Title
The Tyranny of the Super-Majority: How Majority Rule Protects Minorities

Permalink
https://escholarship.org/uc/item/18b448r6

Author
McGann, Anthony J.

Publication Date
2002-10-01

This paper demonstrates that majority rule is the decision rule that provides most protection for the worst-off minority. Dahl (1956, 1988) argues that the values of popular sovereignty and political equality dictate the use of majority rule. However, there are other values that we need to take into account besides popular sovereignty and political equality, notably the protection of minority rights and stability. Thus it is commonly argued that there is a trade-off between political equality (maximized by majority rule) and minority protection (better provided by systems with external checks and balances, which require more than a simple majority to enact legislation). This paper argues that this trade-off does not exist and that actually majority rule provides most protection to minorities. Furthermore it does so precisely because of the instability inherent in majority rule.

Majority rule is the only decision rule that completely satisfies political equality. May (1952) shows that majority rule is the only positively responsive voting rule that satisfies anonymity (all voters are treated equally) and neutrality (all alternatives are treated equally). If we use a system other than majority rule, then we lose either anonymity or neutrality. That is to say, either some voters must be privileged over others, or some alternative must be privileged over others. With super-majority voting, the status quo is privileged–if there is no alternative for which a super-majority votes, the status quo is maintained. Following Rae's (1975) argument, given that the status quo is more desirable to some voters than to others, some voters are effectively privileged. It is certainly the case that super-majority rules can privilege (protect, if you prefer) some voters. Unfortunately, it is not possible to privilege every group over every other group. If super-majority rules create a privileged group, there must be a corresponding under-privileged group.

Nevertheless, super-majoritarian decision rules are widespread, both explicitly and implicitly. For example, in the United States explicitly super-majoritarian rules exist in the form of the 60% cloture requirement to end a filibuster in the Senate, the two-thirds requirement to override a presidential veto and in the need for a supermajority to amend the Constitution. Implicitly, the existence of two legislative chambers with different bases of representation is super-majoritarian, in that more than 50% of the popular support is likely to be needed to ensure a majority in both chambers. The Committee system has a similar effect, to the extent that committees are able to act as "gatekeepers", able to hold-up consideration of legislation. Outcomes decided by judicial review also rest on a super-majoritarian basis, in that Constitutional amendments require a super-majority. The number of democracies with simple majority rule legislatures with few external checks is actually quite small, limited mostly to the small countries of Europe.

Super-majoritarian decision making rules have been justified in terms of the need to protect minorities from "the tyranny of the majority". In the United States, this argument is

associated with James Madison (perhaps inappropriately, I will argue) and John C. Calhoun. Buchanan and Tullock (1962) provide a formalization of this line of thought, arguing that the unanimity rule maximizes the protection of individual rights and economic efficiency, and that super-majoritarian rules are a second-best approximation to unanimity. This paper shows formally that as we move from majority rule towards unanimity, the ability of minorities to defend themselves by overturning unfavorable outcomes is diminished, and that therefore majority rule offers most protection.

Before proceeding two clarifications are needed. Firstly, majority rule should not be equated with single-member district plurality (first-past-the post) electoral systems. Majority rule is a rule for choosing between two alternatives, where the alternative with most votes is chosen. In representative democracies, majority rule is used to decide between alternatives before the legislature, usually using an amendment procedure. There is no reason why those legislators cannot be elected by proportional representation (PR). Indeed if the reason for adopting majority rule in a legislature is to maximize political equality, proportional representation is the natural system to elect the members of that legislature. As van der Hout (2002) shows, if an electoral system satisfies anonymity, neutrality and some technical requirements, it must produce results similar to list PR. It is unfortunate that the term "majoritarian" is in widespread use following Lijphart (1984) to refer to the "winner-take-all" arrangements typical of the British "Westminster" system of government. It is ironic that the some of the countries that most closely approximate majority rule in their legislatures are those that Lijphart characterizes as "consensual" democracies, such as the Netherlands, Sweden, Denmark and Norway.

Secondly, majority rule does not mean that there is necessarily one particular majority that rules. One of the central finding of social choice theory is that majority rule is unstable and prone to cycles (that is, situations where alternative a beats b, b beats c, but c beats a). Similarly majority rule is prone to cycling coalitions. Because of this, it is often unwise under majority rule to try to rule with a minimal winning coalition and exclude everyone else. If a group is excluded from the winning coalition, they can attempt to split the winning coalition by offering some of its members more favorable terms than they are currently receiving. Under majority rule it is quite possible – indeed likely–to see broad coalitions and norms of inclusive, consensual decision-making. For example, Weingast (1979) shows that a norm of universalism, as opposed to minimal winning coalitions, is the optimal solution to the majority rule game facing members of the US House of Representatives. In a similar vein, Dahl (1956) argues that in a polyarchy, we will not see the tyranny of the majority, because a single, permanent, cohesive majority will not exist.

The first section of this paper reviews the literature on super-majoritarian decision making. The second illustrates how super-majoritarianism can produce perverse results. The third section formally analyzes the logic of super-majoritarian decision-making. The fourth presents the proof that majority rule offers the greatest protection to minorities. Section 5 considers the effect of uncertainty about the future on these considerations, while Section 6 deals with the instability of majority rule resulting from cycling, and why this is essential to the protection of minorities.

Super-Majority Rule And Democracy

The theory that checks and balances are needed to restrain majority rule (thus producing a system that is effectively super-majoritarian) is frequently ascribed to James Madison.

However, as Rae (1975) argues, ascribing such a view to Madison is problematic, given that Madison sought a strong national government, capable of decisive action and able to overcome the immobilism of the Articles of Confederation.[1] As we are all familiar with Federalist 10, Madison identifies the problems of minority and majority tyranny. The republican principle (i.e., majority rule) protects against minority tyranny. However, the only solution to majority tyranny given in Federalist 10 is to have a large "extended republic" where a single cohesive majority would not exist, a solution completely compatible with majority rule.[2] It is not until Federalist 51 that Madison advocates external checks and balances, in the context of a directly elected President. It is notable that Madison did not support a directly elected President at the Constitutional Convention until mid-July 1787, immediately after he had lost the argument about equal representation for the States in the Senate. Furthermore, Madison clearly opposed the principle of super-majoritarianism (arguing that it reversed the principle of free government and equaled minority rule[3]), as well as many of the constitutional features we now consider "checks and balances".[4] The original Virginia plan presented to the Convention, authored primarily by Madison, was essentially a majority rule parliamentary system with the executive chosen by the legislature.

Madison gives us, at best, an ambiguous justification for restraining majority rule with checks and balances; according to Rae (1975), it is John C. Calhoun (1842/1982, 1850/1943) who gives us an unequivocal theory. Society is made up a various classes of people, any of which may wish to intrude on the rights of others. A system of "concurrent majorities", whereby the approval of a majority of each class is required for action, can prevent this from happening. Calhoun argues that various features of the US Constitution (most notably equal representation for the States in the Senate) embody this principle. Indeed more recent scholars, such as Weingast (1989) and Aldrich (1995) have analyzed the way in which institutions such as North-South parity in the Senate and the norm of ticket balancing by the parties essentially provided the southern States with a veto until the 1850s.

