Another Consideration in Minority Vote Dilution Remedies: Rent-Seeking

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In some areas of the United States, racial and ethnic minorities have been effectively excluded from the democratic process by a variety of means, including electoral laws. In some instances, the Courts have sought to remedy this problem by imposing alternative voting methods, such as cumulative voting. I examine several voting methods with regard to their sensitivity to rent-seeking. Methods which are less sensitive to rent-seeking are preferred because they involve less social waste, and are less likely to be co-opted by special interest groups. I find that proportional representation methods, rather than semi-proportional ones, such as cumulative voting, are relatively insensitive to rent-seeking efforts, and thus preferable. I also suggest that an even less sensitive method, the proportional lottery, may be appropriate for use within deliberative bodies, where proportional representation is inapplicable and minority vote dilution otherwise remains an intractable problem.

1. INTRODUCTION

When President Clinton nominated Lani Guinier to serve in the Justice Department as Assistant Attorney General for Civil Rights, an opportunity was created for an extremely valuable public debate on the merits of alternative voting methods as solutions to vote dilution problems in the United States. After Prof. Guinier's positions were grossly mischaracterized in the press,[1] the President withdrew her nomination without permitting such a public debate to take place.[2] These issues have been discussed in academic circles,[3] however,

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[1] Bolick (1993) charges Guinier with advocating "a complex racial spoils system."

[2] Guinier (1998) recounts her experiences in this process.

[3] Zimmerman (1978); Ortiz (1982); Davidson (1984); Low-Beer (1984); Weaver (1984); Taagepera and Shugart (1989); Karlan (1989, 2002); McDonald (1989); Taebel et al. (1990); Fremstad (1991); Still (1991); Grofman et al. (1992); Inman (1993); Engstrom (1992:750); Williams (1994); Johnson (1994); Lewyn (1994,1995); Briffault (1995); Pildes and Donoghue

and this article is a contribution to that enterprise. My contribution will be to consider the relative merits of different voting methods (plurality voting, cumulative voting, party list proportional representation, single transferable voting, etc.) with respect to their sensitivity to rent-seeking efforts. In doing so, I find one more reason why proportional voting methods are preferable to cumulative voting as remedies to vote dilution in the election of representatives.[4] I also point out that a rarely considered option, a proportional lottery (decision by drawing lots),[5] has very desirable characteristics with regard to proportional power-sharing and insensitivity to rent-seeking efforts. For these reasons, a proportional lottery should be considered as an alternative decision method within deliberative bodies (where neither cumulative voting nor single transferable voting is practical), if a remedy to persistent vote dilution is appropriate.

2. RENT-SEEKING

Any contest to win a fixed prize can be modeled as a rent-seeking contest. Legislative seats, or the adoption of public policies via the legislative process, can be regarded as fixed prizes. Therefore, elections and policy determinations by elected officials can be modeled as rent-seeking contests. The concern with rent-seeking is that the resources expended in pursuit of the rent are often a social waste, though if the expenditures came in the form of transfers to those allocating the rents, that would not be the case. The legal rules surrounding electoral contests, however, typically impede efforts to influence electoral outcomes by direct payments.[6] This is not to say that all efforts involved in selecting representatives or determining public policy are necessarily wasteful. To the degree that such political contests inform public debate, they clearly

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(1995); Guinier (1995a); Kelly (1996); Graber (1996); Bloch (1998); Engstrom and Brischetto (1998); McKaskle (1998); Mulroy (1998, 1999); Tucker (2002); and McCann (2002).

[4] Proportional representation methods, including party list proportional representation and the single transferable vote, give more proportional results (the proportion of seats won by a party more closely mirrors the proportion of votes received). Additionally, if more than one minority candidate runs, semi-proportional systems, including cumulative voting and limited voting, require a significant amount of coordination to avoid splitting the minority vote, and thus producing no representation. On the preferability of proportional over semi-proportional voting systems, see Amy (2002), Beman (1925:29, noting that cumulative voting is singled out among proportional systems for wasting votes), Lewyn (1994) and Mulroy (1999).

[5] One advocate of giving serious consideration to proportional lotteries is Amar (1984; 1995).

[6] For a thorough discussion of the benefits as well disadvantages of unrestricted buying and selling of votes, see Buchanan and Tullock (1965).

have value apart from the process of simply deciding between alternatives.[7] It would clearly be desirable, however, to minimize the costs involved in collective decision-making, if that can be achieved without biasing the outcome (unless, of course, the bias is towards a more informed decision). Presumably, that is the intent of campaign finance reform. The motivation here is, hopefully, not the belief that conducting electoral campaigns is necessarily harmful and so must be curtailed, but rather, the belief that there is a tendency for campaign expenditures to escalate in a wasteful manner that is not really conducive to advancing valuable political discourse.[8] It remains to be seen if attempts to limit campaign ads and contributions will reduce the costs of campaigns. As will be shown below, however, the rules by which contests are conducted will affect the level of effort expended to win them. That is, which voting method is used to elect officials or to determine public policy will affect the level of effort involved in determining the outcome. In this article, I argue that the costs of achieving collective action should be a consideration when changes to voting methods are being considered.

3. MINORITY PARTICIPATION IN THE DEMOCRATIC PROCESS

For some it may seem that majority rule is the very essence of democracy. If the majority rules, however, the minority is necessarily ruled.[9] If membership in the majority or minority is fluid (that is, if shifting coalitions takes turns comprising the majority), this is not a serious problem.[10] If, however, persistent

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[7] For a model exploring the degree to which political advertising will be wasteful rather than informative, see Congleton (1986).

[8] A more cynical interpretation of campaign finance reform would be that it is an attempt to protect rents by protecting incumbents from challenger competition. Indeed, since the final arbiters of which reforms will be enacted are the incumbents themselves, it would be naïve to believe that it is possible to enact any campaign finance reform that does not disproportionately benefit incumbents at the expense of challengers (see Smith, 2001).

