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Designing Mathematical Models to Describe One-Person, One-Vote Compliance by Unique Governmental Structures: The Case of the New York City Board of Estimate

R. Alta Charo

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DESIGNING MATHEMATICAL MODELS TO DESCRIBE ONE-PERSON, ONE-VOTE COMPLIANCE BY UNIQUE GOVERNMENTAL STRUCTURES: THE CASE OF THE NEW YORK CITY BOARD OF ESTIMATE

R. ALTA CHARO *

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* Associate Director, Legislative Drafting Research Fund of Columbia University; Lecturer-in-Law, Columbia University School of Law; Assistant Director of Research, New York City Charter Revision Commission (1982-83). B.A. 1979, Harvard-Radcliffe College; J.D. 1982, Columbia University School of Law.

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INTRODUCTION

THE federal courts of New York are interpreting the precise scope of the Supreme Court's one-person, one-vote decisions as applied to city elections.[1] The case has profound political implications for the governance of New York City and other municipalities, and raises basic questions concerning the nature of political representation. Immediately at stake is the viability of an institution in New York City government that has brought together the highest officials of the city and its boroughs for over 110 years. This institution, known as the Board of Estimate (Board), has functioned at times as the upper house of a bicameral legislature,[2] while at other times it has been viewed as a check on the excesses of the city legislature.[3] Its history has long reflected the changing power relationships between the centralized city government and the five boroughs. Currently, the Board is being challenged on the ground that its membership and voting structure violate basic democratic principles embodied in the fourteenth amendment.[4] If the Board is dismembered, its

1. See *infra* notes 141-52 and accompanying text for a discussion of the framework of this litigation.
2. See *infra* note 50 and accompanying text.
3. See *infra* note 40 and accompanying text.
4. U.S. Const. amend. XIV.

significant functions could pass to the Mayor and the City Council, resulting in a dramatic shift in the power structure of New York City government.

New York City's Board of Estimate is a unique response to the needs of a diverse city created by the 1896 consolidation of various county and city governments into the present City of New York.[5] During the Board's 110-year history[6] its powers, composition and influence have often changed,[7] but it has always remained an "organic response to the necessity of administering a governmental agency which encompassed several autonomous constituencies."[8] In its present form, the Board consists of the Mayor, the Comptroller and the City Council President, each of whom is elected city-wide and casts two votes, and of the Presidents of the five boroughs, each of whom casts one vote.[9] This composition ensures that the three city-wide officials can constitute a majority,[10] even in the face of unanimous opposition by Borough Presidents.[11] This voting

5. See *infra* notes 28-31 and accompanying text.

6. Predecessors to the Board of Estimate include the 1853 Board of Commissioners, consisting of the Mayor, Comptroller, Recorder, President of the Board of Aldermen and President of the Board of Assessments, which passed on certain appropriations prior to submission to the Board of Supervisors; the 1864 Board of Estimate and Apportionment, created to estimate the expenses of the Metropolitan Police District and composed of the Commissioners of Police (appointed by the Governor) and the Comptrollers of Brooklyn and New York City (appointed by their respective Councils); and the 1873 Board of Estimate and Apportionment, composed of the Mayor, Comptroller, Commissioner of Public Works and the President of the Department of Public Parks, which apportioned real estate tax revenues. *See* W.H.K. Communications Assocs. Inc., *The Structure, Powers and, Functions of New York City's Board of Estimate* 1-2 (1973) [hereinafter cited as Kramarsky Report], *reprinted in* I Joint App. A-154, A-160 to -161, Morris v. Board of Estimate, 707 F.2d 686 (2d Cir. 1983) (compilation of court documents) [hereinafter cited as Joint App.]; *see* W. Sayre & H. Kaufman, Governing New York City 626-52 (1960).

7. See *infra* Pt. I.

8. Kramarsky Report, *supra* note 6, at 1, *reprinted in* Joint App., *supra* note 6, at A-160.

9. *See* New York City Charter ch. 3, §§ 61-62 (Supp. 1984-85).

10. The exception to this rule lies in the formulation of the city's expense and capital budgets. The expense budget is drawn up in preliminary form by the Office of Management and Budget, a mayoral agency. *See id.* ch. 6, §§ 111-112 (1976 & Supp. 1984-85). After hearings by committees of the City Council and the Board of Estimate, *see id.* § 115 (Supp. 1984-85), the Mayor submits a proposed budget to the Board and Council, *see id.* § 116. Either body may "increase, decrease, add or omit any unit of appropriation in the budget as submitted by the mayor, or add, omit or change any terms or conditions of it." *Id.* § 120(a) (1976). The Mayor does not participate in the vote on such changes, thus giving Borough Presidents a majority of the remaining votes. *See id.* § 120(d). In addition, the Mayor may veto the budget adopted by the Board and the Council. *See id.* § 121(a) (Supp. 1984-85). In that case, however, a two-thirds majority, or 6 votes, is needed to override the veto, *see id.* § 121(b), and this cannot be achieved by either Borough Presidents or city-wide officials alone. Procedures for adoption of the capital budget are similar. *See id.* ch. 8, §§ 191-192, ch. 9, §§ 214, 216, 222-223 (1976 & Supp. 1984-85).

11. It should be noted that such a circumstance is rare. An analysis of the Board's votes from February 3, 1980 to March 18, 1983 shows that 96.83% of the 13,380 votes taken were unanimous. *See* Memorandum of Law for Defendant at 16, Morris v. Board

structure gives equal voices to Borough Presidents representing constituencies ranging from 350,000 to over 2,000,000 persons, thus spurring litigation over the representative character of this enormously powerful governmental body.[12]

The Board's most important functions are to develop the city budget, to negotiate and approve all contracts and franchises for the city, and to determine the use, development and improvement of property owned by the city.[13] However, this recitation of powers fails to convey the enor-

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of Estimate, 592 F. Supp. 1462 (E.D.N.Y. 1984) [hereinafter cited as Defendant's Memorandum]. In 111 of the 424 split votes, however, the three city-wide officials voted as a bloc, thus making the Borough Presidents' votes moot. *Id.* Nevertheless, this extraordinarily high level of unanimity has been documented by older studies. *See* Kramarsky Report, *supra* note 6, at 39-41, *reprinted in* Joint App., *supra* note 6, at A-198 to -200 (956 of 1008 items on which a vote was taken during six 1971 meetings were passed unanimously); New York State Comm'n on Governmental Operations of the City of N.Y., II Background Research on the Top Structure of the Government of the City of New York 32 (1961) (4660 of 4685 votes taken in 1959 were passed unanimously)[hereinafter cited as II Moore Commission Report]. Votes concerning contracts and land use planning were the votes most frequently decided without unanimity. *See* Kramarsky Report, *supra* note 6, at 42, *reprinted in* Joint App., *supra* note 6, at A-201. These same votes attracted most of the public testimony. *See id.* at 42-46, *reprinted in* Joint App., *supra* note 6, at A-201 to -205.

12. See *infra* notes 141-52 and accompanying text.

13. The plaintiffs in Morris v. Board of Estimate, 551 F. Supp. 652 (E.D.N.Y. 1982), *rev'd*, 707 F.2d 686 (2d Cir. 1983), *on remand*, 592 F. Supp. 1462 (E.D.N.Y. 1984), presented the following list of the Board's powers:

A. The Board of Estimate exclusively
i. determines the use, development and improvement of property owned by the City;
ii. approves standards, scopes and final designs of capitol [sic] projects for the City;
iii. negotiates and enters into all contracts on behalf of the City.
iv. negotiates and approves all franchises that are granted by the City;
v. grants leases of City property and enters into leases of property for City use;
vi. sets the rates for purchases of water from the City;
vii. sets the charges for sewer services provided by the City;
viii. approves or modifies all zoning decisions for the City; and
ix. sets tax abatements.
B. The Board of Estimate acting in conjunction with the New York City Council
i. recommends and approves the expense budget of the City without the participation of the Mayor;
ii. recommends and approves the capital budget of the City without the participation of the Mayor;
iii. periodically modifies the budgets of the City;
iv. confers with the City Council when agreement on the budget between the two bodies is not reached;
v. overrides mayoral vetoes of budget items without the participation of the Mayor; and
vi. holds hearings on budgetary matters.
C. The Board of Estimate also
i. administers the Bureau of Franchises;
ii. administers the Bureau of the Secretary;
iii. holds public hearings on any matter of City policy within its responsibili-

mous influence of the Board in city affairs. In its administrative capacity, it coordinates agency actions so that the activities of one department do not interfere with the projects of other departments.[14] In its budgetary role, it exercises control over every city agency.[15] In its role as business manager, it approves every operation in which city money is used to hire the services of private business.[16] Finally, the Board's land use and planning authority makes it the pre-eminent body directing real estate development[17] in a city marked by extraordinary land values, acute housing shortages and an economy based largely on its attraction of major businesses with large payrolls and enormous numbers of employees. In sum, the Board represents a concentration of legislative, executive and administrative power in the hands of the eight most pre-eminent local officials—and, through them, in the county leaders of the Democratic Party[18]—making it efficient and effective, while at the same time withholding a significant amount of authority from the members of the more diverse City Council.

To a large degree, the Board of Estimate litigation turns on the mathematical description of the existing power structure of New York. Supreme Court decisions have long focused on equality of representation,[19] which is determined by the use of mathematical models that calculate the relative disenfranchisement and over-enfranchisement of portions of a given population.[20] In order to be useful, however, these models must realistically reflect the power distributions of a representational system. This requires a definition of the power to be equalized.

Clearly the Constitution does not guarantee each person an equal voice; for example, many individuals have superior access to media and thus a stronger voice in political debate. Rather, the Constitution guarantees that each citizen's vote will have equal force. The force of that vote can be measured by a citizen's contribution to the election of a particular candidate.[21] However, even this is not enough. For instance, two

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ties whenever called upon to do so by the Mayor or in its discretion for the public interest;

iv. holds hearings on tax abatements that are within the discretion of City administrative agencies; and

v. makes recommendations to the Mayor or City Council in, *supra* note 6, regard to any matter of city policy.

Statement of Facts Pursuant to Local Rule 9(g), Morris v. Board of Estimate, 707 F.2d 686 (2d Cir. 1983), *reprinted in* Joint App., *supra* note 6, at A-140 to -42.

14. *See* New York City Charter ch. 3, § 67(2), (3), (7) (1976).

15. *See id.* ch. 6, §§ 112(a), 115-116, 119-120; ch. 9, §§ 214(a), 216, 219, 221-222 (1976 & Supp. 1984-85).

16. *See id.* ch. 13, §§ 342, 349.

17. *See id.* ch. 13, § 67(1),(4),(5),(7), ch. 8, § 197-a (1976 & Supp. 1984-85).

18. See *infra* notes 136-40 and accompanying text.

19. See *infra* note 242 and accompanying text.

20. See *infra* Pt. IV.

21. See *infra* notes 249-58 and accompanying text for a discussion of the mathematics used to compare one citizen's ability to contribute to the election of a candidate with that of another citizen who resides in a larger district.

districts of 10,000 persons who cast a single vote apiece does not meet constitutional standards if the first district elects a representative who holds two votes on the governing body and the second district's representative holds only one. Thus, voting equality also means that each representative of equally populated districts has the same amount of absolute legislative power,[22] implying as a corollary that equal numbers of constituents deserve equal amounts of absolute legislative power. New York City's Board of Estimate fails to meet this latter condition, because residents of the most populous borough, Brooklyn, are represented by the same amount of absolute power through their Borough President as residents of the least populous borough, Staten Island (Richmond County).

The inquiry cannot end here, however, because if competing policies can justify the deviation, the Constitution does not require absolute equality in voting power.[23] In such instances, the Supreme Court has balanced the extent of the representational deviation against the importance of the competing policies. Choosing a mathematical model to define representation, (in other words, power) and to calculate the deviation from ideal equality of representation is not, therefore, merely a "imbroglio of mathematical manipulation."[24] Rather, it is a sincere attempt to describe political reality in a fashion that is useful to the balancing process. Considering that different mathematical models have estimated the Board's deviation as ranging from near zero to 330%,[25] it is clear that selecting one model or another can predetermine the result when balancing these conflicting policies.