Dahl (1956) is critical of what he terms the "Madisonian" theory of democracy (essentially the view that checks and balances are required to restrain majority rule). Madison relies on majority rule to protect against minority tyranny. Dahl argues that in cases where positive government action is required to protect rights, restraining majority rule with checks and balances undermines this protection. (Ironically this echoes the argument made in the section from Federalist 58 cited footnote 3.) Furthermore, Dahl argues that there is no empirical evidence that rights are better protected by the American political system than by European constitutions with far fewer constitutional checks, and that institutions such as the filibuster, equal representation in the Senate and judicial review have been used far more frequently to frustrate the extension of fundamental rights than to protect them, most notably in the case of civil rights in the South.

Buchanan and Tullock (1962) provide a different justification for super-majoritarianism. Given a predetermined allocation of rights and property,[5] the decision making rule that best protects this allocation is naturally unanimity. Furthermore, unanimity is the only rule that guarantees that the outcome will be economically efficient in the sense of being Pareto-optimal (it is not possible to make anyone better off without making someone else worse off). If unanimity is impossible because of decision-making costs, super-majoritarian rules may be the second best solution, in that they provide more protection than majority rule against costs imposed by society on individuals.

Rae (1975) critiques Buchanan and Tullock on several grounds. Unanimity only minimizes the costs society imposes on individuals if we make the strong assumption that an unwanted policy imposes a far greater cost on individuals than not getting a policy that is needed. Rae (1969) shows that if we assume these costs are equal, majority rule is optimal. Furthermore, Rae criticizes the concept of Pareto optimality as essentially locking in the status quo and being blind to distributional considerations.[6] Most significantly, Rae shows that universal consent is logically impossible when a decision (even if it is to take no action) has to be taken. If there is disagreement and a decision has to be taken, some decision has to be imposed against someone's will.

Guineer (1994) argues that super-majoritarian voting may be one means to protect minority rights. This is somewhat ironic given that super-majoritarian rules, such as the filibuster in the Senate, have been historically employed to obstruct civil rights legislation. While Guineer is certainly correct to point out that super-majoritarian decision rules are widespread, it not clear that the exclusion of minorities Guineer seeks to remedy results from majority rule, as much as from certain winner-take-all institutions such as single member district elections. (Guineer is supportive of proportional representation.) Miller (1996) provides a social choice theoretic analysis of Guineer's claims.

Our thinking about majority rule has been considerably sharpened by formal social choice theory. As already noted, May (1952) shows that majority rule is the only positively responsive decision rule satisfying anonymity and neutrality. In a similar vein, Rae (1969) and Taylor (1969) show that majority rule is the decision rule that minimizes the probability that an agent votes for something that is not enacted or votes against something that is. Straffin (1977) shows that majority rule is the decision rule that maximizes responsiveness to individual preferences. Social choice theory has demonstrated that majority rule is prone to cycles (Condorcet 1788/1955; Arrow 1952; Plott 1967; McKelvey 1976, 1979; Schofield 1978). The conditions under which this applies to super-majoritarian decision rules has been explored by Nakamura (1979), Greenberg (1979) and Schofield et al. (1988). Miller (1980) and McKelvey (1986) show there are strict limits to majority rule cycling under normal institutional settings, and Miller (1983) argues that the instability produced by cycling may actually beneficial to systemic stability by assuring that there are no permanent losers. Laing and Slotznick (1987) show that under super-majoritarian rules, it may be strategically rational for blocking minorities to defend extreme status quo positions, even though they would like to see them replaced.

Although it is tangential to our concerns here, there is some literature on the effect of super-majoritarian rules on economic outcomes. As noted, Buchanan and Tullock (1962) argue that only unanimity guarantees economic efficiency. Barry (1965), however, argues that the use of the "offensive veto" may lead to economic inefficiency– groups with veto power may try to use that veto to extort privileges, which may lead to worthwhile projects not being undertaken. Moe (1992) argues that super-majoritarian institutions in Congress lead to inefficient bureaucracies, in that bureaucratic structures are designed not to maximize the performance of an agency, but to lock in the gains of the winning coalition and prevent future Congressional majorities and administrations from being able to change the goals of the agency. Huber et al. (1993) find that the presence of external checks and balances have a considerable effect on the size and type of welfare state a country adopts.

Pathologies Of Super-Majority Rule

Using some simple examples, we can illustrate some of the problems that super-majoritarian rules can produce. Such rules can lead to the complete exclusion of minorities, to immobilism where the status quo is impossible to challenge, to situations where ideologically concentrated minorities are advantaged over more dispersed majorities, and even to situations where points at the very extremes are strategically defended by blocking coalitions.
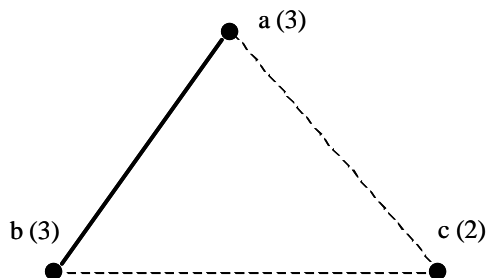

Figure 1. Configuration of Eight Voters

Consider the situation depicted in Figure 1. There are eight voters with simple spatial utility functions (they each prefer outcomes closer to their ideal point). Three have ideal points at position a, three at position b and two at position c. Under majority rule five votes are required to defeat a proposal, and thus there is no core (a proposal or set of proposals that cannot be defeated). For any proposal it is possible to find a counter-proposal that five voters prefer. However, the voters at positions a, b, c have equal bargaining power in determining the outcome. When we move from majority rule to supermajority rule, this changes. If we adopt a super-majoritarian quota of six to pass a proposal, the solid line between positions a and b becomes the core. It is impossible to find a counter-proposal that six voters prefer to a point on the line between a and b. As a result, the voters at c lose all bargaining power and influence over the outcome. If we increase the quota from six to seven, then any point in the triangle abc will be a core point. We may characterize this situation as a "tyranny of the status quo". As long as the status quo is within abc, it cannot be changed. Whoever had influence when the status quo came to pass has their way. Thus we can show that it is at least possible that adopting super-majoritarian rules may severely harm the interests of minorities, compared to their position under majority rule.
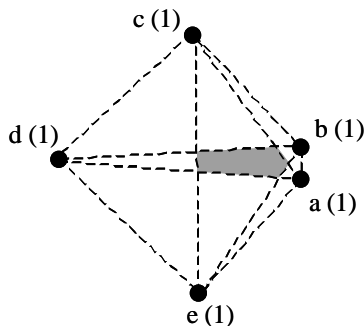

Figure 2. Configuration of Five Voters

Of course, super-majoritarian rules can advantage certain minorities. Certainly a very high quota will advantage minorities that are favorable towards the status quo. Furthermore, super-majoritarian rules may advantage ideologically concentrated minorities. Consider Figure 2. Here there are five voters, at positions a, b, c, and d and e. Under majority rule (q=3) there is no core. In terms of bargaining power, the voters at a and b might have an advantage, in that they can join with any other voter to form a majority, but they are not able to impose their will on the others. However, if we increase the quota to 4, then the shaded area becomes the core. The influence of one minority (the two voters at position a and b) has increased, but at the expense of the smaller minority positions (c, d and e). Thus we would expect super-majoritarian rules to benefit minorities who are large and concentrated enough to form blocking coalitions at the expense of smaller and less concentrated minorities.