[9] For an excellent discussion of the tyranny of the majority, or democratic despotism, see Wood (1969:408-13).

[10] Buchanan (1954) gets to the heart of the matter. "The reason that majority rule proves tolerably acceptable and individual authoritarian dictatorship does not lies not in the many versus the one. It is because ordinary majority decision is subject to reversal and change, while individual decision cannot readily be made so. With identical majority orderings, the majority would, of course, always choose the same leaders, and this advantage of majority rule would be lost." His next point is relevant to a proposed vote dilution remedy discussed below. "It is not evident that we should summarily reject the rule of one individual if we could be assured that every so often a new dictator would be chosen by lot and that everyone's name would be in the lottery."

voting blocks exist, such that membership in the majority or minority is essentially permanent, minority voters are effectively disenfranchised. This problem exists in those areas of the United States where voting patterns are highly correlated with race (Davidson and Grofman, 1994).

The problem of persistently disenfranchised minorities could emerge coincidentally, depending on how voters consistently group themselves, and on which voting methods have historically been in place. The disenfranchisement of black voters in several southern states has, however, been the result of a shameful and deliberate program (Woodward, 1974; Lawson, 1976; Hanks, 1987; Davidson, 1984:1; Kousser, 1984:27; Johnson, 1994). After the 14th Amendment was ratified in 1868, freed male slaves and other black men were, as a matter of law, full citizens of the United States. The 15th Amendment explicitly granted them the right to vote. Numerous barriers to participating in the democratic process were used to effectively disenfranchise blacks, however, including poll taxes, literacy tests, whites-only primaries, place voting,[11] property requirements, physical intimidation and the use of at-large, plurality voting rules (see Davidson and Grofman, 1994; also Guinier, 1998:71).[12]

Progressives were particularly effective in organizing changes in voting laws, since they regarded excluding blacks from the political process as an essential element of "good government."[13] The courts for an extended period demonstrated no particular interest in protecting the civil rights of black Americans; however, the tide turned in 1941 with the Classic Case (313 U.S. 299 (1941)), striking down whites–only primaries. As a result, blacks began once again to participate in the electoral process. In 1940, only 2% of voting age blacks were registered in twelve Southern states. By 1947, 12%, or 600,000 were registered in those states. By 1952, 1,200,000 were registered (Woodward, 1974:141-2). Explicit disenfranchisement did not give way to full political participation, however. In addition to physical intimidation, a variety of voting rule changes were implemented to prevent blacks from influencing political outcomes.[14] Over time, direct disenfranchisement was no longer the problem,

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[11] Requires voters to vote for one candidate per defined place, preventing them from withholding votes from unwanted candidates (see Davidson, 1984:7, 11).

[12] Davidson (1984) notes that, between 1964 and 1975, twenty county governments and boards of education switched from district to at-large elections (also, Grofman et al., 1992:23-5).

[13] Woodward (1974:82-93) says, "Racism was conceived by some as the very foundation of Southern progressivism." See Davidson (1984:11); Lawson (1976:13); Davidson and Korbel (1984:67-71); Kousser (1974:229-231, 236-237, 260-261).

[14] Davidson (1984:3) lists several, including purges of registration rolls, changing polling places with little or no notice, implementing especially burdensome registration procedures, reducing the availability of voting machines in minority precincts, and the threat of reprisals. (See also

but rule changes were enacted to accomplish vote dilution (Guinier, 1994b:8, 75-6, also 1998:71; Davidson, 1984, especially chapters 1 thru 7). Blacks were free to vote, but their votes did not result in the candidates of their choice being elected. One especially common means to accomplish this was by switching from single-member electoral districts to at-large elections (Davidson and Korbel, 1984:65-81; Davidson, 1984:11; McCrary, 1984:59; Parker, 1984:87-89; Ball, 1984:195-6). When drawing electoral districts in regions with substantial minority populations, it may be difficult to draw all districts in a manner which insures that the white population forms the majority in every district. By switching to at-large elections, where all representatives are elected from the same large district, a persistent majority can be assured of electing all representatives. Place system voting requirements, staggered terms, candidate residency requirements, anti-single shot laws (see note 21), runoff elections, and gerrymandering were also employed to render minority votes ineffective (Davidson, 1984:12).

In *Reynolds v. Sims* (377 U.S. 533 (1964)), the Supreme Court considered the issue of how voting rules might distort the political process. The problem was malapportionment. Some Congressional districts had a larger voter population than others also represented by a single member of congress, thus rendering the influence of voters from small districts greater than those of large districts in determining the composition of the House of Representatives. In response, the Court formulated the doctrine of "one person – one vote," requiring that Congressional districts within states be as nearly equal in population as is practical to achieve. The Court has been fairly consistent in its application of the "one person – one vote" doctrine, most likely because of the ease of both detecting variations from the principle, and applying the remedy (redistricting). The Court has shown much less consistency in dealing with the problem of vote dilution. Beginning with *Shaw v. Reno*, the Court has been intolerant of gerrymandering to create majority-minority districts.[15] Drawing districts that dilute the votes of other minorities, such as members of a particular party, however, has been considered a normal outcome of the political process, and so not justiciable.[16] Furthermore, the Court has recognized that the preferred

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Reed Cox and Turner (1981) and Legal Services Corporation of America (1981); Grofman et al. (1992:8, 24).

[15] A majority-minority district is created by drawing district boundaries such that a voting group that represents a minority of the population as a whole is a majority within that district.

[16] *Whitcomb v. Chavis*, 403 U.S. 124 (1971); in *Davis v. Bandemer*, 106 S. CT. 2797 (1986) the Court ruled that political gerrymandering could be justiciable, although the gerrymander before the Court did not constitute impermissible discrimination under the Equal Protection Clause. In *Vieth v. Jubelirer* (000 U.S. 02-1580 (2004)), the Court overruled *Bandemer*, deciding that political

remedy to racial vote dilution, the creation of majority-minority districts, raises other problems–that is, members of the majority race drawn into these districts necessarily have their votes diluted.