In addition to its local impact, the Board of Estimate litigation will be important to counties, cities and towns across the country as they experiment with forms of local government designed to balance centralization with local autonomy, majority authority with minority representation, and relative efficiency with broad-based participation in government. The Board of Estimate falls on the extreme end of the spectrum of local governments subjected to one-person, one-vote requirements. Its members are elected to individual offices, but serve on the Board ex officio. Furthermore, while the Board equalizes the voting strength of local officials from large and small constituencies, it subjects them to a majority voting bloc of city-wide officials. In sum, the Board's structure favors the relative efficiency of a small body of top officials and the preservation of minority interests over the representative character of the purely legislative City Council.

22. The term "absolute" power refers to the number of votes held by a legislator. Obviously some legislators have more relative power than others, whether by seniority, association or force of personality. Furthermore, where districts are of unequal size and legislators are given weighted votes in compensation, absolute power is best defined in terms of "decisive" or "critical" votes. See *infra* notes 258-96 and accompanying text.

23. See *infra*. Pt. VIII.

24. Mahan v. Howell, 410 U.S. 315, 319 n.6 (examination of floterial districts), *modified*, 411 U.S. 922 (1973). See *infra* note 225 for a discussion of floterial districts.

25. See *infra* notes 197-225, 298-316 and accompanying text.

The resolution of the constitutional issues relating to the representative structure of the Board offers the courts an excellent opportunity to explore the extent to which public policy considerations can sustain malapportionment of district seats in order to preserve the boundaries of existing communities and political subdivisions. If the litigation reaches the Supreme Court, it will open the door for a fresh discussion of the kinds of governmental bodies, legislative or not, that should be subject to the one-person, one-vote protections of the equal protection clause of the fourteenth amendment.[26]

Part I of this Article presents a brief history of the Board of Estimate. Particular attention is paid to the changing balance of power between the central city government and the governments of the five boroughs comprising the City of New York. Although a complete history would be fascinating, it is hardly within the scope of this Article. Nevertheless, familiarity with these materials is important to students of municipal government and to those desiring a more complete picture of the political tensions surrounding the current Board of Estimate litigation. In addition, this history describes the vested interests and massive inertia likely to face those who wish to reform the structure of New York City government, and thus foreshadows many of the issues likely to arise in the event a new Charter Revision Commission is appointed in response to the Board of Estimate litigation.

Those readers primarily interested in mathematical modeling of political institutions and the constitutional issues regarding apportionment may wish to by-pass the historical materials of Part I, and turn directly to Part II, which presents the current structure and powers of the Board and describes the litigation to date. Part III discusses the applicability of the one-person, one-vote principle to a governmental body whose members are appointed ex officio, a not uncommon structure of government in New York State. Part IV introduces the traditional mathematical models used to assess whether political institutions comply with these one-person, one-vote requirements. Three such models have been used to date in the Board of Estimate litigation, and each is discussed in detail.

Parts V and VI of the Article describe a more sensitive mathematical analysis of political institutions, and apply this analysis to today's Board of Estimate. This alternative analysis employs the concept of "critical" votes, which have a decisive effect on the outcome of a legislative motion or general election.

Part VII proposes a new weighted voting structure for the Board of Estimate, which is examined using critical votes analysis. In Part VIII, the constitutional justifications for deviation from perfect one-person,

26. U.S. Const. amend. XIV. The Supreme Court has recently granted certiorari to review a district court decision holding that political gerrymandering of state legislative districts violates the equal protection clause. Baudemer v. Davis, No. IP-82-56-C (D.S. Ind. Dec. 12, 1984), *cert. granted*, 53 U.S.L.W. 3680 (U.S. March 26, 1985). Thus it appears the Supreme Court is again interested in resolving novel questions in this area.

one-vote compliance are explored generally and specifically with respect to this Article's proposal for weighted voting for the Board. The Article concludes that although the proposed weighted voting scheme tests some constitutional limits, it nevertheless fulfills certain policy objectives accepted by the Supreme Court and exemplified by nearly one hundred years of New York City history, and therefore is constitutional by today's standards for local government.[27]

I. HISTORY OF THE BOARD OF ESTIMATE

The City of New York was created by state law in 1896 [28] in response to a report by the Municipal Consolidation Commission[29] and a nonbinding voter referendum.[30] The consolidation was designed to increase the efficiency of newly developing municipal services and to decrease political corruption in the greater metropolitan area.[31] Since then the city government has reflected the changing power relationships between the central government and the boroughs.

In 1898, New York City's first charter created a bicameral legislature, named the Municipal Assembly,[32] to govern the newly consolidated five borough city, and continued the Board of Estimate and Apportionment, which had been created in 1873 to manage the city's budget.[33] The Board consisted of the Comptroller, the President of the Board of Aldermen,[34] the Mayor, the President of the Department of Taxes and Assessment, and the Corporation Counsel.[35] On this Board, the Mayor and his appointees held three of five votes, thus beginning a pattern of consolidating power in the hands of the Mayor, his appointees and other city-

27. See *infra* notes 372-94 and accompanying text.

28. 1896 N.Y. Laws 488.

29. This Commission was set up in 1890 "to inquire into the expediency of consolidating the various municipalities in the state of New York, occupying the several islands in the harbor of New York." 1890 N.Y. Laws 311.

30. *See* 1894 N.Y. Laws 64.

31. *See* F. Shaw, The History of the New York City Legislature 3-8 (1954).

32. The Municipal Assembly consisted of a 60 member Board of Aldermen and a 29 member City Council. *See* Greater New York Charter §§ 18, 19, 24 & App. III (1897) (city council of 29 members, board of aldermen consisting of one alderman for each of 56 assembly districts and one from each of the four areas specifically listed in the section). For a general discussion of New York City Charter revisions with respect to City Council Membership see New York City Charter Revision Comm'n, Proposed Amendments to the Charter for the City of New York 357-70 (1983) (available in files of *Fordham Law Review*) [hereinafter cited as Sovern Commission Report]. See generally F. Shaw, *supra* note 31, for a complete history of the New York City Council.

33. *See* Kramarsky Report, *supra* note 6, at 2, *reprinted in* Joint App., *supra* note 6, at A-161.

34. *Id.* at 1-2, *reprinted in* Joint App., *supra* note 6, at A-160 to -161. Beginning in 1884, the Comptroller and the President of the Board of Aldermen were popularly elected, rather than appointed by the Common Council, which had supervised city property in the seventeenth and eighteenth centuries. *See id.*

35. *Id.* at 2, *reprinted in* Joint App., *supra* note 6, at A-161. The Corporation Counsel was added in 1893. *Id.*

wide officials.[36]

The 1898 charter removed final budget authority from the Board by allowing the Municipal Assembly to reduce any budget item without further review by the Board.[37] In addition to the Board and the Municipal Assembly, a Board of Public Improvements existed at the executive level to regulate capital expenditures.[38] Borough Presidents could sit on the Board of Public Improvements but could only vote on matters concerning their own boroughs,[39] thus limiting their city-wide influence. Together the "Board of Estimate and the Board of Public Improvements served as a check on the possible extravagances of the Municipal Assembly in the area of capital expenditures."[40]

By 1901, a coalition of Republicans, insurgents and Brooklyn Democrats, dismayed by their exclusion from the Manhattan-dominated Democratic city government, "push[ed] through a series of amendments to the 1898 Charter."[41] These amendments replaced the City Council with a strengthened Board of Estimate, but retained the Board of Aldermen as the "new unicameral City Legislature."[42] The amendments also radically altered the structure of the Board of Estimate. The new Board combined the functions of the old Board of Estimate and the Board of Public Improvements, and its membership was changed to include the Mayor, the Comptroller, the President of the Board of Aldermen, and the five Borough Presidents.[43] Three votes were granted to each of the three city-wide officials, two votes to the Borough Presidents of the two largest boroughs, Brooklyn and Manhattan, and one vote to each of the other Borough Presidents.[44] This voting structure institutionalized the

36. *See id.* The President of Taxes and Assessments and the Corporation Counsel were mayoral appointees. *See id.*

37. *See id.* at 3, *reprinted in* Joint App., *supra* note 6, at A-162. It should be noted, however, that the Municipal Assembly could not add to the budget. *See id.* The Board's other functions continued unchanged, including estimating the budget, establishing the tax rates, transferring funds among departments and issuing stocks and bonds. *See id.* at 2, *reprinted in* Joint App., *supra* note 6, at A-161.

38. *See id.* at 3, *reprinted in* Joint App., *supra* note 6, at A-162. This board consisted of the Mayor, Comptroller and the heads of the city departments. *Id.*

39. *See id.*

40. *Id.*

41. *See id.* at 4, *reprinted in* Joint App., *supra* note 6, at A-163.

42. *Id.* at 5, *reprinted in* Joint App., *supra* note 6, at A-164.

43. *See id.*

44. *See id.* In 1900, the populations of the boroughs were:

Manhattan (Man.)	1,850,093
Brooklyn (Bklyn)	1,166,582
Bronx (Bnx)	200,507
Queens (Qns)	152,999
Staten Island (S.I.)	67,021

Bureau of the Census, Statistical Abstract of the United States 1960, at 20 (1960). These weighted votes did not proportionally reflect the borough populations. Furthermore, the city officials held nine votes, a simple majority, thus setting a pattern of power distribution between city officials and Borough Presidents that remains to this day.

pattern, still seen on today's Board, in which the city-wide officials can form a majority even in the face of unanimous opposition by the Borough Presidents. However, the Borough Presidents then had full voting power on every measure, which reflected the drafters' conviction that it is "proper that the boroughs should have a direct representation on the Board."[45]

The drafters of this new charter wrote in 1900:

> [T]he Board of Estimate and Apportionment under our draft charter will be the most important body in the City government. Whatever dissatisfaction may have been felt with any other municipal body, the Board of Estimate and Apportionment has generally given satisfaction for its capacity, efficiency and integrity. Under the plan of the Commission it will be in reality the centre of all legislative activity in relation to financial affairs, and of much of the administrative activity of the City. It will be in effect an upper house of the City Legislature and also a cabinet of the most important administrative officers.[46]

Thus by the 1900's the new Board of Estimate represented a partial redistribution of executive power away from the Mayor and toward decentralization. The five Borough Presidents now had significant influence over the city's budget and received broad executive authority over the delivery of municipal service, borough planning and development.[47]

From 1901 to 1936, the Board of Estimate grew in power and prestige, largely because the 1901 charter granted it the residual powers of the City—those powers not specifically granted to other agencies.[48] Indeed, in 1924, under the new City Home Rule Law,[49] de jure recognition was given to the Board's status when it was officially designated as the upper house of the municipal legislature.[50] The plan was for the Board of Esti-

45. New York State Charter Revision Comm'n, Report of the Charter Revision Commission to the Governor of the State of New York 19 (1900) [hereinafter cited as 1900 Report].

46. *Id.* at 18.

47. *See* Kramarsky Report, *supra* note 6, at 4-5, *reprinted in* Joint App., *supra* note 6, at A-163 to -164. The Borough Presidents also inherited the supervision of highways, sewers and public buildings from the old Board of Improvements. *See id.* at 5, *reprinted in* Joint App., *supra* note 6, at A-164.

48. *Id.* at 5, *reprinted in* Joint App., *supra* note 6, at A-164. For example, in 1905, as a result of a scandal concerning the Board of Aldermen, the Board gained the power to grant franchises and generally to control "all the streets, avenues, highways, boulevards, concourses, driveways, bridges, tunnels, parks, parkways, waterways, docks, bulkheads, wharves, piers and all public grounds and waters which are within or belong to the city." Greater New York Charter, ch. 14, § 242(3), 1905 N.Y. Laws 629. The Board gained the authority to pass on improvements in 1911, *see id.* ch. 1, § 247, 1911 N.Y. Laws 679, to create zoning regulations in 1916, *see id.* ch. 1, § 242, 1916 N.Y. Laws 497, and to be the trustee for the City Employee Retirement System in 1920, *see id.* ch. 1, § 1704, 1920 N.Y. Laws 427. Following the 1924 Charter Revision, city powers were redistributed, however, and residual powers were returned to the Board of Aldermen. See *infra* note 51 and accompanying text.

49. *See* 1924 N.Y. Laws 363.