Figure 3 (which is based on Laing and Slotznick 1987) illustrates an even more problematic situation that can arise under super-majoritarian rules. Here status quo point S may be impossible to overturn with a voting quota of four, even though it is not in the core. If we have a super-majoritarian rule with a quota of four, then the shaded area in the figure is the core. If a point in the core is the status quo, it will be impossible to overturn it. However, if we start from status quo point S, it may be that we never get to the core. This is because voters a and e form a blocking coalition. There are points that four voters would prefer to point S. However, there is no point in the core that either voter a or e prefers to the status quo, as can be seen from the fact that the iso-utility curves of a and e do not intersect the core. As a result it may be strategically rational for a and e to block any attempt to move from the status quo. Although there are points that they prefer to the status quo, if these are adopted, this may lead to the adoption in the next round or later of core points that voters a and e do not prefer to the status quo S. In an experimental setting, Laing and Slotznick (1987) confirm the existence of this phenomenon. The situation here may appear familiar. A blocking coalition defends a status quo that some of its members might like to change, because it fears that if it allows change, this will "open the floodgates" to further changes that it views as undesirable.
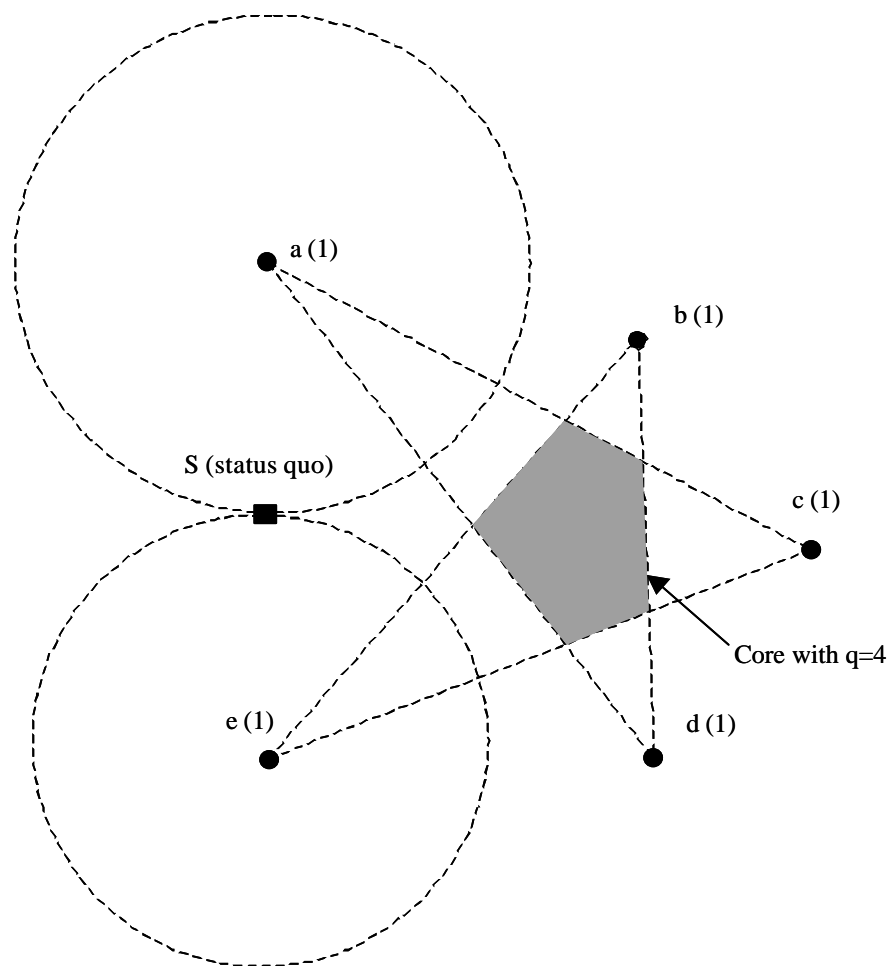
Figure 3. Configuration of Five Voters with q=4 and Status Quo Point S

Analyzing Super-Majority Rule

We have seen that super-majoritarian rule can have some problematic effects. This section will show why super-majority rule is inherently less democratic than majority rule in that it uses less of the information we have about the preferences of society. When we move from majority to super-majority rule, we effectively throw away the preference information we have about pairs of alternatives where a super-majority does not prefer either alternative to the other. In place of using preference information to decide between the two alternatives, we have to decide on some other ground. Usually, the alternative that is the status quo prevails. Thus the decision rule is biased in favor of one of the alternatives, or in the language of May's theorem, is not neutral. We have replaced a democratic decision with an authoritative one; a decision based on preferences with a decision based on precedent.

Of course, as we move from majority to super-majority rule, we reduce the instability in outcomes associated with majority rule. This is precisely because we are deciding between fewer pairs of alternatives using society's preferences. Instability under majority rule results from the fact that social preferences may involves cycles (a is preferred to b is preferred to c is preferred to a). As we stop relying on preferences and rely more on which alternative is the

status quo, the probability of such cycles diminishes. However, in the next section, I will show that it is precisely this instability that offers protection to minorities under majority rule. In section 6, I will argue that instability in outcomes actually enhances systemic stability, following the argument in Miller (1983).

We will analyze majority rule and super-majoritarian decision rules using the graph-theoretic framework from Miller (1980). Let us assume that there are an odd number of voters and that the preferences of all voters over possible alternatives are a linear ordering. That is, if 1 and 2 are alternatives, then voter a either prefers 1 to 2, or 2 to 1; furthermore voter a's preferences are transitive (if voter a prefers 1 to 2, and 2 to 3, then voter a prefers 1 to 3). Then Miller (1980) shows that society's preferences under majority rule can be expressed as a tournament (a complete asymmetric directed graph). If we take any two alternatives 1 and 2, then either society prefers 1 to 2 or 2 to 1. (However, due to reasons familiar from Arrow (1952) we cannot expect society's preferences, in general, to be transitive.) This is illustrated in Figure 4 (a). A line from a point 4 to point 1 means that alternative 4 is majority rule preferred to alternative 1. All points are connected, indicating that society has a strict preference over all pairs of alternatives. However, society's preferences are not transitive–alternatives 3, 4, and 5 form a cycle.
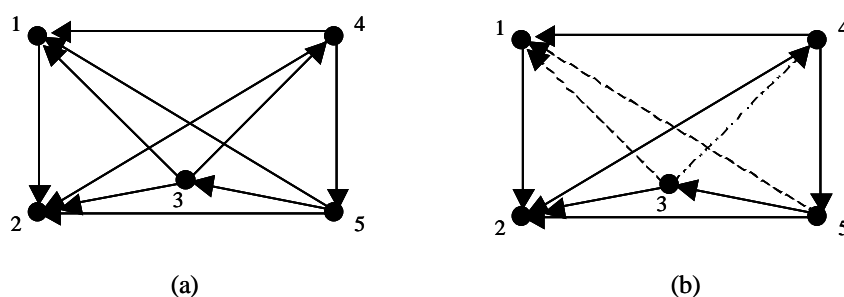