The outcome of the Court's attempts to provide guidelines to address problems of vote dilution have been chaotic and unsatisfying (McDonald, 1989; Guinier and Torres, 2002). We should not judge the Court too harshly in this regard, however. The solution to problems of vote dilution requires the implementation of voting rules other than those currently in place.[17] The design of voting rules is properly a legislative function, not a judicial one. This is especially true in the current situation. A variety of voting rules exist (or could be designed) which would dramatically reduce problems of vote dilution, such as the proportional or semi-proportional systems that will be discussed below. None are widely used in the United States at this time, however. The selection of one to apply to a particular set of circumstances would be best accomplished by a healthy debate within a legislative body, where the various pros and cons of competing systems could be aired. The process is complicated by the fact that the legislative bodies that are best suited to this enterprise are the very sources of the current voting rules that demand remedy. Those bodies, if called upon to redesign their voting rules, might engage in a search to find a system that accomplishes the highest degree of vote dilution that the Court will permit.[18] If some relatively proportional voting systems were well and widely established in the United States, the courts, if necessary, could require their use to address vote dilution problems. The only remedy with which the courts are currently familiar, however, is the redrawing of single-member districts, a process which is particularly ill-suited to the problem of vote dilution.[19] In the long run, we can hope that the debate in the voting law literature, to which this article is a contribution, will eventually be picked up by some legislative bodies that have a genuine interest in solving vote dilution problems. If those bodies enact voting rules that are clearly successful,

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gerrymanders were indeed not justiciable. For a thorough discussion of the issues related to political gerrymandering, see Grofman (1990).

[17] Specific voting rules will be discussed in more detail below.

[18] Kousser (1974:31-37) discusses sixteen methods that have been used to hamper black political power without being struck down by the courts. On how courts should interact with legislatures in the application of voting dilution remedies, see Mulroy (1998, 1999).

[19] Justice Scalia makes this point explicitly in *Vieth v. Jubelirer* 000 U.S. 02-1580(2004) (Ortiz, 1982; Inman, 1993; Low-Beer, 1984; Taagepera & Shugart, 1989:233; McKaskle, 1998:1142; Guinier & Torres, 2002). See also Lowenstein and Steinberg (1985), which makes the argument that it is neither possible nor desirable to avoid political gerrymandering in the drawing of districts, and that virtually all presumably fair criteria proposed to guide district drawing, such as compactness or respecting municipal boundaries, in fact disproportionately benefit the Republican Party.

they may provide some guidance to the courts on how remedies can be imposed where legislatures are less interested in solving the problem. We are not there yet, however.

4. VOTE DILUTION REMEDIES

There are a variety of methods by which minority votes can be diluted to prevent them from influencing the outcome of democratic processes. These include the use of at-large elections, the dilutionary effects of which can be enhanced with run-off elections[20] and anti-single shot provisions,[21] reductions in size of governmental bodies,[22] and gerrymandering.[23] The traditional remedy to at-large districting has been the creation of single-member districts, with particular attention given to the creation of majority-minority districts. The problem with using single-member districts where there are persistent voting blocks is that someone's votes must necessarily be diluted. Where districts are drawn to insure the success of some particular voting block, voters who are not members of the block (such as white voters in a majority black district) have no influence on the election outcome. Even if it were possible to construct districts that were composed exclusively of members of a voting block, that is still problematic, since over-concentration may mean the group can elect fewer representatives than if those voters were spread over two or more districts. The problem is wasted votes. Votes which are cast but have no effect on the

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[20] A run-off provision requires that a winning candidate receive a majority of the vote. If no candidate wins more than 50% of the available votes, a run-off election is held between the two highest vote-getters. This provision precludes the possibility that a candidate with the support of a minority could win the election with a plurality, because the votes of the majority are split between two or more other candidates.

[21] In an at-large election, several offices are filled from a single district. If five offices were to be filled, each voter would have five votes to cast, for their five most preferred candidates. The majority of the voters are able to select 100% of the candidates. Under at-large voting, minority voting blocks can increase their voting power by using a single shot approach. If only one minority candidate is running, and there are five seats to be filled, minority voters can cast only a single vote for their preferred candidate, not using the other four votes available to them. Since the other votes would have had to have been cast for majority candidates, discarding those votes increases the likelihood of the minority candidate being elected. Anti-single-shot provisions require invalidating ballots that do not utilize all available votes (see Davidson, 1984).

[22] If a voting block represents 20% of the population, and the size of a governmental body is reduced to less than five members, that minority is unlikely to receive representation on the body, even using a truly proportional voting method (see Davidson, 1984).

[23] Gerrymandering is the drawing of voting districts, often with bizarre boundaries, with an eye to affecting the outcome of elections. Concentrations of minority voters may be divided among districts to insure that they remain in the minority of all districts, or minority voters may be concentrated in a single district, to prevent them from influencing the outcome in other districts.

outcome can be considered to be wasted. All votes cast for losing candidates are therefore wasted, in this sense, as are all votes cast for the winning candidates in excess of those required to win. Under majority or plurality winner-take-all elections, a majority of the votes cast are typically wasted.[24]

The Court's confusion regarding permissible and impermissible gerrymandering[25] may reflect an appreciation of the intractability of vote dilution problems in single-member districts. However the districts are drawn, some groups will be disadvantaged relative to others. This is true even for compact districts that have other characteristics generally regarded as desirable. Providing a remedy for one group by redrawing the boundaries will necessarily harm others (see Johnston, 1984:59-69).

Problems of vote dilution and vote wastage can be solved, but that requires replacing winner-take–all plurality voting methods with proportional or semi-proportional voting methods. Although unfamiliar to most Americans, most democracies utilize proportional voting methods. Only a few English-speaking nations, along with France, use plurality voting to elect their legislatures.