50. Kramarsky Report, *supra* note 6, at 7, *reprinted in* Joint App., *supra* note 6, at A-166.

mate to run the city's business affairs while the Board of Aldermen ran its legislative affairs.[51] Unfortunately this did not occur. Instead, the Board of Aldermen sank in prestige and power and became a "rubber stamp" for the Board and for the Democratic party.[52]

The early 1930's saw another major charter reform movement.[53] The movement was spurred by disclosures of widespread government mismanagement[54] by the monolithic Democratic Party,[55] and by the need to relieve the Board of some of its overwhelming responsibilities for land-use planning. These problems had resulted in part from federal public works programs and had led to some undesirable log-rolling practices.[56] To help alleviate these problems, the Thacher Commission[57] proposed the creation of a City Planning Commission, appointed by the Mayor.[58] The Commission's recommendations "could be overruled only by a 3/4ths majority vote of the Board of Estimate."[59] Members of the Board

51. This followed the 1924 charter revision effort, which set forth a scheme for dividing municipal power in the following manner: taxing and purely "legislative powers" to the Board of Aldermen, business and routine administrative decisionmaking to the Board of Estimate and Apportionment, politically or financially sensitive administrative decisionmaking to both bodies jointly and all residuary powers to the Board of Aldermen. *See* The New York Charter Comm'n, Report of the New York Charter Commission with a Draft of Charter for the City of New York 10 (1923).

52. The abolition of the Board of Aldermen . . . will result in no injury to the City of New York.

> . . . As Borough President Harvey frankly admitted before the Committee: 'They say the members of the Board of Aldermen are rubber-stamps and I can see that they are, because if they don't do what they are told, they are put out.'

Joint Legislative Comm. to Investigate the Admin. of the Various Dep'ts of the Gov't of the City of N.Y., *In re The Investigation of the Departments of the Government of the City of New York* 19 (1932). One commentator has stated:

> In this scheme of things the Board of Aldermen became a mere cog in the party machine, its chief function being to ratify those decisions of the party chiefs which required the sanction of the board in conformity with the city charter . . . . Overwhelming Democratic majorities, especially after 1921, made the task relatively simple. During this sixteen-year period the board went through the motions of conducting business in a constitutional manner; in reality it was a travesty of a legislative body.

F. Shaw, *supra* note 31, at 34.

53. *See* Kramarsky Report, *supra* note 6, at 7-8, *reprinted in* Joint App., *supra* note 6, at A-166 to -167. "This movement came to fruition in the form of the Thacher Commission." *Id.* at 8, *reprinted in* Joint App., *supra* note 6, at A-167. *See* New York City Charter Revision Comm'n, Preliminary Report and Draft of Proposed Charter for the City of New York 1 (1936) [hereinafter cited as Thacher Commission Report].

54. F. Shaw, *supra* note 31, at 152-53. The disclosures were made by Judge Seabury. *See id.*

55. Between 1922 and 1937, the Democratic majority averaged 89% of the representation on the Board of Aldermen. In fact, in the 1932-33 session, only one Republican sat among 64 Democrats. *See id.* at 28.

56. *See* Kramarsky Report, *supra* note 6, at 8, *reprinted in* Joint App., *supra* note 6, at A-167.

57. See *supra* note 53 and accompanying text.

58. *See* Thacher Commission Report, *supra* note 53, at 8.

59. Kramarsky Report, *supra* note 6, at 9, *reprinted in* Joint App., *supra* note 6, at A-168.

saw this as an attempt to increase the power of the Mayor at their expense.[60] However, the Board's membership was left unchanged by the Charter reformers. Commenting on the role of the Borough Presidents on the Board, the drafters wrote:

> The right of each borough to separate and direct representation in the administration of the city's government is maintained by continuing the borough presidents as members of the board . . . . It is the conviction of the Commission that such representation is not only important in the interest of the boroughs but in the interest of the city as a whole. Those who administer the manifold affairs of the city should be intimately familiar with the conditions and needs of the five boroughs.[61]

Thus, despite wanting to reduce the Board's municipal planning powers, the drafters still recognized a substantial need for direct representation of the boroughs on the Board.

The Thacher Commission also proposed a number of other significant changes in city government that affected borough power. Its unanimous report and preliminary draft called for a strong mayor, retention of the Board of Estimate, and a smaller, thirty-two member City Council to serve as a unicameral legislature, replacing the Board of Aldermen.[62] To elect the new City Council, the Commission submitted a proposal for proportional representation (P.R.)[63] directly to the electorate without recommendation. The new system was designed to increase minority party representation and used the boroughs as the basis for the new legislative delegations.[64] However, because an act of the 1934 state legislature

60. *See id.*

61. Thacher Commission Report, *supra* note 53, at 17.

62. *See id.* at 5-11.

63. *See id.* at 5.

64. *See* F. Shaw, *supra* note 31, at 167. Proportional representation (P.R.) is a voting device used in multi-member districts. A voter can cast ballots for as many candidates as he or she wishes, marking each candidate in order of preference. If a first choice candidate has already gathered a number of votes sufficient to determine his election or defeat, the ballot is counted toward the next most preferred candidate whose success or defeat is still uncertain. The net result is a slate of elected candidates that should accurately reflect underlying voting sentiment. As an example, for a slate of ten candidates in a city that is 60% Democrat and 40% Republican, traditional majoritarian voting schemes should elect ten Democrats and P.R. should elect six Democrats and four Republicans. For a more extensive discussion of proportional representation see Sovern Commission Report, *supra* note 32, at 643-63. Many commentators have also discussed proportional representation. *See, e.g.*, G. Hallett, Proportional Representation—The Key to Democracy (1940); McCaffrey, *Municipal Affairs*, 33 Am. Pol. Sci. Rev. 841 (1939); Zeller & Bone, *American Government and Politics—The Repeal of P.R. in New York City—Ten Years in Retrospect*, 42 Am. Pol. Sci. Rev. 1127 (1948); Zimmerman, *The Federal Voting Rights Act and Alternative Election Systems*, 19 Wm. & Mary L. Rev. 621, 640-50 (1978). For a criticism of the mathematical basis of P.R., see Brams & Fishburn, *Some Logical Defects of the Single Transferable Vote*, in Choosing an Electoral System: Issues and Alternatives 147 (G. Pomper ed. 1984).

required any proposal for P.R. to be submitted separately to the voters,[65] and because the Thacher Commission feared P.R.'s defeat, the Commission recommended retention of the Board of Estimate.[66] Otherwise, if P.R. were defeated and a traditional City Council were elected from the districts, the resulting consolidation of power in the City Council could have given the Democratic Party permanent control of the City.[67]

In 1936 the voters of New York adopted the Thacher Commission's proposals in full.[68] The result was to redistribute city power once again. Boroughs became significant power bases through their legislative delegations, with each borough being a single constituency and electing one council member for every 75,000 valid P.R. ballots.[69] The Board of Estimate, retained as a safeguard against the defeat of the P.R. proposal, became the pre-eminent executive and administrative government organ. Through the Board, the Borough Presidents came to play a crucial role in formulating the city's capital and expense budgets, selling and leasing city property, granting franchises and setting municipal salaries.[70] Even the city's planning functions, which the 1936 Charter purported to place in the hands of the Mayor's City Planning Commission, actually remained within the Board's control. This occurred because in *Child v. Moses*,[71] the New York Appellate Division held that the Commission was an advisory body that could not execute city powers or expend city funds without approval or acquiescence by the Board.[72] The new structure of government placed the responsibility for making law in the hands of the City Council, which consisted of delegations elected at-large by P.R. from each of the boroughs.[73] The Board, with its five Borough

65. *See* Thacher Commission Report, *supra* note 53, at 15; F. Shaw, *supra* note 31, at 163.

66. *See* Thacher Commission Report, *supra* note 53, at 13; F. Shaw, *supra* note 31, at 163-64.

67. F. Shaw, *supra* note 31, at 163-64.

68. *See* Sovern Commission Report, *supra* note 32, at 361; Kramarsky Report, *supra* note 6, at 9, *reprinted in* Joint App., *supra* note 6, at A-168.

69. F. Shaw, *supra* note 31, at 167.

70. *See* Kramarsky Report, *supra* note 6, at 11, *reprinted in* Joint App., *supra* note 6, at A-170. However, the power of the Borough Presidents to maintain public buildings was transferred to the Department of Public Works and the power to cite building violations was transferred to the Department of Housing and Buildings. *Id.* at 9-10, *reprinted in* Joint App., *supra* note 6, at A-168 to -169.

71. 265 A.D. 353, 38 N.Y.S.2d 704 (1942), *aff'd mem.*, 290 N.Y. 828, 50 N.E.2d 235, *modified mem.*, 290 N.Y. 925, 50 N.E.2d 307 (1943).

72. *Id.*

73. In their report the Thacher Commission stated:

> The relative functions of the Council and the Board of Estimate are altered in several important respects. The Council is the legislative body and is vested with the entire legislative power of the city. All municipal legislation is to be by local law, rather than by ordinance, and local laws may be initiated only in the Council, which will alone constitute the local legislative body under the City Home Rule Law. The primary function of the Board of Estimate, on the other hand, is to direct the business affairs of the city. It will have no control over legislation except that local laws having to do with certain subjects directly re-

Presidents exerting significant but not decisive control, acted as a check on the City Council and as the primary authority over city finances.[74]

While the structure of the Board of Estimate under the 1936 charter remained unchanged until 1958, P.R. and the City Council did not fare as well. From its inception in 1937, the system of P.R. was a subject of near constant debate.[75] Its strength and its flaw were the same. Its strength was its ability to assure proportional minority representation on the City Council[76] by limiting Democrats to only one-half of its seats, thus reflecting the true extent of their popular support.[77] Its considered

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lated to the organization and administration of the government and amendments to the charter require its approval. It also passes upon the expense budget as submitted by the Mayor and the capital budget as submitted by the City Planning Commission. . . . Local laws may be vetoed by the Mayor subject to the power of the Council to pass them over such veto by a two-thirds' vote.

Thacher Commission Report, *supra* note 53, at 6.

74. In describing the Board's financial responsibilities the Thacher Commission reported:

> The Board of Estimate exercises no control over legislation except to check the Council in respect to the organization and administration of the government and to approve or disapprove amendments to the charter. It has general control over the financial policy of the city. It passes upon the Mayor's budget and is free to amend it by adding, increasing, decreasing or omitting items. After the Board of Estimate has passed the budget, it goes to the Council, which may only reduce or strike out the amounts appropriated for particular items. The Board of Estimate holds hearings so that it is before this small body of elected officers that the people have an opportunity to criticise the budget or any item in it.

Id. at 16. Some commentators maintain that the Council's role in the budgetary process was largely "formal and symbolic" because the Mayor was authorized to veto any Council amendments to the budget, and a three-fourths vote of the Council was necessary to override the veto. *See* W. Sayre & H. Kaufman, *supra* note 6, at 627.

In addition to its power to enact the budget, the Board possessed significant financial powers over which it exercised exclusive control. The most extensive and important of these was the Board's authority to alter the expense budget during the fiscal year by transferring funds from one appropriation to another. *See* New York City Charter, ch. 6, § 127 (1936). This power permitted the Board substantially to remake the budget after its enactment. Other significant financial powers of the Board included its powers and duty to fix the salaries and grades of city employees, *id.* ch. 3, §§ 67, 68; to approve the rates to be charged for water, *id.* ch. 30, § 734(4), wharfage, *id.* ch. 29, § 709(b), and for lease of city property, *id.* ch. 15, § 384(b); to regulate the letting of contracts, *id.* ch. 13, § 343(a); to set standard specifications for city purchases, *id.* ch. 13, § 347; and to regulate the acquisition and sale of city property and materials, *id.* ch. 15, § 384(a). In addition, the Board supervised the city's assessable improvements system, *id.* ch. 12, § 300, and headed the city's Employee Retirement System, *id.* ch. 3, § 71(a). The Board also had the power to grant franchises by setting aside streets and other lands for market purposes. *Id.* ch. 14, § 362. Finally, all the residual powers of the City were vested in the Board. *Id.* ch. 3, § 70. The Board was thus heir to all the powers generally vested in the City unless otherwise provided by law.

75. *See, e.g.*, G. Hallett, *supra* note 64, at 153-55; McCaffrey, *supra* note 64, at 845; Zeller & Bone, *supra* note 64, at 1127-28.

76. *See* G. Hallett, *supra* note 64, at 149.