(a)   (b)

Figure 4. Society's Preferences over Alternatives under Majority and Super-majority Rule

Let us consider what happens when we go from majority to super-majoritarian rule, by raising the voting quota required for one alternative to beat another from 50%+1 to some higher value. As the voting quota is raised, some of society's preference relations are erased. If the voting quota is q, and the proportion of the population that prefers alternative 3 to 4 is greater than 50%, but less than q, then the decision rule no longer gives a social preference between alternatives 3 and 4. Thus we go from the situation depicted in Figure 4 (a), where the decision rule ranks all pairs of alternatives, to that in Figure 4(b), where the dotted line represent preference relations that have been erased. As we further increase the voting quota q, preference relations cannot be replaced. If q people do not prefer alternative 1 to 2, or 2 to 1, then a higher quota q* clearly cannot prefer 1 to 2 or vice versa.

Thus as we increase the voting quota q we make the decision rule less responsive to the preferences of the population. When the quota q = 50% + 1, then the decision rule registers any majority preference as a social preference. When we raise the quota to q*, then majority preferences that are less than q* are disregarded. As such, the higher we raise the quota, the less of the information about majority preferences we use.

However, as Rae (1975) argues, it may well be necessary to make a decision between two alternatives, even though our decision rule does not rank them. In this case some other

criterion, outside of the population's preferences, has to be used. Usually in the case of super-majoritarian systems, the status quo is privileged. The alternative that is the status quo is maintained unless some other alternative is preferred by quota q of the population. This, however, has significant distributional consequences. Under the super-majoritarian quota q, every blocking coalition (size 1-q) can block any alternative that makes it worse off than the status quo. The status quo becomes essentially the guaranteed position of each blocking coalition. As a result a great deal of the distributional bargaining that otherwise would go on, may be pre-empted. The decision is biased in favor of the status quo, and thus by extension in favor of those parties who favor or can tolerate the status quo.

Similarly, we can see why increasing the voting quota reduces the instability associated with majority rule. Saari (1997) shows that as we increase the voting quota, then the set of alternatives that are not defeated by any other alternative (the core) must expand monotonically. That is, the core under voting quota q* must be a subset of the core under quota q**, if q** q*. Considering Figure 4, we can see why this must be the case. As we raise the quota from q* to q**, we erase the lines representing the preference relations between any two alternatives where the majority in favor of one over the other is less than q**, but greater than q*. However, no new social preference relations are added–if the social preference between two alternatives is undefined under quota q*, it will still be undefined under the higher quota q**. As a result, the set of alternatives that are undefeated may increase as some social preference relations are deleted. However, any alternative that is undefeated under quota q* will also be undefeated under quota q**, as no new social preference have been added.

Nakamura (1979) gives conditions for a simple game (such as our voting rule) to not have cycles. Applying this result to a super-majoritarian voting system, we find that the voting systems will produce no cycles under any preference profile when the quota q n (p-1) / p, where n is the population size and p is the number of alternatives. If preferences and alternatives can be represented spatially, then a core must exist if q n (w-1) / w, where w is the number of dimensions (Greenberg 1979; Schofield et al. 1988). In the case of unanimity, transitivity is ensured with any number of alternatives or dimensions. If alternative 1 is unanimously preferred over alternative 2, and alternative 2 is unanimously preferred over alternative 3, then alternative 1 must be unanimously preferred over 3, because we assume that every individual's preferences are a linear ordering. However, we achieve this stability by eliminating a great deal of information about society's preferences. Consider Figure 5, which represents hypothetical social preference relations under unanimity. Compared to Figure 4, there are few lines connecting the nodes. The only lines remaining are those between one alternative that is unanimously preferred to another. Thus alternative 1 is undefeated (that is to say, it is in the core) and is Pareto-optimal (there is no alternative that is unanimously preferred to it), even though it is defeated under majority rule by alternatives 3 and 5, which are not in the core.
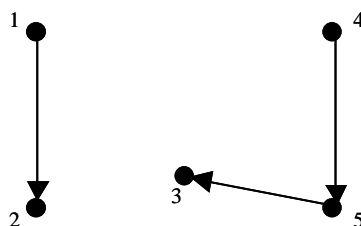

Figure 5. Social Preference Relations under Unanimity

Thus we can see that the effect of going from majority rule to more super-majoritarian quota rules is to ignore more and more preference information and to rely more and more on precedent – whichever alternative is established as the status quo prevails. Naturally, this makes the status quo more stable. However, as I will show in the next section, it is precisely this instability – the ability to overturn undesirable outcomes if necessary – that guarantees protection to minorities.

Super-Majority Rule And The Protection Of Minorities

It has frequently been argued that super-majoritarian decision rules (both explicit and implicit) safeguard minorities. However, we have seen that super-majoritarian processes essentially discard preference information when the majority is less than quota q, and imposes the status quo in these cases. To argue that replacing marginal democratic outcomes with a priori outcomes protects minorities requires some strong assumptions. First, we must believe that minorities are more at threat from a change in the status quo than from a failure to change the status quo, either in response to an existing injustice or some new threat. Second, we must be able to say what the status quo is and will be. In other words, we require certainty (or at least a high degree of confidence) about what the status quo will actually be in the future. The next section argues that this assumption of certainty is unrealistic over the timespan of constitutional arrangements. This section shows that if we do not have prior knowledge of our interests, majority rule provides most protection to the worst-off minority.

Suppose we are choosing a voting system behind a "veil of ignorance" of the type proposed in Rawls (1971/1999). That is to say, we have no particular information, and thus are not aware of our preferences or the status quo point. Under these conditions Rawls argues that it is rational to employ the maximin principle–we choose the rule that maximizes our utility in the worst situation we could find ourselves. The worst outcome we could find ourselves in would be to be faced with a very unfavorable outcome that we are unable to overturn by joining with a coalition of other voters. Considering different voting quotas, we can show that the higher the quota, the lower the utility floor we are guaranteed, and thus that the system that guarantees us the highest utility floor is majority rule:

Proposition 1: Given a voting rule with quota q, let $m_i(q)$ be the utility associated with the least preferred position for agent i that, if enacted, no coalition including i could overturn given sincere voting. Then $m_i(q) \geq m_i(q+1)$.