The primary proportional voting methods are the Party List and the Single Transferable Vote (STV).[26] Under a closed party list, voters vote for their preferred party, and the party gets a number of seats that reflects the number of votes received.[27] The party determines which candidates get the seats. Under

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[24] "Voters on the losing side in a single-member plurality election have no more political influence than if they were officially denied the right to vote. Their votes are what political scientists call *wasted votes* – votes that produce no representation and have no impact on policymaking" (Amy 2002:26, emphasis in the original). See also, McCann (2002). Votes in excess of those required to win are also wasted. For example, say candidate A has 75% of the vote and candidate B has 25%. The votes for B do not affect the outcome and are thus wasted. The votes that A received in excess of 25% + 1 are also wasted. Thus, in this scenario, roughly 74% of the votes cast were wasted. The minimum amount of votes that may be wasted under winner-take-all elections occurs when the election is decided by a single vote. The number of votes wasted under that scenario is 50% - 1.

[25] The Court has ruled that racial gerrymandering is impermissible while political gerrymandering is acceptable.

[26] Also known as preference voting, or the Hare or Hare-Clark system. For an excellent cross-national exposition of the single transferable vote where it is used, see Bowler and Grofman (2000). For a critique of STV, see Brams and Fishburn, (1984:147-151). For a discussion of proportional voting methods which have been used in the U.S., see Weaver (1984:191-206).

[27] The actual number of seats won will vary based on the procedure used. Under the d'Hondt highest average formula, seats are awarded sequentially to whichever party currently has the highest "average," where the average is defined as $t / (s + 1)$, where t is the total number of votes the party received, and s is the number of seats won so far. Every time a seat is awarded, the denominator increases for the party that won it. The procedure continues until all seats have been awarded. This procedure tends to favor larger parties over smaller ones. That effect can be attenuated by adjusting the denominators, so that they follow the sequence (1.4, 3, 5, 7, …)

open Party List, voters indicate which partisan candidates they prefer. The number of seats the party receives is determined as in the closed Party List system, but which party members are seated is determined by the voters rather than the party.

Under STV, voters rank their preferences among the candidates. After the first choice votes are tallied, "wasted" votes are reallocated to second choice preferences, and so on. That is, if a candidate receives more votes than required to assure a seat,[28] those additional ballots are counted as votes for the second choice listed. Once all excess votes for winning candidates are allocated, the candidate with the least votes is disqualified, and ballots for that candidate are then reallocated to their second choice candidate, and so on. If the second choice is a candidate who has already been elected, the third choice candidate gets the vote, and so on. The process continues until, as nearly as possible, all ballots are used to elect a candidate.

Semi-proportional systems include Cumulative Voting and Limited Voting.[29] Under Cumulative voting, candidates run in multiple-member districts, and each voter may cast as many votes as there are seats to be filled. They may, however, allocate those votes among the candidates however they choose, including giving all the votes to a single candidate (plumping) (Guinier, 1994b:14-5). This is the method that Lani Guinier advocated in her writings (Guinier, 1994a,b; 1991a,b; 1993a,b; 1995b), which drew such heated, and generally misguided, criticism. It was used in Illinois from 1870 to 1980 (Katz, 1986:89), and is in use in a modified form (limiting the degree of plumping) in Luxembourg and Switzerland (Lijphart, 1986b:114). Under Limited Voting, candidates run in multiple-member districts, and voters are given several votes, with the opportunity to cast one vote per candidate of their choice. They are given fewer votes than the number of seats that will be filled, however, and

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rather than (1, 2, 3, 4, …). That modification is referred to as the Lague highest average formula, which tends to favor medium-sized parties at the expense of the largest and smallest parties. An alternative procedure is the largest remainder formula. Under the largest remainder method, the price of a seat in votes is given by $q = v/m$ where v is the total number of votes cast in the election, and m is the number of seats to be awarded. Initially, each party is given as many seats as its vote total contains, q. Ordinarily not all seats will be awarded at that point. The remaining seats are then allocated so that the first remaining seat goes to the party with the largest remainder, the next seat to the party with the second highest remainder, and so on (see Rae, 1967:ch2). Lijphart (1986a:170) finds the largest remainder formula to yield the most proportional results. See also Amy (2002:259-266).

[28] The required number is determined by the Droop quota, $v / (m + 1)$, where v is the total number of votes cast in the election, and m is the number of seats being awarded (Rae, 1967:36-9).

[29] For a discussion of semi-proportional voting methods which have been used in the United States, see Weaver (1984:191-206).

vote plumping is not permitted.[30] This may be contrasted with at-large voting with an anti-single shot provision. The method was used in some elections in Britain in the nineteenth century, and has been used in Japan since 1900, and Spain since 1977 (Lijphart et al., 1986:155-6).

All of the methods discussed in this section permit minority voters to achieve some level of representation, so long as the minority is sufficiently large. True proportional voting methods (Party List and STV) give more proportional results. This can be measured by the ratio of share of seats won s to share of votes cast t (Rae, 1967:25-30). Ideally, s/t should equal 1, so that a party that wins 20% of the vote should be awarded 20% of the seats. How the votes are allocated will affect how proportional the result is, with some methods currently in use benefiting larger parties relative to smaller ones (see note 27). Party List with least remainder gives the most proportional result (see note 27) – that is, it allows minority voting blocks to gain representation at a level that best reflects the strength of the block in the polity. Where voters are more interested in individual candidates than in political parties per se, STV may be preferred, as it results in an outcome that more closely reflects voter preferences for individual candidates, rather than for parties. In fact, STV elections can be non-partisan,[31] which is obviously not possible under Party List systems. Since Americans show less party allegiance and are more inclined to split tickets[32] than citizens in other countries (Epstein, 1967), STV may be more appropriate in the U.S.