77. For example, in the last election before P.R., sixty-two of the sixty-five members of the Board of Aldermen were Democrats; in the first P.R. election, the Democrats gathered half the City Council seats and fifty percent of the popular vote. *Id.*

weakness at that time, however, was that the Councils elected by P.R. consistently resulted in the election of representatives of the small but well organized Communist and American Labor parties.[78] After World War II, as anti-Communist sentiment grew in the United States, advocates for repeal attacked P.R. for its propensity toward minority representation. Some critics even candidly denied the premise that an election arrangement giving representation to political minorities was either sound or desirable.[79] In addition, although Republicans gained more seats with P.R. than with the traditional ward system, the party's leadership could not prevent the nomination and election of so-called "independent Republicans," and so joined the repeal movements.[80] In 1948, P.R. was repealed and elections returned to the use of wards based on the city's twenty-five state senatorial districts.[81] In the 1948 election, the Democratic Party captured twenty-four of the twenty-five council seats, despite gathering only 52.6% of the popular vote.[82]

Thus, by 1949, the boroughs were no longer the definitive power base for the City Council, which was now elected from districts. However, the Board of Estimate, and through it the Borough Presidents, still exercised enormous executive control over the city's finances and real estate. In addition, the Board acted as a check on Democratic Party ward politics, thereby achieving the purpose for which it had been designed by the Thacher Commission in the event that P.R. was defeated.[83]

In 1958 the boroughs and the Board of Estimate were once again affected by charter revision efforts when, in response to population growth in Queens, Staten Island and the Bronx, the voting powers of the Borough Presidents were equalized.[84] Although the boroughs were still of

78. The Council elected in 1937 was composed of 26 members: 15 Democrats, 5 American Labor Party members, 3 Republicans, 3 City Fusion Party Members. *Id.* In 1945, the Communist and American Labor parties gathered 18% of the first-choice vote and 17.5% of the Council seats. *See* Zimmerman, *supra* note 48, at 649. The New York Herald Tribune, looking back on the 1937 election, stated: "P.R. in fact operated magnificently then. It raised tremendously the character of representation in the council . . . and gave it a political division in reasonable accordance with the real sentiment of the city." G. Hallett, *supra* note 64, at 151 (quoting N.Y. Herald Tribune, Oct. 6, 1939, at 24, col. 2).

79. *See* Zeller & Bone, *supra* note 64, at 1133-34. It was argued that P.R. was "subversive of the two-party system and gave a 'lion's roar to irresponsible fleas,' magnifying 'out of all legitimate or decent proportion voices belonging to the tiniest fractions of our people.' " *Id.* at 1134 (quoting N.Y. Times, Aug. 25, 1947, at 16, col. 6).

80. *See id.* at 1128.

81. *See* F. Shaw, *supra* note 31, at 208-09. Note that this was practically identical to the alternative plan prepared by the Thacher Commission in the event P.R. was defeated. Under the alternative plan the Commission proposed: "Pending reapportionment of the senatorial districts equality of representation will be partially restored by providing that until a reapportionment is effected there shall be elected in addition to the councilmen chosen from the senatorial districts two Councilmen at large from each of the boroughs . . . ." Thacher Commission Report, *supra* note 53, at 14.

82. *See* Zimmerman, *supra* note 64, at 646 n.123.

83. See *supra* notes 65-67 and accompanying text.

84. *See* Kramarsky Report, *supra* note 6, at 11, *reprinted in* Joint App., *supra* note 6,

vastly different populations,[85] each Borough President received two votes, and each city official received four votes, thus retaining the city officials' bloc-voting majority.[86] However, equalizing voting strength was not the only change in the offing; technological and social developments were moving the city toward further centralization.[87]

Nevertheless, while centralizing city government was clearly on the political agenda, the concentration of that central authority was still uncertain. In 1960, the State Commission on Governmental Operations of the City of New York (Moore Commission) criticized the concentration of broad powers in the hands of the Board,[88] maintaining that "[t]he Board's practice of reaching decisions *in camera*, prior to hearing public testimony, frustrated the voters who wished to participate in the decision-making process."[89] The Moore Commission concluded that the am-

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at A-170. These changes were made by state law in response to a home rule request from the City Council. *See* 1958 N.Y. Laws 719(a).

85. In 1960, the populations of the various boroughs were:

Bklyn	2,627,319
Qns	1,809,578
Man.	1,698,281
Bnx	1,424,815
S.I.	221,991

See Bureau of the Census, Statistical Abstract of the United States 1961, at 25 (1961).

86. *See* Kramarsky Report, *supra* note 6, at 11, *reprinted in* Joint App., *supra* note 6, at A-170. Some legislators objected to equalizing the voting strength among the boroughs. Stanley Isaacs, Minority Leader for the City Council, wrote to the Governor's Counsel urging the Governor to veto the bill:

> Since the Board of Estimate is a body which passes on all budgets, spending the City's money, it seems sound to me that the boroughs which contribute so much should have more to say than the boroughs which contribute far less.
>
> This is highlighted by the fact that the Borough President of Richmond (Staten Island) is given two votes. The population is approximately 2 1/2% of the total population of the City. The assessed value of the Borough is approximately 2% of the total assessed value. It is absurd that they should have equal weight on the Board of Estimate . . . .

Letter from Stanley M. Isaacs to Daniel Gutman (April 3, 1958), *reprinted in* 1958 N.Y. Laws 719 (bill jacket).

87. In spite of these [1958] alterations, the Board of Estimate was essentially the same at [sic] it had been in 1901. The city, however, had changed drastically. In 1901, the city was a loose consolidation of formerly autonomous entities. The growth of the subway system, the mass use of automobiles along the city's highway system, and the introduction of the telephone and television slowly integrated city life. Technology was making centralization of city government more feasible. The expansion of the city's budget and the ever-blossoming variety of services it provided led many to recommend such centralization.

Kramarsky Report, *supra* note 6, at 12, *reprinted in* Joint App., *supra* note 6, at A-171.

88. *See* Kramarsky Report, *supra* note 6, at 12, *reprinted in* Joint App., *supra* note 6, at A-171.

89. *Id.* (emphasis in original). In describing the procedures of the Board of Estimate the Kramarsky Report states:

> The executive session, an informal and confidential meeting at which no record of the proceedings is taken, creates the optimum conditions for the Board to assert its unique role in the city's governmental process.
>
> . . . Each member [of the Board] by participating in the executive sessions is

biguous division of authority among the Mayor, the Board, the Borough Presidents and the City Council made it difficult for voters to assign responsibility for policy decisions, and that the structure should be replaced by a strong Mayor, a more independent and powerful Council, and a Board of Estimate limited largely to planning matters.[90]

In 1961 the Mayor appointed a new Charter Revision Commission (Cahill Commission) under authority granted by the State Legislature.[91] The Commission proposed a new charter, which took effect on January 1, 1963.[92] This charter made some profound changes in city government, many of which reduced the power of the Borough Presidents both di-

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expected to hold to his position at the public meeting and only the rare instance of new and persuasive testimony or an overwhelmingly negative public reaction will change the positions of Board members after the executive session.

. . . .

Critics of the Board of Estimate's present procedures argue that the Board should not reach decisions in executive sessions prior to public hearing. [But this] . . . would serve to delay decisions on the overwhelming majority of items on which there is no controversy. Furthermore, since virtually all controversial items have previously been subject of [sic] public debate, this . . . would be a dubious benefit even with regard to such items.

Id. at 23-26, *reprinted in* Joint App., *supra* note 6, at A-182 to -185. Despite these remarks, public sentiment exists in favor of eliminating the in camera decisionmaking on the Board and the use of delegates at the public meetings to cast votes in accordance with the members' prior positions. For example, at the Sovern Commission's Bronx hearings, Mr. Angelo Campanaro, President of the Chester Civic Association, testified as follows:

I think it's a disgrace that goes on now. A tremendous issue comes up at a public hearing, and the people come. New facts are brought out. They have expert testimony and contradictory maybe to other testimony. And immediately following the testimony, without the Borough President being there, or the Mayor, or [the City Council President], or the Controller [sic], they [the delegates] take a vote. I think that's scandalous. The people are disgusted. They feel they do not have a say. And what's the sense of us going before a public hearing of the Board . . . . They [the Board members] do not know what came up at the last meeting at the last minute, and their aide votes.

. . . .

. . . You know, heaven help the guy who doesn't know the ropes that maybe he can't get to the Mayor's staff before. Most people don't know that. They think this is the ultimate, you come before the Board of Estimate and you are going to present it on the first shot, and then you find you only have two members to speak to.

Transcripts of the N.Y. City Charter Revision Commission Public Hearings, Bronx County Courthouse, at 87, 90 (Feb. 3, 1983) (available in files of *Fordham Law Review*).

90. *See* Kramarsky Report, *supra* note 6, at 12, *reprinted in* Joint App., *supra* note 6, at A-171.

91. *See* Charter Revision Comm'n of the City of N.Y., Report of the Charter Revision Commission of the City of New York 1 (1961) [hereinafter cited as Cahill Commission Report]. The City Council and the Board of Estimate feared the possibilities of charter revision at this time, particularly in light of political feuding between the Mayor and the county leaders. Because the Mayor chose to run for re-election with new running mates, both bodies refused to appropriate monies for the Commission. *See* Kramarsky Report, *supra* note 6, at 12-13, *reprinted in* Joint App., *supra* note 6, at A-171 to -172.

92. Kramarsky Report, *supra* note 6, at 13, *reprinted in* Joint App., *supra* note 6, at A-172.

rectly at the borough level and indirectly at the level of the Board.[93] First, it significantly reduced the Board of Estimate's power over the budget.[94] Specifically, changes made in the budget by either the Board of Estimate or the City Council would be subject to mayoral veto, which could be overridden only by a two-thirds vote by each body.[95] In addition, the Board lost its line-by-line supervision of the expense budget,[96] and the Mayor, rather than the Board, was empowered to authorize increases of up to fifteen percent for projects included in the capital budget.[97] The Board retained its traditional authority over zoning, franchises and leases,[98] but residual powers of the City were vested in the Mayor rather than in the Board.[99]

The changes taking place in 1963 also affected the boroughs. The Borough Presidents lost some of their executive power with respect to the delivery of city services.[100] In exchange, however, each borough gained two new City Council members, to be elected at large.[101] These seats were designed to increase the status and prestige of the Council[102] by adding members with a broader vision than that of district representatives.[103] At the same time, it introduced the concept of borough representation and minority party representation on the City Council for the

93. *See id.* One commentator summarized the effect of these changes as an "integration of services, reduction of county and borough autonomy, and reduction of the powers of the Board of Estimate through a shift in authority to the Mayor and a legislative body representing the city as a whole." Weinstein, *The Effect of the Federal Reapportionment Decisions on Counties and Other Forms of Municipal Government*, 65 Colum. L. Rev. 21, 38 (1965).

94. *See* Kramarsky Report, *supra* note 6, at 13, *reprinted in* Joint App., *supra* note 6, at A-172.

95. *See* Cahill Commission Report, *supra* note 91, at 20-21 (proposed charter for the City of New York).

96. *See id.* at 21; Kramarsky Report, *supra* note 6, at 13, *reprinted in* Joint App., *supra* note 6, at A-172.

97. *See* Kramarsky Report, *supra* note 6, at 13, *reprinted in* Joint App., *supra* note 6, at A-172. This forced the Board to approve or disapprove entire programs, obviously a far more difficult task politically.

98. *See* Cahill Commission Report, *supra* note 91, at 4; Kramarsky Report, *supra* note 6, at 14, *reprinted in* Joint App., *supra* note 6, at A-173. The Board also retained certain powers concerning urban renewal plans, plans for public and publicly assisted housing, and grants of tax exemptions by virtue of the state legislation. *See id.* at 14, *reprinted in* Joint App., *supra* note 6, at A-173.

99. *See* Cahill Commission Report, *supra* note 91, at 3. See *supra* note 64 for a discussion of these powers.

100. *See* Kramarsky Report, *supra* note 6, at 14, *reprinted in* Joint App., *supra* note 6, at A-173. These powers had been granted under the 1901 Charter in a backlash against the advisory, figurehead office of the Borough President. *See* F. Shaw, *supra* note 31, at 11-13.

101. *See* Cahill Commission Report, *supra* note 91, at 3. Such at-large seats were first recommended in 1936 by the Thacher Commission. See *supra* note 81.

102. *See* New York State Comm'n on Governmental Operations of the City of N.Y., A New Charter for the City of New York 10 (1961).