(Proof in appendix)

The intuition behind the proof is straightforward. Let us define the $_i$Core (the core for voter i) as the set of alternatives that voter i cannot overturn by joining with a coalition other voters of size q or greater and replacing it with another alternative. The worst thing that can happen to voter i is the outcome in the $_i$Core that is least favorable to voter i. As the quota rule q increases, the size of the $_i$Core monotonically increases, as some social preference relations are deleted and none are added, so some alternatives that voter i previously could have overturned are now invulnerable. As the $_i$Core under quota q* must be a subset of the $_i$Core under quota q** (q** > q*), so the worst outcome for voter i in the $_i$Core under quota

q** must be at least as bad as the worst outcome under quota q*, and possibly worse. Thus a higher quota exposes voter i to potentially worse outcomes that cannot be overturned through a coalition with other voters. Majority rule is the decision with the lowest voting quota that does not result in indeterminate outcomes. (A quota of less that 50% can result in situations where alternative 1 is socially preferred to alternative 2 and alternative 2 is socially preferred to alternative 1.) Thus majority rule offers maximum protection against the imposition of an outcome that a voter is unable to bargain to overturn.

Simple majority rule gives us the most protection against having unfavorable outcomes imposed on us. Indeed, provided that preferences are distributed in at least two dimensions and do not meet some very stringent symmetry conditions (Plott 1967, McKelvey 1976, 1979, Schofield 1978) we can find a coalition to overturn any outcome except our ideal point. The problem is that any other agent can do the same. Whether this forces "reasonable" outcomes, or whether this leads to chaos is a behavioral question, which will be addressed below. Nevertheless, majority rule offers greater protection against an imposed outcome than any other system, and therefore the system that offers most protection for minority rights, is, ironically, majority rule.

Super-Majority Rule and Uncertainty

To argue that it is prudent to privilege the status quo over an alternative that is majority preferred, it is necessary to be able to say what the status quo is. Furthermore, the greater the degree of uncertainty about the status quo, the more reasonable it is to use the Rawlsian assumption of a veil of ignorance as a device for arguing about justice. I will argue here that over the timeframes relevant to constitutional choice, the status quo may be quite indeterminate.

The analysis her builds on the work of Brunel-Petron (1998)[7] concerning the theory of rights. Brunel-Petron argues that we have to consider rights as claims on outcomes. The mapping, however, between the law and the rights we possess in practice is problematic. This mapping may change over time, in particular in responses to changes in technology and social mores. Thus although the law may not change, if there is a significant change in technology or mores, this law may represent a very different outcome.

This idea can be applied to our consideration of the status quo. Indeed between the set of possible status quo positions and the set of possible pay-offs, there are several mappings. Super-majoritarian rule privileges the status quo by making it hard to change the law. The status quo that is protected, however, is not an outcome or pay-off, but rather a set of legal formalisms. If the way in which these legal formalisms are translated into outcomes or pay-offs changes, then the substantive status quo will change, although the formal status quo is untouched. Figure 6 illustrates the mappings from the set of possible laws to the set of possible pay-offs.

First, the written law produced by legislation has to be translated into government action or policy. The interpretation of law by the executive and the courts, can, of course, change over time, which will substantively change policy. This kind of slippage is particularly significant in super-majoritarian systems. Under simple majority rule, it is relatively easy for the legislature to "correct" changes in interpretation by the executive or judiciary by simply passing new legislation. If the decision rule is super-majoritarian, however, the executive and judiciary may have far more discretion. As such, super-

majoritarian rule may amount in practice to a form of concealed guardianship, if the interpretation is performed by an unelected body (See Dahl 1956 for a critique of the US Supreme Court in this role). Moe and Howell (1999) argue that super-majoritarian rules effectively empower the US President because he has some unilateral power to determine how laws are implemented. Likewise it can be argued that the power of the European Commission (the executive of the European Union) is enhanced by the fact that the Council of Ministers proceeds on the basis of unanimity or qualified majority voting, and thus has a hard time overturning Commission rulings.
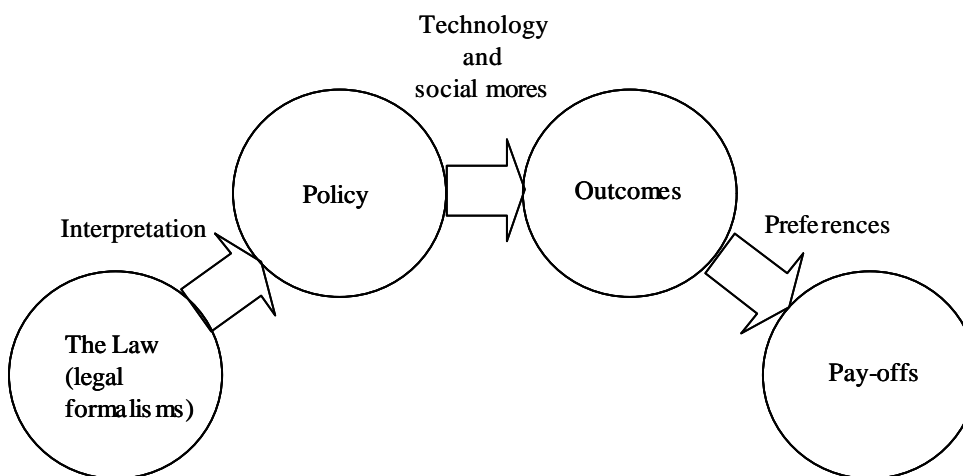

Figure 6. Mappings from the Law to Final Pay-offs

Even if government policy remains the constant over time, the outcomes that this policy represents may change because of changes in technology, social mores or the environment in general. For example, slow government response may be tolerable or even desirable in normal conditions, but disastrous in time of national emergency. (This is why Federalist 22 is so hostile to super-majoritarianism.) Technology may also affect the effective consequences of laws. The right to keep weapons may have very different consequences depending on the development of military technology. The development of efficient computers has surely changed the impact of data privacy laws (or lack thereof). Similarly, social mores change the consequences of laws. A law banning public nudity would have no effect if nobody wished to behave in this way, or if nobody minded. Neither would the lack of such a law.

In addition to the direct effect on the relationship between policy and outcomes that a change in technology or mores may have, there may be indirect effects mediated through economic processes. Changes in technology change production functions. As a result, demand for factors of production change, as does their relative value. The factors that are crucial to people's livelihood and welfare, and the relationship between them, also change. A type of economic regulation that appeared equitable may no longer be so. In an agrarian society, we would not expect people to even conceptualize the need for organized labor. It is only with the advent of an industrial society that disputes over the right to organize or not to be organized become salient, as industrial labor is now a key factor of production. Lack of specific laws dealing with organized labor have no effect when there is no societal drive to organized labor, but may later become crucially important. Similarly, in a post-industrial

economy, intellectual capital may become the crucial factor of production. Laws concerning intellectual property that seemed reasonable when employees were expected to works for a firm for life, may be extremely problematic in a society where frequent job shifts are commonplace. Suddenly, the distribution of intellectual property rights between employer and employee becomes a crucial concern.

Finally, even if outcomes remain constant over time, society's preferences over these outcomes may change. Thus the eventual pay-offs to the various actors would be different, and our considerations of justice would have to adapt to this. One particular instance in which society's preferences may be exceptional is during time of crisis. It is possible that legislation may be passed hastily under crisis conditions despite super-majoritarian rules, because all parties may want action of some type to be taken quickly. However, these hastily made decisions may prove extremely difficult to change when time allows more detailed consideration.