The semi-proportional systems (Cumulative Voting and Limited Voting) give less proportional results than true proportional systems. That is, the share of seats won will be closer to the shares of votes cast for that party. Semi-proportional systems are, however, fairly effective at insuring that a substantial minority can elect at least one representative. That is, if the minority exceeds the threshold of exclusion,[33] they can be assured of electing at least one representative, if voters carefully coordinate their votes. Their appeal, therefore, really exists only in relation to at-large, winner-take-all elections, where minorities can be completely excluded from the electoral process.

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[30] One form of Limited Voting is the Single Non-Transferable Vote. More than one seat is to be filled, but voters are permitted to cast only one vote (Grofman et al., 1999).

[31] Candidates need not be identified by party at all.

[32] That is, to cast ballots for members of more than one party, rather than voting strictly along party lines. Party identification has been becoming less and less important in American politics (Wattenberg, 1984, 1991).

[33] The proportion of votes required to insure representation (see Lijphart et al., 1986:157-8; Rae, 1967:32-3; Taagepera and Shugart, 1989:116-7, 274-7). Mulroy (1998:370) advocates the threshold of exclusion as a bright line test on the potential to elect minorities.

Compared to true proportional systems, they perform poorly (Beman, 1925:29; Briffault, 1995:436-440; Lewyn, 1994:940-41; McKaskle, 1998:1127). It should be noted that, although Guinier stressed cumulative voting as a vote dilution remedy in her earlier writings, her more recent writings acknowledge the benefits of truly proportional systems as well (Guinier and Torres, 2002). Semi-proportional voting systems are especially problematic if more than one minority candidate is on the ballot. Unless minority voters coordinate their votes carefully, they can end up splitting their votes among minority candidates, such that ultimately no minority candidates are elected (Pildes and Donoghue, 1995:297-99). This notion of the level of effort and coordination required to achieve desired results in the electoral process is key to the point I am making in this article, and I will return to it later.

Legal challenges to persistent minority vote dilution have resulted in cumulative voting being imposed as a remedy in Chilton County, Alabama;[34] Alamogordo, New Mexico;[35] and Sisseton-Wahpeton, South Dakota (Engstrom and Barrilleaux, 1991). In these instances, cumulative voting resulted in the election of black, Hispanic, and Native American candidates, respectively, overcoming long-standing exclusion from the political process. In other instances, however, the courts have considered and rejected cumulative voting as a minority vote dilution remedy (Mulroy, 1998:359).

Another potential remedy is decision by drawing lots. Although not currently used (except for jury selection) (Amar, 1984, 1995), it was successfully used to select public officials in ancient Athens,[36] as well as in renaissance Venice (Queller, 1986; Finlay, 1980; Gilbert, 1968) and Florence (Gilbert, 1968; Herlihy, 1991:197-221; Najemy, 1982; Rubinstein, 1968). A proportional lottery can be used where ballots, rather than being counted, are placed in a drum, and one selected at random (Fishburn and Gehrlein, 1977). Alternatively, the ballots can first be counted, and then the winner(s) selected by generating a random number. It is possible to use the second technique to develop a process highly resistant to tampering or fraud.[37] A proportional lottery, unlike

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[34] *Dillard v. Chilton County Board of Education*, 699 F. Supp. 870 (M.D. Ala. 1988). See also Pildes and Donoghue (1995).

[35] *Vega v. City of Alamogordo*, No. 86-0051-C (D.N.M. Feb. 10, 1986). See also Engstrom et al. (1989).

[36] Headlam (1933); Plato, *The Republic*, Book V, 460 A, 461 E, Book VIII, 557 A.; *Laws,* Book III, 690c, Book VI, 759c. Isocrates, *Areopagiticus,* 20-23. Demosthenes, *Philippics*, 57. Xenophon, *Memorabilia*, 1.2.9. Aristotle, *Const. Athens*, 8.1, 22.5, 43. 1, 55.1, 62.1; *Politics*, 1298a, 20-25, 1294b, 5-10, 1300b, 1-5, 1303a, 15-20; *Rhetoric*, 1393b, 1-9.

[37] Amar (1984:1308, n.132) raises this as a concern. Assume that three parties participate in an election. The Left party gets 25,000 votes, the Center party 50,000, and the Right party 25,000. The Center party could be responsible for developing a computer program that, when executed, generates 1,000 unique randomized lists, each of which contains 25,000 Ls, 25,000 Rs and 50,000

traditional proportional voting methods, can be applied in single-member districts. Further, the ex ante expected results from selection by a proportional lottery are perfectly proportional, rather than being susceptible to being biased depending on how remainders are handled. That is, a candidate supported by 12% of the voters can expect to win 12% of the time. It thus accomplishes nicely the ideal advocated by Guinier (1994b:5-7) of "taking turns."

No minority is too small to be excluded under a proportional lottery. That is, even a candidate with only 1% support can still expect to win 1% of the time. This may be perceived, however, as a liability rather than a benefit, as it gives fringe groups the ability to gain representation (see, e.g., McCann, 2002:204). If this is regarded as a problem, however, a threshold can be incorporated into the system (see Amar, 1995:204), such that candidates receiving fewer votes than required under the threshold are disqualified. Traditional proportional systems have natural thresholds based on the number of seats within the district,[38] but several include additional thresholds besides.[39]

5. COLLECTIVE DECISION-MAKING AND RENT-SEEKING

The process of collective decision-making is not costless.[40] Decision methods which consume fewer resources should be preferred, *ceteris paribus*. If the *ceteris paribus* condition does not hold, however, we may want to consider the direction of bias resulting from more costly decision-making methods. This involves considering who is best able to bear the associated costs. Since a typical device which has been applied to suppress minority voting has been to

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Cs. The Left party could be responsible for developing a computer program that, when executed, generates a random number from 1 to 1000. The Right party would be responsible for developing a computer program that, when executed, generates a random number from 1 to 100,000. The code for all programs would be made available for inspection. All three programs could be executed simultaneously. The Left party's number would indicate which list generated by the Center party would be used, and the Right party's number would indicate which element of the list would be selected. More sophisticated procedures could also be used, Left and Right parties generating 1000 numbers each, and other parties generating numbers indicating which of those numbers to select. In that way, the random characteristics of the program would be immediately apparent (see also Lockard, 2001).