103. *See id.* See Sovern Commission Report, *supra* note 32, at 515-56 for a comparison of single and multi-member districts and their attendant advantages and disadvantages.

first time since the repeal of proportional representation.[104] These at-large seats were discontinued in 1983,[105] however, because the sizes of the resulting delegations of council members from each of the variously populated boroughs violated the one-person, one-vote principle.[106]

In 1975 the State Charter Revision Commission for the City of New York,[107] led by State Senator Roy Goodman, made further sweeping changes in the city government. Most notable was the formalization of the community district, which was to serve as an integral, albeit advisory, player in land use decisions through its community board.[108] In addition, the community district was to play a crucial role in the coordination of various municipal services within common service districts

104. See *supra* notes 75-82 and accompanying text for a discussion of P.R.'s repeal. The at-large representatives also served another very important purpose: They reintroduced minority party representation in the City Council through the use of limited nomination and voting. Under this system, each political party is restricted to one nomination for each borough's two at-large seats, and each voter is restricted to one vote. The net result is the election of a runner-up, who may gather only a very small vote, and who will be of a different political party than the leading candidate. This was merely one of the proposals for minority representation considered in 1961. *See* New York State Comm'n on Governmental Operations of the City of N.Y., III Background Research on the Top Structure of the Government of the City of New York 91-93 (1961) [hereinafter cited as III Moore Commission Report]. Limited voting has been subject to several unsuccessful attacks based on dilution of the majority vote, which could otherwise have easily elected candidates to both seats, and based on restriction of first amendment rights to free speech, because majority voices are rendered less effective. *See* Hechinger v. Martin, 441 F. Supp. 650, 652-53 (D.D.C. 1976) (first amendment challenge), *aff'd mem.*, 429 U.S. 1030 (1977); LoFrisco v. Schaffer, 341 F. Supp. 743, 750 (D. Conn.) (fourteenth amendment challenge asserting dilution of majority vote), *aff'd mem.*, 409 U.S. 972 (1972); Kaelin v. Wardin, 334 F. Supp. 602, 605-06 (E.D. Pa. 1971) (same); Blaikie v. Wagner, 258 F. Supp. 364, 369-70 (S.D.N.Y. 1965) (same); People *ex rel.* Daniels v. Carpentier, 30 Ill. 2d 590, 596, 198 N.E.2d 514, 517 (1964) (asserting scheme for electing representatives violated state constitution because of dilution of majority vote); *In re* Blaikie v. Power, 13 N.Y.2d 134, 143-44, 193 N.E.2d 55, 56-59, 243 N.Y.S.2d 185, 190-91 (1963) (asserting scheme for electing councilmen violated state constitution because of dilution of majority vote); *In re* Arricale v. Power, 61 Misc. 2d 666, 669, 306 N.Y.S.2d 334, 342-43 (Sup. Ct. 1969) (same). See Sovern Commission Report, *supra* note 34, at 593-613 for a general discussion of limited voting, particularly in light of its effect on racial and ethnic minorities and thus its relationship with the Federal Voting Rights Act of 1965 as amended in 1982. *See* Voting Rights Act of 1965, 42 U.S.C.A. §§ 1971, 1973 to 1973 bb-1 (West 1981 & Supp. 1984).

105. *See* Andrews v. Koch, 528 F. Supp. 246 (E.D.N.Y. 1981) (order granting interim relief), *aff'd*, 688 F.2d 815 (2d Cir.), *aff'd sub nom.* Giacobbe v. Andrews, 459 U.S. 801 (1982). The members left office at midnight on June 22, 1983, the day on which the Sovern Commission Report, *supra* note 32, was presented to the Mayor and the City Clerk.

106. *See* Andrews v. Koch, 528 F. Supp. 246, 249 (E.D.N.Y. 1981), *aff'd*, 688 F.2d 815 (2d Cir.), *aff'd sub nom.* Giacobbe v. Andrews, 459 U.S. 801 (1982). The 1961 researchers were aware that giving each borough two seats would give disproportionate representation to the smaller boroughs, but they hoped that population shifts would ameliorate this problem. *See* III Moore Commission Report, *supra* note 104, at 80.

107. *See* State Charter Revision Comm'n for N.Y. City, Preliminary Recommendations of the State Charter Revision Commission for New York City (1975) [hereinafter cited as Goodman Commission Report].

108. *See id.* at 116-18.

which were to be coterminous with community district boundaries.[109] This decentralization[110] of land use decisionmaking did not, however, diminish the authority of the Board of Estimate or the Borough Presidents: In order to coordinate decisionmaking with the community boards and the City Planning Commission, the Goodman Commission gave the Board of Estimate "final authority respecting the use, development and improvement of city land [and] authority to approve standards, scopes and final designs of capital projects."[111]

In fact, although the Goodman Commission had ample opportunity to revamp the Board of Estimate when it was evaluating the rest of the City Charter, it instead drafted a paean to the Board and its unique structure:

> [T]he Board of Estimate is a valuable and unique institution of City government that should be continued.
>
> . . . .
>
> The Board of Estimate is well structured to make important political decisions and to resolve conflicts between City-wide and local interests. Its eight members include the most powerful City-wide officials, each publicly elected by a diversified constituency. Their combined voices represent a broad consensus, and the Board's relatively small size enables it to act more decisively than the City Council. Its mixture of City-wide and borough officials provides a balanced perspective.
>
> The nature of the Board of Estimate has been shaped by special needs which have arisen during particular times in the City's history. Specifically, it has been a magnet for issues that require deliberative judgments in the best interests of the City as a whole, and it has repeatedly been assigned responsibility for sensitive matters (e.g., franchises, consultant contracts, etc.) that have not been adequately handled by other bodies or officials.
>
> . . . The Board is not a body devised by esoteric social scientists, but rather an institution forged from the singular historical development and attributes of New York City and its distinct geographic parts.[112]

In addition to transferring final authority over land use decisions to the Board, and through it to the Borough Presidents and top three City officials, the 1975 charter revisions also strengthened the "borough boards."[113] These boards consisted of the Borough President and the council members elected at-large or from districts of that borough.[114] In 1975, membership was increased to include the chairs of the community

109. *See* Fowler, *Community Board Wrap-Up, reprinted in* 6 New York Affairs 7 (1980); "The Effectiveness of New York City's Community Boards," in Sovern Commission Report, *supra* note 32, at 801-37; League of Women Voters of N.Y. City, *You and Your Community Board* (1978) (available in files of *Fordham Law Review*).

110. Decentralization of city government was a hotly debated issue in the early 1970's. *See generally* W. Farr, L. Liebman & J. Wood, Decentralizing City Government: A Practical Study of a Radical Proposal for New York City (1972).

111. New York City Charter ch. 3, § 67(4),(5) (1976).

112. Goodman Commission Report, *supra* note 107, at 84.

113. *See* New York City Charter ch. 4, § 85 (1976).

114. *See id.*

boards within the borough,[115] and the functions of each borough board were expanded to include coordination with its local community boards,[116] preparation of comprehensive and special purpose plans for physical improvements in the borough,[117] submission of comprehensive capital and expense budget priorities for the borough,[118] and evaluation of local service delivery by the city agencies.[119]. Further, borough boards entered the land use planning process by reviewing applications for use and development and by making recommendations of their own when such uses would affect land in more than one community district.[120] The Goodman Commission left the voting power distribution of the Board intact, however, and although subsequent legislation has reduced the number of votes, the Board's power distribution was not affected.[121] In 1978 the Mayor, Comptroller and City Council President were each given two votes, and the Borough Presidents were each given one vote.[122]

II. THE BOARD OF ESTIMATE TODAY: STRUCTURE, POWERS AND LITIGATION STATUS

As can be seen from the preceding discussion, by the time the current litigation was initiated the Board of Estimate's structure represented a deliberate apportionment of budget-making authority between the legislative and executive branches of government. Today the budget-making powers of the Board are closely coordinated with the actions of other city agencies, both executive and legislative. For example, the Board cannot independently make or revoke a final budget, nor can it add or delete a budget appropriation without the Mayor's review and approval.[123] New York City's Charter authorizes the Mayor to submit his expense budget to the Board of Estimate and the Council,[124] and either body may alter the original budget by adding or eliminating items.[125] The Mayor may

115. There are 59 community districts in New York City: 12 in the Bronx, 18 in Brooklyn, 12 in Manhattan, 14 in Queens, and 3 in Staten Island. *See* Sovern Commission Report, *supra* note 32, at 819-37 (maps of each district). According to 1980 census figures, 15 districts subject to a 100,000 person population minimum, New York City Charter § 2701(b)(3) (1976), had fallen below that figure. *See* Sovern Commission Report, *supra* note 32, at 47. In light of overwhelming public sentiment in favor of maintaining the present district boundaries in order to continue developing working relationships, and in light of evidence that coterminality based on these boundaries was beginning to show some benefits, the Sovern Commission decided to eliminate the population minimum and to substitute a limited procedure that would temporarily discontinue some forms of coterminality when a district became too underpopulated. *See id.* at 43-49.

116. *See* New York City Charter ch. 4, § 85(b)(1) (1976).

117. *See id.* § 85(b)(5).

118. *See id.* § 85(b)(8).

119. *See id.* § 85(b)(9).

120. *See id.* § 85(b)(6).

121. *See* 1978 N.Y. Laws 761.

122. *See* New York City Charter ch. 3, § 62(a) (Supp. 1984-85).

123. *See id.* ch. 6, §§ 120-122, 222.

124. *See id.* § 116.

125. *See id.* § 120(a) (1976).

veto such changes,[126] which disposes of that item unless his veto is overridden by a vote of two-thirds of each body acting together in identical terms.[127] There are similar mechanisms for the City's capital budget.[128]

Outside the area of fiscal planning, today's Board of Estimate is a center of municipal authority over land use. The Board's most important nonbudgetary functions include the following powers: exercising control over zoning,[129] franchises,[130] and sales and leases of real property;[131] revising by a three-fourths vote the determinations of the City Planning Commisssion rejecting projects sponsored by the Mayor;[132] and holding hearings on tax abatement applications relating to the development of city land when granting such applications involves the exercise of administrative discretion by any city agency.[133] Contrary to the 1936 Charter provisions, local legislation no longer requires the Board's consent,[134] and the residual powers of the City have been taken from the Board and vested in the Mayor.[135] Through the exercise of powers granted to the Board of Estimate, the Borough Presidents play their most significant role as budgetary and land use champions of their boroughs.

What must be noted after any recitation of Board powers, however, is that beyond the explicit authority granted to the Board, its members exercise enormous political influence in the City. The Board's authority over budget preparation, franchises and land use planning review makes its members extremely influential at the highest levels of business and real estate development. This political power is the key to the relationships between the City-wide officials and the Council, and to the control of the Borough Presidents over long-range planning and development in their respective boroughs. Further, the Borough Presidents exercise their power on behalf of their county party organizations as well as their individual constituents.[136] The importance of the county organizations of

126. *See id.* §§ 121(a), (b) (Supp. 1984-85).

127. *See id.* In computing the two-thirds of the Board, the Mayor's two votes are obviously not considered. This means that two-thirds of nine votes, or six, are needed to override the Mayor's veto. The Borough Presidents' five votes alone cannot accomplish this; thus they alone can never accomplish decisive budget choices.

128. *See id.* §§ 222-223.

129. *See id.* § 200.

130. *See id.* ch. 14, § 363 (1976).

131. *See id.* ch. 3, §§ 67(1)(4), 384.

132. *See id.* ch. 8, § 199 (Supp. 1984-85).

133. *See id.* ch. 3, § 67(7) (1976).

134. *See id.* ch. 2, § 38. See *supra* notes 70-74 and accompanying text for a discussion of the Board's authority under the 1936 Charter provisions.

135. *See* New York City Charter ch. 1, § 8 (1976).

136. *See* W. Sayre & H. Kaufman, *supra* note 6, at 639. Commentators have noted:

> The Borough Presidents bring to the Board neither the impressive formal powers of the Mayor or of the Comptroller, nor the ambiguous potential of the President of the Council; instead, each Borough President brings to the Board a consciousness that he represents a county party organization with which . . . he ordinarily has close ties, and that he has the formal capacity to claim that he speaks, as no other member of the Board can, for the special interests of his borough.

the Democratic Party should not be underestimated. These organizations serve to nominate and elect public officials, including the three City-wide officials sitting on the Board.[137] Thus, Borough Presidents gain and lose influence along with their county leaders.[138] The Board of Estimate serves as a fulcrum upon which is balanced the influence of the party organization as opposed to the "impetuous tendencies of Mayors who are more responsive to their broad constituencies than to party organization advice."[139] In every aspect of financial and real estate transactions supervised by the Board, county leaders play a quiet but enormously influential role.[140]

Given this sizable role of the Board in city governance, it is not surprising that it is subject to constitutional requirements for fair representation. However, determining the role of the one-person, one-vote principle, and properly applying it to the Board's unique blend of City-wide officials' voting majority with Borough Presidents' significant voting power and direct borough administration, is far from simple. The application of the one-person, one-vote standard to the Board raises a number of issues left unresolved by Supreme Court decisions concerning local government and the fourteenth amendment.