It is very difficult to argue that we can know what the status quo will be in the medium term, let alone that it will be a satisfactory outcome. Thus attempts to "engineer" specific outcomes using constitutional mechanisms appear hubristic. Furthermore, we have not yet considered one further change we would expect to occur over time: The agents themselves will change, as some die and others are born. Super-majoritarian rule privileges the status quo, and as such the choices of one generation over that the succeeding one. In this sense super-majoritarian rule can be thought of a mechanism by which a dominant group today protects itself against the majority of the next generation, bequeathing to their children a world that not only did they not create, but that they may not even be able to revise.

Stability and The Benefits of Cycling

The instability resulting from cycling is the other main objection to majority rule given as justification for the adoption of super-majoritarian decision rules. However, following Miller (1983) I have argued that it is precisely this instability that allows us to overcome the problem of the protection of minorities from a "tyranny of the majority". We have seen that super-majoritarian rule merely replaces the possibility of domination by a majority with domination by a privileged minority. However, the presence of multiple, cycling majorities provides the possibility of a check on majorities without artificially empowering a minority. Furthermore, we now have theoretical and empirical reasons to believe that there are strict bounds on the instability associated with majority rule. Not least amongst these is that fact that countries with majority rule legislatures with few if any external checks and balances (such as the Netherlands, Austria and Sweden) do not appear particularly unstable. Indeed these are amongst the countries identified by Lijphart (1999) as being "consensual".

Majority rule cycling can protect minorities in two ways. First, as Miller (1983) argues, it can ensure that there are no permanent losers. A group out of power can always expect to be able to defeat the incumbents in the future, and thus have an incentive to keep playing the game, which enhances the stability of the system. Second, the need to build and maintain majority coalitions encourages inclusion. Any party that is excluded and feels like the interests of its constituents are threatened, can undermine the governing coalition by offering its support to one of the governing parties at a very low "cost". By offering some of the governing parties outcomes they find very desirable in exchange for only the outcome it views as absolutely vital, an excluded party can break up the governing coalition. Of course,

this outcome is not stable, as the new excluded parties have an incentive to pursue the same strategy. The only way to achieve stability is to organize outcomes so that excluded parties are indifferent to staying in opposition and trying to break into the governing coalition. The fact that cycling majority rule makes it easy for an excluded party to make trouble by trying to undermine the governing coalition, encourages power sharing. Ironically, majority rule seems to encourage the kind of "taking turns" solutions that Guineer (1994) advocates.

This provides a solution to the problem of intensity of preferences, which Dahl (1956, ch.4) suggested was insoluble. If a majority and a minority disagree on an issue which both view as being vital to their survival, there is probably no solution satisfactory to both parties. However, in a situation where a minority views an issue as vital, while the majority is relatively apathetic about it, single-issue majority rule produces an unsatisfactory result. However, any attempt to safeguard the minority with special protections is problematic, as there is no way to measure what issues actually are vital to the minority, and it will have an incentive to exaggerate in order to get its way on more issues. However, a majority rule parliament in which multiple issues are considered provides a solution. The minority can trade votes on issues it considers of minor importance for support on issues it considers vital.

Interestingly, although Buchanan and Tullock (1962) have been amongst the foremost advocates of unanimity rule, the following quotation (*Calculus of Consent,* p. 132) provides an argument very similar to the one above:

> "Applying the strict Pareto rules for determining whether one social situation represents an improvement over another, almost any system that allows some such exchange to take place would be superior to that system which weights all preferences equally on each issue. By way of illustration, it is conceivable that a proposal to prohibit Southern Democrats from having access to free radio time might be passed by simple majority vote in a national referendum should the issue be raised in this way. Such a measure, however, would not have the slightest chance of being adopted by the decision-making process actually prevailing in the United States. The measure would never pass the Congress because the supporters of the minority threatened with the damage would, if the issue arose, be willing to promise support on other measures in return for votes against such discriminatory legislation."

While cycling has beneficial effects in terms of the protection of minorities, the negative effects in terms of instability have been overstated. On the theoretical level, it is now apparent that the presence of cycles does not mean chaos in the sense of "anything can happen, and probably will". Early interpretations of McKelvey's (1976, 1979) and Schofield's (1978) global cycling results (notably Riker 1982) argued that the results had a corrosive effect on democratic theory, making any outcome as valid as any other, and making agenda-setting politicians the key determinant of outcomes. However, it is now clear that even without a core, majority rule is rather more orderly. For example, Miller (1980) shows that in a variety of institutional settings, outcomes will tend to fall in the "uncovered set" (the set of points that are not "covered", in that there is no other point that beats them and everything that they beat). McKelvey (1986) shows that the uncovered set is typically a relatively small, central set. Furthermore, it can be shown that any point outside the uncovered set can be beaten by any point in the generalized median set. In order to produce

an outcome beyond the uncovered set would require a Mephistolean agenda manipulator who is able to permanently exclude alternatives around the median from consideration.[8] Experimental research also suggests that even where there is no core, majority rule tends to produce outcomes in a small central set, similar to the uncovered set (see McKelvey and Ordeshook 1990).

There is no evidence that countries that have majority rule parliaments and very few checks and balances are particularly unstable.[9] Indeed, many of the small European democracies identified by Lijphart as being consensual are of this type, with majority rule legislatures elected by proportional representation (Netherlands, Belgium, Austria, Sweden, Norway, Denmark).[10] Given the presence of cross-cutting social cleavages, and the fact that there are certainly multiple issue dimensions, we would expect cycling majorities amongst parties. Indeed, in all of these countries we have seen government by different combinations of parties, and by combinations that do not make sense in terms of a one-dimensional left-right ideological division. It is true that these countries have various institutions that facilitate power sharing. However, these institutions exist within the context of majority rule. There have been "grand coalitions" and delegation of decision making to communities and functional bodies. Even when some parties are excluded from the governing coalition, they are not completely excluded from decision making, as parliamentary committees and various consultative councils are important. As Strom (1992) argues the power difference between those in government and those out is small. There is a willingness by party leaders to take decisions in an inclusive manner, as well as a keen awareness that those excluded are part of an "alternative" coalition.

Finally we may speculate that majority rule is rather conducive to consensual outcomes. Although Lijphart (1977, 1984, 1999) does not talk in the language of social choice theory, his model of consensus democracy seems to be driven by the presence of cycling majorities. Consensual outcomes are more likely when no group is able to dominate on its own, but instead groups have to reach accommodations with each other. In these circumstance majority rule has the advantage of making intransigence a very risky strategy. If I refuse to compromise, you can reach a deal with someone else and I will be excluded. With super-majority rules, however, as I have argued above, intransigence by a minority may often be an optimal strategy, as a minority may have the power to block changes and thus have something to defend. As such consensus (unanimity) may be the decision rule least likely to produce consensual behavior. Rather than power sharing being a response to protect minorities from majority rule, it may actually be the type of response that majority rule encourages.