[38] If there are five seats in a district, candidates receiving less than 20% of the vote are necessarily excluded (see note 33).

[39] Parties receiving less than the legal threshold of votes are denied representation in some nations. To be represented, parties must win .67 % of the vote in the Netherlands, 1% in Israel, 2% in Denmark, 5% in Germany, 17% for parties and 30% for alliances in Greece (Taagepera and Shugart, 1989:133-4).

[40] Essential reading on the costs of decision-making is Buchanan and Tullock (1965), especially chapters 6 and 8.

raise the cost of voting for those who are frequently least able to bear it,[41] decision costs seem especially relevant to discussions of remedies to minority vote dilution.

As noted earlier, elections can be modeled as rent-seeking contests, where contestants compete to win the prize of political office. To the degree that rent-seeking efforts are wasteful, it would be desirable to design electoral contests in a manner so as to minimize rent-seeking. The literature on rent-seeking can provide us some guidance here. In particular, we can compare the expected level of rent-seeking in winner-take-all contests (indivisible rent), comparable to choosing legislators in single-member districts, with proportionate-sharing contests (divisible rent), comparable with proportional representation. Congleton (1984; 1980:153-179) has compared those contests, and found the expected level of rent-seeking effort associated with indivisible rather than divisible prizes to be greater by a factor of four. Congleton (1984) modeled the expected award from participating in a rent-seeking contest for a divisible prize as:

$$(1) \qquad A_j \quad = \quad \frac{E_j(P)}{E_i}$$

where A_j is the award to contestant j, E_j is the effort expended by contestant j in pursuit of the award, $\Sigma\, E_i$ is the sum of all award-pursuing effort by all contestants, and P is the total amount of the prize to be divided amongst the contestants. This contest success function can be interpreted as a particular instance of the more general contest function given below, with the exponent n set to 1:

$$(2) \qquad S_j \quad = \quad \frac{V_j{}^n}{V_i{}^n}$$

Theil (1969) uses this function to model the proportion of seats won in a legislative body as a function of the number of votes cast.[42] S_j would be the proportion of seats won by party j, V_j would be the number of votes received by party j, $\Sigma\, V_i$ would be the total number of votes cast, and n would be a parameter measuring the effectiveness of gaining seats by winning votes, which

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[41] Poll taxes are an explicit example. Less direct means include, among others, literacy tests, inconvenient siting or frequent relocation of polling places, and elections held on workdays.

[42] The model is used in the same manner in Taagepera and Shugart (1989). Hirshleifer (1991, 1995) uses it to model conflicts, including wars.

would be a function of the voting method being applied. Tullock (1980:97-112) uses the same function to model the probability of winning an indivisible prize, where S_j would be the probability the prize is won by contestant j, V_j would be the effort expended to win the prize by contestant j, ΣV_i would be the total effort by all contestants, and n would be a parameter measuring the effectiveness of effort directed at winning the prize.[43]

Tullock's model suggests that the optimum expenditure[44] is:

$$(3) \qquad (P)\, n\, (N\text{-}1)\, /\, N^2$$

where P is the value of the prize sought, n is the parameter from the model which reflects the productivity of expenditures, and N is the number of contestants. What is important here is that the level of expenditures increases as n increases.

Theil's application of the contest success function relates share of votes received to legislative influence won. We can also relate the share of votes received to the level of effort expended in pursuit of votes, given by the campaign expenditures of party j, E_j.

$$(4) \qquad V_j = Ej_A{}^p$$

Where $p < 1$ to reflect the diminishing marginal effect of campaign expenditures on election results.[45] Combining equations (1) and (2) yields the following result, where the exponent r is the product of exponent n from equation (2) and exponent p from equation (4).

$$(5) \qquad S_j \;=\; \frac{E_j{}^r}{E_i{}^r}$$

Recall that r is the product of n and p from equations (1) and (2). Under perfect proportional representation, $n = 1$. That is, the proportion of seats that a party receives in the legislature is equal to the proportion of votes it receives.

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[43] A large literature has grown up around Tullock's article (Lockard and Tullock, 2000).

[44] Any variation reduces the expected return from participating in the contest, where the expected return is equal to the value of winning times the probability of winning minus the amount spent trying to win.

[45] For empirical support for the premise that campaign expenditures are subject to diminishing marginal productivity, see Thomas (1989) and Gerber (1998). Specifications of the contribution of expenditures towards electoral success in semi-log form are more common. See, for instance, Welch (1974) or Giertz and Sullivan (1977). I apply the exponential form to simplify the model while preserving the essential characteristic of diminishing marginal return.

The value of *n* in this model is higher under plurality voting, typically estimated to be about 3.[46] If we assume that the productivity of acquiring votes through campaign expenditures is the same under both proportional representation and plurality voting, then *r* is higher under plurality voting (because *n* is higher, while *p* is the same), therefore campaign expenditures will be higher under plurality voting. If the productivity of campaign expenditures differs between proportional representation and plurality voting, the same result obtains, unless campaign expenditures are significantly more productive (*p* is at least twice as large) under plurality voting than under proportional representation. It is not apparent why such a discrepancy in productivity in campaign expenditures should exist.

The model can also be applied to a proportional lottery, where each vote is equivalent to one lottery ticket, so that securing 51% of the votes gives a probability of winning of .51, rather than being decisive. This is equivalent to Tullock's model with $r = 1$.

The most important point to be drawn here is that the level of rent-seeking expenditures, on both an individual level and in the aggregate, is increasing in the exponent *r*. Therefore, a marked decrease in rent-seeking (campaign expenditure) efforts should be associated with a change from a simple plurality voting mechanism to a proportional representation system (or a proportional lottery).