In 1981 the New York Civil Liberties Union sued the Board of Estimate on behalf of several residents of the city's most populous borough, Brooklyn.[141] Plaintiffs claimed that the voting scheme providing one vote for each of the Presidents of the variously populated boroughs was an unconstitutional dilution of the citizen vote.[142] Plaintiffs cited the obvious unfairness created when the President of Brooklyn, a borough of 2.25 million persons, casts the same one vote on the Board as the Presi-

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Id. at 638.

137. Some commentators have further stated that

> the eight members of the Board usually aspire to renomination and reelection, or else they hope for other and higher posts on the party or governmental career ladder—aspirations which, in either event, are subject to the important if not conclusive influence of party leaders. The ties between the members of the Board and the party leaders (especially the five County Leaders) in most instances are consequently direct, frequent, and of importance both to the officials and to the party leaders.

Id. at 644-45.

138. *See id.* at 645.

139. *Id.* It has been noted that

> [f]or the Borough Presidents and the Comptroller, the main significance of their relationship to the County Leaders is that it strengthens the hand of the Board against the Mayor. The working alliance has a similar attraction for the party leaders . . . .

Id.

140. The Board's organization allows county leaders time for bargaining prior to executive sessions, and secrecy "surrounds the party leaders' intervention through the Borough Presidents or other members . . . . [T]he pattern is one of optimum arrangements: maximum exercise of influence with mimimum risk of accountability." *Id.* at 646.

141. *See* Morris v. Board of Estimate, 551 F. Supp. 652 (E.D.N.Y. 1982), *rev'd*, 707 F.2d 686 (2d Cir. 1983), *on remand*, 592 F. Supp. 1462 (E.D.N.Y. 1984).

142. *See id.* at 653.

dent of Staten Island, a borough of less than half a million residents.[143] The district court held that the Board was not the sort of governmental body subject to the one-person, one-vote requirements of the fourteenth amendment and dismissed the complaint.[144] That decision was reversed by the Second Circuit,[145] which held that the Board is subject to one-person, one-vote requirements because it is selected by popular election and performs general governmental functions.[146] The court of appeals remanded the case to the district court to resolve the following issues: (1) What is the proper mathematical model to describe the Board of Estimate?; (2) to what degree does the Board deviate from the literal one-person, one-vote formula?; (3) what policies and interests can justify deviations from malapportionment? and (4) can the current Board of Estimate be justified by these policies?[147]

On August 21, 1984 the district court issued a memorandum and order[148] addressing the first of the four directives. The court held that the various mathematical models proposed by the plaintiffs and defendants were all unduly complex, because each attempted to analyze the representation of the boroughs in light of the majority voting bloc of the City-wide officials.[149] In their stead, the district court employed a straightforward analysis modeled after the Supreme Court test used in *Abate v. Mundt*.[150] While the district court's choice has the advantage of simplicity, it fails to portray accurately power distributions among the Borough Presidents, specifically because it fails to consider the role of the city officials on the Board.[151]

In response to the court of appeals' second directive, the district court had the parties develop a set of stipulations listing those policies which the parties contend could justify departures from the one-person, one-vote principle.[152] The district court's decision with respect to the consti-

143. *See* Morris v. Board of Estimate, 707 F.2d 686, 686 (2d Cir. 1983), *on remand*, 592 F. Supp. 1462 (E.D.N.Y. 1984).

144. *See Morris*, 551 F. Supp. at 657.

145. *See Morris*, 707 F.2d at 691.

146. *See id.* at 689-90.

147. *See id.* at 690-91. In reaching its decision the court stated:

> "Mathematical exactness or precision is hardly a workable constitutional requirement," and this is "particularly true for state and local bodies, where more flexibility is constitutionally permissible due to the interest in the normal functioning of these institutions." The district court may find it desirable to amplify the record with regard to "the particular circumstances and needs of [the] local community as a whole [which] may sometimes justify departures from strict equality."

Id. (quoting Reynolds v. Sims, 377 U.S. 533, 577 (1964); Baker v. Regional High School Dist. No. 5, 476 F. Supp. 319, 323 (D. Conn. 1979); Abate v. Mundt, 403 U.S. 182, 185 (1971) (footnote omitted)).

148. *See Morris*, 592 F. Supp. at 1462.

149. *See id.* at 1467-70.

150. *See id.* at 1475 (citing Abate v. Mundt, 403 U.S. 182 (1971)).

151. See *infra* notes 226-39 and accompanying text for a criticism of the district court's analysis.

152. *See Morris*, 592 F. Supp. at 1477.

tutionality of the Board in light of these policy considerations is expected in 1985.

III. THE APPLICABILITY OF THE ONE-PERSON, ONE-VOTE REQUIREMENT TO THE BOARD OF ESTIMATE

Any inquiry concerning the applicability of one-person one-vote principles to the Board of Estimate must begin with an examination of whether that principle can be applied to units of local, borough, city and county governments. Next, one must examine whether a local body is elected or appointed. As an ex officio body,[153] the Board of Estimate's structure must be defined as within one of these two categories.[154] Finally, for an elected body to be subject to one-person, one-vote requirements, it must be determined that the body exercises general governmental powers.[155]

The Supreme Court provided the answer to the first question in *Avery v. Midland County*[156] when it stated: "We . . . see little difference, in terms of the application of the Equal Protection Clause and of the principles of *Reynolds v. Sims*, between the exercise of state power through legislatures and its exercise by elected officials in the cities, towns, and counties."[157] Thus, based on *Avery*, it is clear that local units of government are subject to fourteenth amendment apportionment requirements.

The next inquiry is whether the unit is composed of appointed or elected members. This distinction is important because the Supreme Court held in *Sailors v. Board of Education*[158] that "the principle of 'one man, one vote' has no relevancy"[159] to a county school board, which was neither elected[160] nor exercised significant legislative powers.[161] New

153. The Board members are directly elected as City-wide officials and Borough Presidents but serve as members of the Board ex officio. In other words, no independent election is held to elect the Board's members. See *supra* note 9 and accompanying text.

154. See *infra* notes 158-62 and accompanying text.

155. See *infra* notes 163-89 and accompanying text.

156. 390 U.S. 474 (1968).

157. *Id.* at 481 (citing Reynolds v. Sims, 377 U.S. 533, 567 (1964)). In Reynolds v. Sims, 377 U.S. 533 (1964) the Supreme Court interpreted the scope of the fourteenth amendment's one-person, one-vote requirements. *Id.* at 567. See *infra* notes 320-26 and accompanying text.

158. 387 U.S. 105 (1967).

159. *Id.* at 111.

160. The board was composed of five members selected by delegates from the popularly elected local school boards. *Id.* at 109 n.6.

161. The school board powers included appointment of a county school superintendent, preparation of an annual budget and levy of taxes, distribution of delinquent taxes, furnishing consulting or supervisory services to a constituent school district upon request, conducting cooperative education programs, employment of teachers for special educational programs, establishment of a school for children in juvenile homes and transfer of areas from one school district to another. *Id.* at 110 n.7. The Court characterized these powers as "essentially administrative functions; and while they are important, they are not legislative in the classical sense." *Id.* at 110. It is important to note, however, that if a governmental unit exercises "legislative" as opposed to "administrative" powers, it may be necessary for it to elect its members, *see id.* at 109-10, because legislative power—for

York City's Board of Estimate does not fall within the *Sailors* holding because the Board is an elected body. Each member of the Board is elected to his or her city or borough office, and membership on the Board is one of the functions of the Office of Mayor, Comptroller, Council President or Borough President. Therefore, the composition of the Board is properly classified as elective.[162]

Thus the Board of Estimate, as an elected body, falls within the scope

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example, budget-making authority—"is the essence of sovereign power," Bergerman v. Lindsay, 25 N.Y.2d 405, 409, 255 N.E.2d 142, 144, 306 N.Y.S.2d 898, 900 (1969), *cert. denied*, 398 U.S. 955 (1970), and sovereign power derives its legitimacy from the "consent of the governed." The Declaration of Independence para. 2 (U.S. 1776). This principle applies to state legislatures and local governments whose actions "*are* the actions of the State." Avery v. Midland County, 390 U.S. 474, 480 (1968) (emphasis in original). If the elected unit meets this criterion, it will be subject to the one-person, one-vote requirement of Reynolds v. Sims, 377 U.S. 533 (1964). However, the court in *Sailors* expressly reserved this question, stating: "We need not decide at the present time whether a State may constitute a local legislative body through the appointive rather than the elective process." Sailors v. Board of Educ., 387 U.S. 105, 109-10 (1967). One can infer, therefore, that because nonlegislative functions do not govern the populace to the same extent, a body exercising such functions might not be subject to one-person, one-vote requirements.

162. *See* Morris v. Board of Estimate, 707 F.2d 686, 689 (2d Cir. 1983), *on remand*, 592 F. Supp. 1462 (E.D.N.Y. 1984). It is interesting to note that the initial district court judgment upholding the present formulation of the Board rested largely on the characterization of the Board as an appointed body, consisting of members who serve ex officio. The Court stated:

> The Board, however, is not an elected body: it consists of a group of public officials who are already constitutionally elected to their respective offices as required by law. No provision is made in the Charter for the election of a board of estimate. Membership and participation in the assigned activities of the Board is simply a part of the prescribed duties of the respective offices to which the designated officials were already elected. The members of the Board are, in effect, appointed by local law.

Morris v. Board of Estimate, 551 F. Supp. 652, 656 (E.D.N.Y. 1982), *rev'd*, 707 F.2d 686 (2d Cir. 1983), *on remand*, 592 F. Supp. 1462 (E.D.N.Y. 1984). (citations omitted).

Furthermore, the district court rejected the plaintiffs' suggestion that the Board is legislative in character. *Id.* Although a finding that it was a legislative body might have required it to have been elected, see *supra* note 161, the question went unanswered by the district court because it found that "[t]he Charter makes it clear . . . that it is the *city council* which is 'vested with the legislative power of the city, and shall be the local legislative body of the city.' " *Morris*, 551 F. Supp. at 656 (emphasis added). The Court further stated:

> [T]o the extent that the Board has a role with the city council in the budget-making process which may be regarded as legislative in nature, the Board's powers "are at once closely conditioned and highly contingent on the action of other city agencies, executive and legislative. The board is itself unable alone to make or revoke a budget . . . beyond the reach of further change by others." The subsequent elimination in 1975 of the mayor's votes on the Board in the budget formulation and adoption process clearly does not undermine the *Bergerman* Court's findings or permit representatives of a minority of the City's population to adopt a budget, as plaintiffs contend.

Id. (quoting Bergerman v. Lindsay, 25 N.Y.2d 405, 409, 255 N.E.2d 142, 144, 306 N.Y.S.2d 898, 901 (1969), *cert. denied*, 398 U.S. 955 (1970)) (citations omitted).

The Second Circuit rejected the district court's characterization of the Board. The court of appeals followed its reasoning concerning ex officio boards in Bianchi v. Griffing,

of the Supreme Court's holding in *Avery v. Midland County*.[163] *Avery* concerned the Midland County Commissioners Court, which was an elected body composed of one member elected at-large and four members elected from districts of grossly disparate sizes.[164] Because the Commissioners Court had significant governing powers over the county,[165] the

393 F.2d 457, 460 (2d Cir. 1968), and found that the Board was an elected body subject to one-person, one-vote requirements. *See Morris*, 707 F.2d at 689-90.

The *Bianchi* decision concerned county boards composed of the supervisors elected in each of the component townships. *Bianchi*, 393 F.2d at 458. The position of the supervisors in this structure was virtually identical to that of the Borough President on the Board of Estimate. The *Bianchi* court concluded that voters perceive themselves as casting ballots for a town supervisor and a county board member at one and the same time. *Id.* at 461. It stated:

> The mere fact that board members may be characterized as 'delegates' and perform functions in addition to their duties on the board, does not provide a meaningful distinction from *Avery*. *We are impelled to the realistic recognition that a citizen entering the voting booth chooses at one and the same time a member of the Board of Supervisors and his town supervisor.*

Id. at 461 (emphasis added).