Conclusion

Dahl (1956) argues that majority rule uniquely embodies the values of popular sovereignty and political equality. However, it is argued by Dahl, amongst others, that these are not the only values we are concerned with in matters of constitutional choice. The two alternative values most commonly cited are the protection of minority rights and stability. It is commonly argued that there is a trade-off between political equality (best served by majority rule) on one hand, and minority protection and stability (best served by external checks and balances) on the other. This paper has argued that this trade-off is illusory, and that majority

rule provides more protection for the worst-off minority than any other decision rule. Furthermore, it does so precisely because of the instability inherent in majority rule.

Majority rule offers most protection to minorities because it makes it easiest for a minority to form a coalition that can overturn an unacceptable outcome. Super-majority rules can certainly protect (or rather privilege) some minorities, but only at the expense of others. It is not logically possible for every minority to be privileged over every other minority. Super-majority rules make the status quo hard to overturn and thus privilege minorities who favor the status quo over those who favor changing it. Arguments in favor of super-majoritarian institutions have tended to be built on the assumption that the threat to rights from government action or a change in the law is greater than the threat from government inaction or the maintenance of current laws. Given the history of the United States this assumption is problematic, especially given the use of super-majoritarian institutions to impede the extension of civil rights. Furthermore, given uncertainty about legal interpretation, technology, social mores and preferences over the timescale involved in constitutional choice, any assumptions about where the threat to rights are likely to lie are inevitably heroic.

While super-majoritarian rules are only able to protect some minorities at the expense of others, the instability resulting from global cycling under majority rule offers an alternative approach to the problem of the tyranny of the majority. The costs of instability resulting from cycling have been overstated–theoretically we no longer expect unrestricted or "chaotic" outcomes, and the countries that practice relatively unchecked majority rule are quite stable. Nevertheless, the possibility of cycling seems to lead to inclusive politics, in that it is always necessary to assemble a broad coalition, and any coalition can be split. There is no "tyranny of the majority" because there is no single, cohesive majority ready to dominate everyone else. This, of course, is essentially the "extended republic" argument made by James Madison at the Constitutional Convention of 1787 and in Federalist 10.

Bibliography

Aldrich, J. 1995. *Why Parties? The Origin and Transformation of Political Parties in America*. Chicago: University of Chicago Press.

Barry, B. 1965/1990. *Political Argument*. New York: Harvester Wheatsheaf.

Brunel-Petron 1998. "Contribution à l''analyse des droits en theorie du choix social." Thèse pour le doctorat de L'Université de Caen, specialité sciences economiques.

Buchanan, J. and Tullock, G. 1962. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor: University of Michigan Press.

Calhoun, J. 1842/1982. "On the Veto Power." In Kirk, R. ed. *The Portable Conservative Reader*. New York:Penguin Books.

Calhoun, J. 1850/1943. *A Disquisition on Government*. New York: P. Smith.

Condorcet, Marquis de (de Caritat, M.). 1788/1995. "On the Consititution and Function of Provincial Assemblies." In Mclean, I. and Urken, A. eds. *Classic of Social Choice*. Ann Arbor: University of Michigan Press.

Dahl, R. 1956. *A Preface to Democratic Theory*. Chicago: University of Chicago Press.

Dahl. R. 1988. *Democracy and its Critics.* New Haven: Yale University Press.

Greenberg, J. 1979. "Consistent Majority Rules over Compact Sets of Alternatives." *Econometrica* 47.3: 627-36.

Guinier, L. 1994. *The Tyranny of the Majority: Fundamental Fairness in Representative Democracy*. NY: The Free Press.

Hamilton, A., Madison, J. and Jay, J. 1788/1961. *The Federalist Papers*. New York: Mentor.

Huber, E., Ragin, C. and Stephens, J. "Social Democracy, Christian Democracy, Constitutional Structure and the Welfare State." *American Journal of Sociology* 99.3:711-49.

Laing, J and Slotznick, B 1987. "Viable Alternative to the Status Quo*." Journal of Conflict Resolution* 31: 63-85.

Lijphart, A. 1977. *Democracy in Plural Societies*. Yale University Press.

Lijphart, A. 1984. *Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries.* New Haven: Yale University Press.

Lijphart, A. 1999. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries.* New Haven: Yale University Press.

Madison, J. 1840/1966. *Notes of Debates in the Federal Convention of 1787 Reported by James Madison*. Athens, OH: Ohio University Press.

Madison, J. 1999. *Writings*. New York: The Library of America.

May, K 1952. "A Set of Independent Necessary and Sufficient Conditions for Simple Majority Decision." *Econometrica* 20: 680-4.

McKelvey, R 1976. "Intransitivities in Multidimensional Voting Models and Some Implications for Agenda Control." *Journal of Economic Theory* 16:472-82.

McKelvey, R 1979. "General Conditions for Global Intransitivities in Formal Voting Models." *Econometrica*: 1085-1112.

McKelvey, R 1986. "Covering, Dominance, and the Institution-Free Properties of Social Choice." *American Journal of Political Science* 30.2: 283-314.

McKelvey, R 1990. "A Decade of Experimental Research on Spatial Models." In Enelow, J and Hinich, M., *Advances in the Spatial Theory of Voting*. Cambridge University Press.

Miller, N. 1980. "A New Solution Set for Tournaments and Majority Voting: Further Graph-Theoretical Approaches to the Theory of Voting." *American Journal of Political Science* 24.1:68-96.

Miller, N. 1983. "Social Choice and Pluralism." *American Political Science Review* 77.3:734-47.

Miller, N. 1996. "Majority Rule and Minority Interests." In Shapiro, I. and Hardin, R. eds. *Political Order: Nomos XXXVIII*. New York: New York University Press.

Moe, T. 1989. "The Politics of Bureaucratic Structure." In Chubb, J. and Peterson, P. *Can the Government Govern?* Washington, DC: The Brookings Institution.

Moe, T. and Howell, W. 1999. "The Presidential Power of Unilateral Action." *The Journal of Law, Economics and Organization* 15:132-179.

Nakamura, K. 1979. "The Vetoers in a Simple Game with Ordinal Preferences*." International Journal of Game Theory* 8: 55-61.

Plott, C. 1967. "A Notion of Equilibrium under Majority Rule." *American Economic Review* 57: 787-806.

Rae, D. 1969. "Decision-Rules and Individual Values in Constitutional Choice." *American Political Science Review* 63.1: 40-56.

Rae, D. 1975. "The Limits of Consensual Decision Making." *American Political Science Review 69.4: 1270-94.*

Rawls, J. 1971/1999. *A Theory of Justice.* Harvard University Press.

Riker, W. 1982. *Liberalism versus Populism: A Confrontation Between the Theory of Democracy and the Theory of Social Choice*. San Francisco: Freeman

Saari, D. 1997. "The Generic Existence of a Core for Q-Rules." *Economic Theory* 9: 219-60.

Schofield, N. 1978. "Instability of Simple Dynamic Games." *Review of Economic Studies* 45.3: 557-594.

Schofield, N., Grofman, B. and Feld, S. 1988. "The Core and Stability of Group Choice in Spatial Voting Games." *American Political Science Review* 82.1: 195-211.