With regard to semi-proportional systems, we will need to look beyond the model discussed above. It is useful here to introduce the concept of strategic voting.[47] Under strategic voting, voters deviate from simply casting their votes for their most preferred alternatives, in order to avoid an unfavorable outcome. Under plurality voting, voters are often urged not to "waste" their votes on third party candidates for fear their least-favored candidate will win.[48] All voting methods that do not incorporate a significant element of chance are susceptible to strategic voting (Gibbard, 1973, 1977; Satterthwaite, 1975; Barberà and Peleg, 1990). A proportional lottery, for example, is not susceptible to strategic voting (Kelly, 1977; Satterthwaite, 1975), while the

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[46] Kendall and Stuart (1950) found that $n = 3$ in British elections to Parliament, while Laakso (1979) reexamined British elections and found that $n = 2.5$. Taagepera and Shugart (1989) find that $n = 3$ for U.S. House of Representative elections, and ranges from 4 to 10 in the U.S. Presidential electoral college.

[47] On strategic voting under plurality voting and proportional representation, see Cox (1997).

[48] In the U.S., voters for Green Party candidate Ralph Nader may well have been instrumental in the election of Republican George Bush to the White House in 2000, although most such voters would have likely preferred the Democratic candidate, Al Gore.

other voting methods discussed in this article are, to varying degrees.[49] Susceptibility to strategic voting may be undesirable for several reasons. For one thing, there is value in knowing voters' preferences apart from determining election results, simply as a guide to public policy. Manipulation by political parties that appreciate the strategic potential can seriously curtail voters' choices as well.[50] Within the context of this paper, however, what is important about strategic behavior in elections is that it may be costly to accomplish. For those minority voters utilizing cumulative voting or limited voting to be assured of gaining the level of representation these systems allow, it is essential that they coordinate their votes. This is relatively straightforward if there is only one candidate on the ballot that appeals to the minority block. If more than one minority candidate runs, however, cumulative voting especially requires coordinated voting to avoid splitting the minority vote and achieving no representation (Briffault, 1995:436-7; Amy, 2002:221-4; Pildes and Donoghue, 1995:271,297; Mulroy, 1999:1908). These coordination activities (deciding whom to clump votes for under cumulative voting, or whom to exclude under limited voting) are necessarily costly. We may conclude that pursuing victory through semi-proportional voting systems is more costly than through plurality voting systems, let alone proportional voting systems.[51]

  Given the costliness of achieving minority representation via cumulative voting methods, does it make any sense for that method to be advanced? We should bear in mind that cost affects choice on the margin. That is, it is the marginal cost associated with a change in procedure that matters. In those areas where minority voter dilution is most apparent as a problem, civil rights activists may have already been engaged in costly "get-out-the-vote" activities such as door-to-door canvassing, and providing detailed instructions on how to utilize absentee ballots.[52] For political activists who anticipate a high degree of interaction with their constituents regardless, the marginal cost of applying a

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[49] Of several commonly used systems, Chamberlin (1986) finds STV the least manipulable, clearly outperforming plurality voting in this regard.

[50] In Illinois, where cumulative voting was long used in three member districts, the major parties agreed that whichever party was stronger in any district would run two candidates, and the weaker party would run one, rendering the outcome of elections virtually certain (Lewyn, 1995:206,220; Dunn, 1972:651; Tucker, 2002:435; Sawyer and MacRae, 1962:936; Blair, 1960).

[51] But see Pildes and Donoghue (1995:300), who find no evidence of increased campaign costs under cumulative voting.

[52] Guinier (1998:ch 7) details this kind of activism by the Perry County Civic League (PCCL) in Alabama. The degree of interaction between the PCCL and voters was so great that the Justice Department brought charges against PCCL members for these activities, claiming they constituted voter fraud. They were found not guilty, and an argument can be made that the prosecution was itself part of a deliberate vote dilution effort.

semi-proportional system, such as cumulative voting, is negligible. That level of interaction would not, however, be required when using a proportional representation method.

During the firestorm surrounding Guinier's nomination for Assistant Attorney General for Civil Rights, she was accused of promoting quotas or a racial spoils system (see fn 1). As she made clear in her writings, however, her proposed remedy, cumulative voting, is race neutral. Any group of voters who wanted to coordinate amongst themselves to promote a particular cause or candidate could do so. If they could achieve a level of support exceeding the threshold of exclusion (see fn 33), they could be assured of representation (Guinier, 1994b:15). It is worthwhile to consider which groups are most likely to successfully engage in collective action through a costly political process. It may seem intuitive that the larger a group is, the more likely it is to achieve its goals through collective action. This is not the case, however. Group outcomes are dependent on the behavior of individual group members. The larger the group is, the less important any individual's contribution is to the success of the endeavor, and the more widely shared is any benefit. Therefore, the larger any group is, the more difficult it is to coordinate the behavior of those that might benefit from a collaborative effort (Olson, 1965). Those groups that are most likely to overcome the problems of collective action are relatively small groups who stand to receive a high per member benefit from political action – that is, special interest groups (Lewyn, 1994:946). It is the dynamics of collective action that allow small groups to achieve benefits for themselves while imposing costs on vast numbers of people through the political process. The number of persons who benefit from tariffs and agricultural price supports is miniscule compared to the number of persons who bear those costs, and the aggregate costs borne by those harmed by such policies are dramatically greater than the benefits enjoyed by the beneficiaries. However, since the costs are diffused, and the benefits are concentrated, the beneficiaries can much more easily achieve the level of coordination necessary to prevail in the political arena. Introducing minority vote dilution remedies which are more costly to utilize will bias the political system towards serving special interest groups. Where alternative remedies exist which reduce the costs of participation in the political process, those alternatives should be preferred. Fortunately proportional representation systems (and proportional lotteries) provide just such alternatives.

