always give us a single outcome that is preferred to all others. However, this does not imply that the results of majority rule are arbitrary, or that all we can expect of democracy is periodic alternation of governments. Rather, majority rule is the only decision rule that is procedurally fair in terms of treating all voters and alternatives equally. It also provides a great deal of information about which alternatives are popularly acceptable, and rejects most of them. It may also be possible to justify majority rule on pragmatist or deliberative grounds, a possibility we will consider further in chapter 6. While social choice theory may undermine the "populist" theory of democracy—the idea that democracy is legitimated by its ability to find "the" will of the people—it does not undermine the case for the political procedure populists typically favor—majority rule.

It is important to recognize that majority rule is treated here as a rule that structures a deliberative process, not a procedure that produces the correct democratic outcome directly from legislators' preferences. Rather, majority rule defines a game in which legislators bargain, negotiate, deliberate, persuade, and trade, subject to the requirement that the final agreement receive the support of a majority. Majority rule is justi-

fied normatively because it is procedurally fair, and because we have reason to expect that the game carried out subject to majority rule will produce reasonable outcomes. Of course, for a majority-rule game to satisfy political equality, the agenda-setting procedure must also be democratic. If the agenda is fixed, then some alternatives are advantaged. Similarly, if some player controls the agenda, that player is advantaged. An open agenda procedure satisfies political equality but may well be chaotic. A procedure that combines political equality and stability is used in most parliamentary democracies. Following election to the legislature, the legislators negotiate a governing coalition and a coalition program. This is then passed by a series of party line votes. However, the government is always subject to threat of a vote of no confidence, which can be proposed by any legislator. Essentially the vote of investiture for the government and the negotiation about the governing program represents a grand bargain covering all policy areas.

Furthermore cycling actually strengthens the case for majority rule. Since Riker, cycling has been viewed as being corrosive to democracy, a problem to be solved. For example, Coleman and Ferejohn (1986) argue that it is still possible to talk about the general will in spite of cycling, while Dryzek and List (2003) argue that deliberation may be able to prevent cycling. Mackie (2003) and Regenwetter et al. (forthcoming) argue that while cycles are logically possible, they are uncommon and thus unlikely to cause problems. However, following the argument of N. Miller (1983), it is rather the case that cycling is what makes democracy as we know it possible. Cycling simply means that there are multiple, overlapping potential winning coalitions. This means that the current winning coalition can be replaced. As will be argued in chapter 5, this allows minorities to protect themselves while still respecting majority rule, without giving out vetoes that can be abused to protect unjust privileges and extort advantages. Furthermore, the existence of multiple potential winning coalitions creates strong incentives for coalition building and the deliberation that goes with it (see chapter 6). Far from being a problem to be solved, cycling is rather an integral part of the way democracy operates. This may be the most significant consequence the social choice literature has for democratic theory.