163. 390 U.S. 474 (1968).

164. *Id.* at 475-76. The four districts were Midland City, population 67,906, and three rural districts, populations 852, 414 and 828 respectively. *See id.* at 476.

165. The Commissioners Court had the following powers: to establish a courthouse and jail; to appoint numerous minor officials, such as the county health officer, to fill vacancies in the county offices; to lease contracts in the name of the county; to build roads and bridges; to administer the county's public welfare services; to perform numerous duties with regard to elections; to set the county tax rate; to issue bonds; to adopt the county budget; and to serve as a board of equalization for tax assessments. *See id.* at 476 & n.1 (citations omitted).

The Court also examined the possibility that the Commissioners Court was exempt from *Reynolds* because it was a special function body serving rural interests. *Id.* at 483-84. *See, e.g.*, Dusch v. Davis, 387 U.S. 112, 116-17 (1967) (Virginia Beach legislature, elected at-large with requirements that some legislators reside in different districts that had disparate populations, exempt from *Reynolds*); Sailors v. Board of Educ., 387 U.S. 105, 107-08 (1967) (appointed administrative school board exempted from *Reynolds*); *see also* Ball v. James, 451 U.S. 355, 371 (1981) (large utility district exempt from *Reynolds*); Salyer Land Co. v. Tulare Lake Basin Water Storage Dist., 410 U.S. 719, 727-30 (1973) (election of water district board by weighted voting is restricted to affected landowners that is exempt from *Reynolds*). But see the following cases in which voting for traditional "general governmental" bodies was struck down because it was limited by property requirements: City of Phoenix v. Kolodziejski, 399 U.S. 204, 208-09 (1970) (election to approve issuance of general obligation bonds for municipal improvement); Cipriano v. City of Houma, 395 U.S. 701, 704-05 (1969) (approval of bond issue for municipal utility); Kramer v. Union Free School Dist., 395 U.S. 621, 623, 632-33 (1969) (school board elections).

Despite the arguments that the Commissioners Court fell within the special function body exception, the *Avery* court held that the Commissioners Court exercised sufficiently broad governmental powers to require fair apportionment. *See* Avery v. Midland County, 390 U.S. 474, 476 (1968). In a forceful dissent to the *Avery* decision, Justice Fortas stated:

> Although a mere listing of these authorizing statutes and constitutional provisions would seem to indicate that the Commissioners Court has significant and general power, this impression is somewhat illusory because very often the provisions which grant the power also circumscribe its exercise with detailed limitations.

390 U.S. at 502-03 (Fortas, J., dissenting). Justice Fortas cited the following specific ex-

Court concluded: "Our decision today is . . . that units with general governmental powers over an entire geographic area [are] not [to] be apportioned among single-member districts of substantially unequal population."[166]

One year later—and just one year prior to a broader and more definitive statement of the *Avery* holding [167]—the New York Court of Appeals applied the *Avery* holding to a question almost identical to the question at hand today: Does the New York City Board of Estimate unconstitutionally exercise legislative powers, particularly budget-making powers, while being composed of representatives of widely disparate district [borough] populations?[168] In *Bergerman v. Lindsay*,[169] the court of appeals in 1969 held that the Board of Estimate is not subject to one-person, one-vote requirements because it does not exercise " 'general governmental powers over the entire geographic area.' "[170] The *Bergerman* court interpreted the *Avery* "general governmental powers" requirement very narrowly, believing that it must encompass all essential governmental functions. The court stated:

> This is something different from a test measured by legislative powers alone. In pure theory, at least, the typical legislative body in the United States does not normally exercise "general governmental powers." Indeed the concept of separation of powers negates the exercise by any one branch of "general governmental powers." Normally only governments with parliamentary executives come close to this theoretical merger.[171]

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amples: The Commissioners Court could not levy a tax in excess of 80¢ on $100 property valuation; it could not issue any bond without submitting it to the qualified property-taxpaying voters of the county; in practice, it was primarily concerned with rural roads; it had no control over the numerous departments headed by officials elected directly by county voters, including the Assessor and Collector of Taxes, the County Attorney, the Sheriff, the Treasurer, the County Clerk and the County Surveyor. *Id.* at 503-05.

166. *Id.* at 485-86. Courts have declined, however, to apply one-person, one-vote requirements to bodies that do not exercise general governmental powers. *See* Education/Instruccion, Inc. v. Moore, 503 F.2d 1187, 1189 (2d Cir. 1974) (per curiam) (Connecticut advisory planning council), *cert. denied*, 419 U.S. 1109 (1975); Davis v. AT&T, 478 F.2d 1375, 1375 (2d Cir. 1973) (per curiam) (telephone company); Concerned Citizens v. Pine Creek Conservancy Dist., 473 F. Supp. 334, 337-38 (S.D. Ohio 1977) (nature conservancy); Tron v. Condello, 427 F. Supp. 1175, 1191 (S.D.N.Y. 1976) (New York City teacher's retirement fund); Slisz v. Western Regional Off-Track Betting Corp., 382 F. Supp. 1231, 1233-34 (W.D.N.Y. 1974) (state off-track betting corporation); Wells v. Edwards, 347 F. Supp. 453, 454 (M.D. La. 1972) (election of state judges), *aff'd*, 409 U.S. 1095 (1973); Sullivan v. Alabama State Bar, 295 F. Supp. 1216, 1222 (M.D. Ala.) (board of commissioners for state bar), *aff'd per curiam*, 394 U.S. 812 (1969).

167. See *infra* notes 180-91 and accompanying text for a discussion of the Supreme Court's holding in Hadley v. Junior College Dist., 397 U.S. 50, 53-54 (1970).

168. *See* Bergerman v. Lindsay, 25 N.Y.2d 405, 412, 255 N.E.2d 142, 146, 306 N.Y.S.2d 898, 903 (1969), *cert. denied*, 398 U.S. 955 (1970).

169. 25 N.Y.2d at 405, 255 N.E.2d at 142, 306 N.Y.S.2d at 898.

170. *Id.* at 410, 255 N.E.2d at 145, 306 N.Y.S.2d at 901-02 (quoting Avery v. Midland County, 390 U.S. 474, 485 (1968)).

171. *Id.* at 408, 255 N.E.2d at 143, 306 N.Y.S.2d at 900.

The court of appeals examined the Board's powers, noting especially that it does not have final budgetary authority. While it did not completely dismiss plaintiff's assertion that budget-making— which is the "essence of sovereign power"[172]—is primarily a legislative function,[173] the court stated that the Board of Estimate is "quite unique"[174] in both "structure and composition"[175] and that it "is neither legislative nor executive within classical definitions."[176] Another fact the *Bergerman* court found to be quite persuasive was that the Borough Presidents, even voting as a bloc, could neither form a simple majority[177] nor override a mayoral veto.[178] The court found that the limited power of the Borough Presidents to make or revoke a budget did not require application of *Reynolds v. Sims* principles, particularly because the Supreme Court had stated in *Avery v. Midland County* that its decisions are " 'not roadblocks in the path of innovation, experiment, and development among units of local government.' "[179]

Bergerman might have unquestionably been the controlling case in today's Board of Estimate litigation had it not been for another Supreme Court decision one year later. In 1970, the Court expanded the scope of its holding in *Avery v. Midland County* when it decided *Hadley v. Junior College District*.[180] *Hadley* concerned the apportionment of trustees on a consolidated junior college district, which was composed of the elected representatives of eight separate school districts.[181] The Court began its inquiry by examining the governmental powers exercised by the district to see whether they were sufficient to fall within its *Avery* holding.[182]

The Court examined the nature[183] and geographic scope[184] of the junior college district powers and concluded that

172. *Id.* at 409, 255 N.E.2d at 144, 306 N.Y.S.2d at 900.

173. *See id.* at 408-09, 255 N.E.2d at 143-44, 306 N.Y.S.2d at 900-01 (Plaintiffs cited People v. Tremaine, 252 N.Y. 27, 168 N.E. 817 (1929)).

174. *Id.* at 411, 255 N.E.2d at 145, 306 N.Y.S.2d at 902.

175. *Id.*

176. *Id.* at 412, 255 N.E.2d at 146, 306 N.Y.S.2d at 903.

177. *See id.* at 409, 255 N.E.2d at 144, 306 N.Y.S.2d at 901.

178. *See id.* at 410, 255 N.E.2d at 144, 306 N.Y.S.2d at 901.

179. *Id.* at 411, 255 N.E.2d at 145, 306 N.Y.S.2d at 903 (quoting Avery v. Midland County, 390 U.S. 474, 485 (1968)); *see* Sailors v. Board of Educ., 387 U.S. 105, 110-11 (1967) ("Viable local governments may need many innovations, numerous combinations of old and new devices, great flexibility in municipal arrangements to meet changing urban conditions. We see nothing in the Constitution to prevent experimentation.").

180. 397 U.S. 50 (1970).

181. *See id.* at 51.

182. *See id.* at 53 (citing Avery v. Midland County, 390 U.S. 474, 485 (1968)).

183. In *Hadley*, the junior college district could "levy and collect taxes, issue bonds with certain restrictions, hire and fire teachers, make contracts, collect fees, supervise and discipline students, pass on petitions to annex school districts, acquire property by condemnation, and in general manage the operations of the junior college." *Id.* at 53.

184. The *Bergerman* court had rejected the geographic part of the *Avery* test, stating:

> In the development of the *Midland County* opinion the court noted that the Commissioners Court of Midland County, Texas, had, among other things,

> [w]hile not fully as broad as those of the Midland County Commissioners, [these powers] certainly show that the trustees perform important governmental functions within the districts, and we think these powers are general enough and have sufficient impact throughout the district to justify the conclusion that the principle which we applied in *Avery* should also be applied here.[185]

The Court considered and rejected as unworkable the propositions that one-person, one-vote requirements should be applied only to important elections[186] or to elections for "legislative" as opposed to "administrative" bodies.[187] Although it did continue to recognize the exceptions carved out in *Avery v. Midland County* with respect to special function bodies,[188] the Court stated the following general rule:

> We . . . hold today that as a general rule, *whenever a state or local government decides to select persons by popular election to perform governmental functions*, the Equal Protection Clause of the Fourteenth Amendment requires that each qualified voter must be given an equal opportunity to participate in that election, and when members of an elected body are chosen from separate districts, each district must be established on a basis that will insure, as far as is practicable, that equal numbers of voters can vote for proportionally equal numbers of officials.[189]

"authority to make a substantial number of decisions which affect all citizens, whether they reside inside or outside the city limits of Midland."

This description could, of course, fit innumerable State and local agencies throughout the country. When the opinion is seen in full text this is obviously not the test by which the one man-one vote requirement is to be applied to multimember agencies.

Bergerman v. Lindsay, 25 N.Y.2d 405, 410, 255 N.E.2d 142, 145, 306 N.Y.S.2d 898, 902 (1969) (quoting Avery v. Midland County, 390 U.S. 474, 484 (1968)), *cert. denied*, 398 U.S. 955 (1970).

185. *Hadley*, 397 U.S. at 53-54.

186. *See id.* at 55. The court noted that:

> If the purpose of a particular election were to be the determining factor . . . courts would be faced with the difficult job of distinguishing between various elections. . . . [G]ood judgment and common sense tell us that what might be a vital election to one voter might well be a routine one to another . . . . [W]e think the decision of the State to select that official by popular vote is a strong enough indication that the choice is an important one.

Id.

187. *See id.* at 55-56. The court further stated:

> It has also been urged that we distinguish for apportionment purposes between elections for "legislative" officials and those for "administrative" officers. Such a suggestion would leave courts with an equally unmanageable principle since governmental activities "cannot easily be classified in the neat categories favored by civics texts," and it must also be rejected.

Id. (quoting Avery v. Midland County, 390 U.S. 474, 482 (1968)).