In addition to reducing the level of campaign expenditures, it is possible that more proportional representation systems would also elevate the quality of the debate (McKaskle, 1998:1197,n.324; Inman, 1993:2013; Lijphart, 1986a:150). As a practical matter, it is more difficult for candidates to demonize the

numerous opponents found in a multi-member district than what often is only a single credible opponent in a single-member district. Also, since a successful candidate in such a system will necessarily serve with some other candidates that ran in the same contest, a politician's effectiveness in office may depend in part on not alienating other candidates, not to mention their supporters.

6. BEYOND MINORITY REPRESENTATION - MINORITY INTEREST

Thus far, this article has focused on methods of achieving representation for minority groups. That may not suffice to insure that minorities indeed can influence the political process. If minorities achieve representation in legislative bodies, but constitute a permanent minority voting block within those institutions, the victory of electoral success will necessarily ring hollow.[53] Even advocates of proportional or semi-proportional voting methods for the election of representatives frequently concede that plurality voting should be applied within legislative bodies (e.g., Briffault, 1995:462; Amar, 1995:202). Guinier (1994b:107-8) proposes that cumulative voting could be utilized within deliberative bodies, but this requires voting on issues in clusters, where manipulation via agenda control may prove very effective. In most instances, the continued use of plurality voting by deliberative bodies is probably appropriate. Where plurality voting is clearly being used as the last line of defense in a well-established campaign to disenfranchise minority voters, however, a proportional lottery would be an effective remedy. Representatives could cast their votes, a ballot could be drawn at random, and the decision on that ballot would prevail. A persistent minority of say 20% would achieve their objectives 20% of the time, rather than never. A proportional system of "taking turns"[54] would be achieved. It is worth noting that under plurality (or majority) voting, there is no incentive to pursue consensus beyond what is required to insure a plurality (or majority) of the votes (Riker, 1962). When applying a proportional lottery, the benefits of pursuing a consensus extend up to the point of unanimity. Eliminating one opposing ballot may well be worth offering a compromise on the proposal under consideration. Also, since a minority cannot be permanently suppressed with any degree of certainty, there is an incentive to temper any potentially discriminatory proposals that may draw future retribution. The advantages of using a proportional lottery as opposed to some other decision rule to remedy vote dilution problems within

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[53] Guinier (1994b:71) addresses this in a section entitled "*No Two Seats.*"

[54] This is a value advocated by Guinier (1994b:ch.1).

deliberative bodies include achieving a strictly proportional outcome (over the long term) (Amar, 1984:1307), the ability to consider one issue at a time (unlike semi-proportional voting methods), invulnerability to strategic voting, lower decision costs, and thus, less susceptibility to rent-seeking (special interest initiatives). A potential drawback might be that fringe groups would be able to occasionally triumph, but if a group has sufficient support to elect a representative, taking democracy seriously requires permitting them this opportunity (Bloch, 1998). If a proportional lottery is applied, it would be necessary to incorporate a rule prohibiting the reconsideration of the same issue over again, to prevent repeated trials until a favorable outcome is achieved, but this is not an insurmountable difficulty.[55]

7. CONCLUSION

Minority vote dilution is a problem that requires a remedy. No such remedy is achievable using single-member districts with plurality voting. Proportional representation, semi-proportional representational systems, and proportional lotteries do provide solutions. Of these, proportional representation is clearly preferable to semi-proportional systems,[56] such as cumulative voting and limited voting, and to proportional lotteries as well, at least with regard to likely acceptance. Proportional representation is preferred to semi-proportional methods because the result more closely reflects the preferences of the voters. Furthermore, as noted in this article, proportional representation methods are less susceptible to rent-seeking efforts, and so should result in lower aggregate campaign expenditures, and less susceptibility to special interest politics.

  Where minority vote dilution remains an intractable problem, in spite of representation, due to persistent voting blocks within deliberative bodies, I recommend the use of a proportional lottery as a device to achieve a proportional outcome while minimizing decision costs. Although citizens may be reluctant to accept a decision methodology incorporating an element of chance, presumably proportional lotteries would only be applied in areas where citizens are also reluctant to accept decision rules which permit minority

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  [55] Amar (1984:1303; 1995:204) raises this as an issue. If no such precaution is taken, it would be like an instance where a person, losing a coin toss, immediately suggests the decision should be by "best two out of three." An appropriate rule to prevent this problem could be that no issue can be reconsidered within a specified time period without the unanimous consent of the body. Some provision for reconsideration should be provided to accommodate changing circumstances.

  [56] Guinier (1994b:104) cites principles that should be met to achieve political equality for minorities. They are, "1. that each group has a right to have its interests represented, and 2. that each group has a right to have its interests satisfied a fair proportion of the time." More proportional outcomes necessarily satisfy principle 2 more closely.

participation in the political process. In such areas, where a remedy would likely be imposed by the courts rather than embraced by a majority of the affected body, a proportional lottery is likely to be the best available alternative.

This is not to say that proportional representation is generally the best system for choosing legislators under all circumstances, or that proportional lotteries should be universally applied for making decisions within legislative bodies. Both systems have their own weaknesses. Under proportional representation, extremist factions may gain representation, and government is often accomplished by unwieldy and unstable coalitions of parties brought together not by any ideological compatibility, but by the simple prospect of forming a majority coalition. The principles voters intend their parties to defend may be undervalued in the parties' quest for power (see, e.g., Farrell, 2001:192). And even the best-known advocates of making political choices by lottery, the Athenians, did not use that method for making critical decisions, such as filling key military posts (Headlam, 1933:2). There are, of course, trade-offs involved in any selection of a collective decision-making process. My argument is that under specific circumstances, that is, where plurality voting is problematic because persistent minority vote dilution exists, proportional representation, and proportional lotteries within legislative bodies, can address that problem, and are superior to other proposed solutions (semi-proportional systems), especially in regard to their sensitivity to rent-seeking efforts.

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