Sen, A. 1970. *Collective Choice and Social Welfare*. San Francisco: Holden-Day.

Straffin, P. Jr. 1977. "Majority Rule and General Decision Rules." *Theory and Decision* 8: 351-60.

Strom, K. 1990. *Minority Government and Majority Rule*. Cambridge: Cambridge University Press.

Tataru, M. 1999. "Growth Rates in Multidimensional Spatial Voting*." Mathematical Social Science* 37: 253-263.

Taylor, M. 1969. "Critique and Comment: Proof of a Theorem on Majority Rule*." Behavioral Science* 14: 228-31.

van der Hout, E. 2002. "Axioms Characterizing the Plurality Ranking Rule." Paper presented at the annual meeting of the Public Choice Society, San Diego, CA, March 22-24.

Weingast, B. 1979. "A Rational Choice Perspective on Congressional Norms*." American Journal of Political Science* 23.2:245-62.

Weingast, B. 1988. "Political Stability and Civil War: Institutions, Commitment and American Democracy." In Bates, R., Greif, A., Levi, M., Rosenthal, J.-L. and Weingast, B. *Analytic Narratives.* Princeton: Princeton University Press.

Appendix: Proofs

Lemma 1: Let the $_i$Core be the "core for agent i", that is the set of points that a coalition C including agent i cannot overturn. The $_i$Core with quota q will be a subset of the $_i$Core with quota q+1. The $_i$Core must contain at least the ideal point of agent i.

The $_i$Core can be thought of as the set of points that agent i cannot block by proposing a point that i and q-1 other voters prefer. Let L(C) be the set of points that coalition C cannot overturn – that is, the set of points for which there does not exist another point that coalition C unanimously prefers. Then the $_i$Core for quota q is:

$$\bigcap_{C \in N: |C| \geq q, i \in C} L(C) = \left(\bigcup_{C \in N: |C| \geq q, i \in C} (L(C))' \right)'$$

It is clear that $L(\overline{C} : |C| = q) \subseteq L(\overline{C} + u \in (N - C))$. If there is a point x such that coalition $\overline{C}$ cannot find another point that it unanimously prefers, then there cannot be a point that the larger coalition $(\overline{C} + u \in (N - C))$ unanimously prefers to x. Therefore:

$$\left(L(\overline{C} : |C| = q) \right)' \supseteq \left(L(\overline{C} + u \in (N - \overline{C})) \right)'$$

$$\Rightarrow \bigcup_{C \in N: |C| \geq q, i \in C} (L(C))' \supseteq \bigcup_{C \in N: |C| \geq q+1, i \in C} (L(C))' \Rightarrow \left(\bigcup_{C \in N: |C| \geq q, i \in C} (L(C))' \right)' \subseteq \left(\bigcup_{C \in N: |C| \geq q+1, i \in C} (L(C))' \right)'$$

$$\Rightarrow \bigcap_{C \in N: |C| \geq q, i \in C} L(C) \subseteq \bigcap_{C \in N: |C| \geq q+1, i \in C} L(C) \Rightarrow {}_i Core(q) \subseteq {}_i Core(q+1).$$

Given that a coalition containing i cannot overturn i's ideal point, and the $_i$Core is defined as those points that a coalition containing i cannot overturn, then the $_i$Core must at least contain i's ideal point.

Proposition 1: Given a voting rule with quota q, let $m_i(q)$ be the utility associated with the least preferred position for agent i that, if enacted, no coalition including i could overturn given sincere voting. Then $m_i(q) \geq m_i(q+1)$.

Formally $m_i(q) = \min_{x \in {}_i Core(q)} u_i(x)$.

It is obvious that $\min_{x \in X} u_i(x) \geq \min_{x \in Y: Y \supseteq X} u_i(x), \quad given \ X, Y \neq \varnothing$

Given lemma 1 that $_i Core(q) \subseteq {}_i Core(q+1)$, it can be seen that $\min_{x \in {}_i Core(q)} u_i(x) \geq \min_{x \in {}_i Core(q+1)} u_i(x)$, and thus $m_i(q) \geq m_i(q+1)$.

Endnotes

[1] See Madison's remarks to the Constitutional Convention on June 19, 1787 (Madison (1840/1966) and "Vices of the Political system of the United States" (Madison 1999).

[2] On June 6 at the Federal Convention, Madison argued that extending the scope of the republic was the *only* way to protect minorities: "In a Republican Govt. the majority if united have always an opportunity. The only remedy is to enlarge the sphere, and thereby divide the community into so great a number of interests and parties, that in the 1st place a majority will not be likely at the same moment to have a common interest separate from that of the whole or of the minority; and in the 2nd place that in case they should have such an interest, they should not be apt to unite in the pursuit of it" (Madison, 1840/1966 p.77).

[3] Consider this passage from Federalist 58: "It has been said that more than a majority ought to be required for a quorum; and in particular cases, if not all, more than a majority of a quorum for a decision. That some advantages might have resulted from such a precaution cannot be denied. It might have been an additional shield to some particular interests, and another obstacle generally to hasty and partial measures. But these considerations are outweighed by the inconveniences in the opposite scale. In all cases where justice or the general good might require new laws to be passed, the fundamental principle of free government would be reversed. It would no longer be the majority that would rule: the power would be transferred to the minority. Were the defensive privilege limited to particular cases, an interested minority might take advantage of it to screen themselves from equitable sacrifices to the common weal, or, in particular emergencies, to extort unreasonable indulgences." (p. 361) See also Federalist 22 (authored by Hamilton).

[4] Madison most famously opposed equal representation of the states in the Senate. However, he also championed the supremacy of the national government over the states (including a national veto on all state legislation), supported a simple majority over-ride of judicial review and opposed the prohibition of legislators taking executive posts.

[5] It is notable that Buchanan and Tullock (1962, p.47) do not state how these rights come about, but merely state that: "…it will be useful to "jump over" the minimal collectivization of activity that is involved in the initial definition of human and property rights and the enforcement of sanctions against violations of these rights."

[6] Rae quotes Sen (1970) "An economy can be optimal in this sense even when some people are rolling in luxury and others are near starvation as long as the starvers cannot be made better off without cutting into the pleasures of the rich. If preventing the burning of Rome would have made Emperor Nero feel worse off, then letting him burn Rome would have been Pareto-optimal. In short, a society or economy can be Pareto-optimal and still be perfectly disgusting."

[7] Thanks to Donald Saari for pointing me to this source.

[8] In addition, Tataru (1999) puts precise limits on the number of moves required to move a given distance from the median, and shows that this function is in the limit linear.

[9] The European country most associated with instability (Italy before 1994) actually had very super-majoritarian parliamentary practices, with frequent use of the filibuster (see Di Palma 1988) The existence of secret voting in the legislature also made vote trading arrangements of the type we have been discussing unenforceable.

[10] Switzerland is an example of a democracy that Lijphart terms strongly consensual that is also strongly super-majoritarian. Belgium has become rather more federalist with the new Constitution of 1994, but continues to work on the basis of majority rule for issues not having constitutional standing.