188. See *supra* note 165.

189. *Hadley*, 397 U.S. at 56 (emphasis added). In Wells v. Edwards, 347 F. Supp. 453 (M.D. La. 1972), *aff'd*, 409 U.S. 1095 (1973), a federal district court considered a challenge to a Louisiana scheme that elected state Supreme Court justices from districts of unequal size. *See id.* at 456. The district court held that justices do not exercise governmental functions, which the court described as applying only to "such things as making

Examined in light of the *Hadley* decision concerning a school board, the powers of the New York City Board of Estimate, particularly its budget-making authority, are sufficiently general, governmental and far-reaching in geographic impact to fall within the scope of the *Avery* decision. The New York Court of Appeals holding in *Bergerman v. Lindsay*[190] may be questioned because its interpretation of the *Avery* "general governmental power" language is far too limited in light of the literal reading given that language more recently in *Hadley v. Junior College District*.[191]

IV. TRADITIONAL MATHEMATICAL MODELS FOR DETERMINING ONE-PERSON, ONE-VOTE COMPLIANCE

In his opinion in *Whitcomb v. Chavis*,[192] which considered a challenge to the mathematical model used to reapportion Indiana's multi-member state legislative districts,[193] Justice Harlan noted that " '[t]here is something fascinating about science. One gets such wholesale returns of con-

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laws, levying and collecting taxes, issuing bonds, hiring and firing personnel, making contracts, collecting fees, operating schools, and generally managing and governing people." *Id.* at 455. In a strong dissent to the Supreme Court's affirmance, however, Justice White argued that judges "are state officials, vested with state powers and elected (or appointed) to carry out the state government's judicial functions." Wells v. Edwards, 409 U.S. 1095, 1096 (1973) (White, J., dissenting). Justice White further stated:

> We have held that a State may dispense with certain elections altogether [*Sailors*] and we have suggested that not all persons must be permitted to vote on an issue that may affect only a discernible portion of the public. What I had thought the apportionment decisions at least established is the simple constitutional principle that, subject to narrow exceptions, once a State chooses to select officials by popular vote, each qualified voter must be treated with an equal hand and not be subjected to irrational discrimination based on his residence [*Reynolds*]. Nothing could be plainer from Mr. Justice Black's statement in *Hadley* . . . . *Id.* at 1097-98 (citations omitted).

190. 25 N.Y.2d 405, 409, 255 N.E.2d 142, 145, 306 N.Y.S.2d 898, 902, *cert. denied*, 398 U.S. 955 (1970).

191. 397 U.S. 50 (1970). Courts have applied the one-person, one-vote requirement to many bodies with relatively limited powers. *See, e.g.*, Wyche v. Madison Parish Police Jury, 635 F.2d 1151, 1158 (5th Cir. 1981) (police juries); Baker v. Regional High School Dist. No. 5, 520 F.2d 799, 802 (2d Cir.) (school board), *cert. denied*, 423 U.S. 995 (1975); White Eagle v. One Feather, 478 F.2d 1311, 1312-14 (8th Cir. 1973) (per curiam) (Indian tribal council); Seergy v. Kings County Republican County Comm., 459 F.2d 308, 314-15 (2d Cir. 1972) (party procedures for filling vacant seats); Montana v. Lee, 384 F.2d 172, 174-75 (2d Cir. 1967) (same); Barnes v. Board of Directors, Mount Anthony Union High School Dist., 418 F. Supp. 845, 849 (D. Vt. 1976) (school board); Fahey v. Darigan, 405 F. Supp. 1386, 1390-91 (D.R.I. 1975) (party procedures for filling vacant seats); Martin v. Venables, 401 F. Supp. 611, 616-17, 620 n.8 (D. Conn. 1975) (town planning and zoning body).

192. 403 U.S. 124 (1971).

193. *See id.* at 144-46 & n.23. The challenge was made to Indiana's use of an arithmetic model, and was based on the theories espoused in Banzhaf, *Multi-Member Electoral Districts—Do They Violate the "One Man, One Vote" Principle?*, 75 Yale L.J. 1309 (1966) [hereinafter cited as Banzhaf I].

jecture out of such a trifling investment of fact.' "[194] Indeed, the mathematical morass surrounding the calculations used to assess one-person, one-vote compliance is an example of inadequate consideration of political reality prior to the application of a calculator.[195] Specifically, any mathematical model purporting to represent a political institution must first accurately portray the power held by each member of that institution.

In 1983, the Second Circuit held that the Board of Estimate is subject to one-person, one-vote requirements,[196] and remanded the case to the district court, with instructions that the court "determine the degree of malapportionment present (after deciding on the appropriate methodology for doing so) and rule on the policies and interests which the Supreme Court has held may justify deviations from the literal one person, one vote formula."[197]

Neither of these instructions is easy to follow. Determining an appropriate mathematical model for calculating the Board's deviation from perfect equality of representation is complicated both by its unique structure, in which city-wide officials hold a majority of the voting power, and by the fact that the Supreme Court has never fully explained what constitutes equality of representation. Consideration of the public policy reasons for allowing an imperfectly apportioned Board to continue is complicated by New York City's relatively unique structure, in which a municipal government incorporates five county (borough) governments, and by the history of power sharing and power trading between the City and its boroughs.[198] Furthermore, the two issues identified by the Second Circuit are intertwined. The mathematical model chosen should reflect the real political positions of the voting members of the Board. This choice can result in findings of deviations ranging from approximately 2%[199] to 153%.[200] Public policy considerations may justify some but certainly not all of these deviations.

To begin, one must understand the meaning of the term "deviation," for it is by this measure that the Supreme Court sets standards for one-person, one-vote compliance. A deviation is the degree of difference between the representation a constituency should have and the representation it does have.[201] Usually it is measured in terms of population. For

194. *Whitcomb*, 403 U.S. at 169 n.5 (1970) (Harlan, J., dissenting in part) (quoting M. Twain, Life on the Mississippi 109 (1965)).

195. For an example of the lack of political considerations in the analysis, see *infra* note 225.

196. *See* Morris v. Board of Estimate, 707 F.2d 686, 689-90 (2d Cir. 1983), *on remand*, 592 F. Supp. 1462 (E.D.N.Y. 1984).

197. *Id.* at 690 (footnote omitted).

198. See *supra* Part I.

199. *See* Affidavit in Support of Intervenor-Defendant Ponterio's Motion to Deem Issues Resolved at Exh. VII, Morris v. Board of Estimate, 592 F. Supp. 1462 (E.D.N.Y. 1984) (available in files of *Fordham Law Review*) [hereinafter cited as Ponterio Affidavit].

200. See *infra* notes 204, 225 and accompanying text.

201. *See* Abate v. Mundt, 403 U.S. 182, 184 (1971).

example, imagine a county with 10 representatives and a population of 100,000. Ideally, each legislator should have a constituency of 10,000. If one legislator had a constituency of 12,000, then each person in that constituency would be under-represented, getting only 1/12,000 of the legislator's time, attention and loyalty, rather than the 1/10,000 that is due. To measure the deviation, one generally compares the excess number of constituents (here, 2,000) with the ideal number of constituents (here, 10,000). The comparison is then expressed as a percentage, called the deviation:

$$\begin{aligned} \text{Actual Constituents} &= 12{,}000 \\ \text{Ideal Constituents} &= 10{,}000 \\ \text{Difference} &= 2{,}000 \end{aligned}$$

$$\frac{\text{Difference}}{\text{Ideal}} = \frac{2{,}000}{10{,}000} = \frac{1}{5} = 20\%$$

The deviation is therefore 20%. If two other districts in this county had only 9000 persons, each would be 10% over-represented. The "extreme" or "total deviation" is the range between the most over-represented district (10%) and the most under-represented district (20%), for a total deviation of 30%.

According to the 1980 census, the population of New York City was 7,071,030, with a borough population ratio between the largest and the smallest of roughly seven-to-one, as presented in Table 1.

Table 1 [202]

New York City Population Figures—1980

Borough	Population	% of Total Population
Bklyn	2,230,936	31.55
Qns	1,891,325	26.75
Man.	1,427,533	20.19
Bnx	1,169,115	16.53
S.I.	352,121	4.98
TOTAL	7,071,030	100.00

202. *See* Bureau of the Census, 1984 Statistical Abstract of the United States 29 (1980 New York City population census). These same figures were consistently used by the Sovern Commission for the 1983 Charter Revision effort. *See* Sovern Commission Report, *supra* note 32, at 697, 700, 702, 704. Note that the Comission also employed adjusted figures used by the 1981 New York City Districting Commission and approved by the Department of Justice. The actual difference between the two sets of figures is slight and reflects errors in counting. *See id.* at 431.

A. *Plaintiffs' First Mathematical Model of the Board of Estimate*

In their complaint in *Morris v. Board of Estimate*,[203] plaintiffs asserted that the Board exhibits a deviation of 136.4% over-representation of Staten Island and 16.7% under-representation of Brooklyn, for an extreme or total deviation of 153.1%.[204] Plaintiffs' strategy was to use an analysis similar to that employed for weighted voting schemes and loosely modeled after that used in *Abate v. Mundt*.[205] The only difference was that the concept of "vote" was substituted for the concept of legislator—that is, plaintiffs measured the number of constituents per vote rather than per legislator.[206] Before such a scheme can be used, one must decide how to attribute votes to the constituents. For the votes held by the Borough Presidents this is a straightforward matter; each Borough President currently casts one vote for the constituents of that borough.[207] The votes held by the city-wide officials—the Mayor, Comptroller and City Council President—are not as easy to attribute. The formula chosen must not only be mathematically elegant, but must also reflect the political realities of the Board—that is, the attribution of city-wide votes must reflect the degree of representation each city-wide official gives to each of the boroughs. The plaintiffs' complaint allocated these city-wide votes among the boroughs in proportion to the population in each borough, on the theory that each city resident is represented equally by the city-wide official. For example, Brooklyn has 31.55% of the city population, and therefore gets 31.55% of the 6 votes held by city-wide officials, for a total of 1.89 votes.[208] These 1.89 votes held in trust for Brooklyn are then added to the 1 vote held by Brooklyn through its Borough President. In sum, the plaintiffs contended that Brooklyn is represented by 2.89 of the 11 votes on today's Board.[209]

Table 2 illustrates plaintiffs' analysis of the voting power of each borough on the present Board of Estimate:

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203. 551 F. Supp. 652 (E.D.N.Y. 1982), *rev'd*, 707 F.2d 686 (2d Cir. 1983), *on remand*, 592 F. Supp. 1462 (E.D.N.Y. 1984).

204. *See* Complaint for Declaratory and Injunctive Relief at 6, Morris v. Board of Estimate, 551 F. Supp. 652 (E.D.N.Y. 1982) (available in files of *Fordham Law Review*) [hereinafter cited as Plaintiff's Complaint].

205. 403 U.S. 182 (1971).

206. *Compare id.* at 184 & n.1 (using constituents per legislator), *with* Plaintiff's Complaint, *supra* note 204, at 5-6 (using constituents per vote of legislator).

207. *See* New York City Charter ch. 3, § 62(a) (Supp. 1984-85).

208. Plaintiff's Complaint, supra note 164A-1, at 5.

209. *See id.*

Table 2[210]

Plaintiffs' Analysis of Present Board Voting Structure

Borough	% of City Population	City-wide Votes Attributed to the Borough	Borough President Vote	Total Votes Actually Held by Borough
Bklyn	31.55	1.89	1.00	2.89
Qns	26.75	1.60	1.00	2.60
Man.	20.19	1.21	1.00	2.21
Bnx	16.53	0.99	1.00	1.99
S.I.	4.98	0.30	1.00	1.30
TOTAL	100.00	5.99*	5.00	10.99*

As Table 2 demonstrates, the plaintiffs distributed city-wide votes among the boroughs and added to them the one vote held by each Borough President in order to determine the total vote actually held.

To demonstrate the unfairness of the present structure of the Board, plaintiffs then illustrated the voting structure of an ideal Board of Estimate in which each borough controls a number of votes that is in perfect proportion to its population.[211] In their illustration plaintiffs reallocated the five votes held by the Borough Presidents as if those five votes were distributed according to population rather than under today's formula of one vote per Borough President. Under this scheme, Brooklyn would control 1.58 of the 5 votes, and Staten Island only 0.25.[212] By adding a borough's proportional share of the Borough President votes to its attributed share of the city-wide officials' votes, one can conclude that ideally Brooklyn would control 3.47 of the Board's 11 votes, Staten Island 0.55, and Manhattan 2.22, as illustrated in Table 3:

Table 3[213]

Plaintiffs' Ideal Distribution of Votes on the Board

Borough	% of City Population	Citywide Votes Attributed to the Borough	Proportional Share of All Borough Votes	Ideal Number of Votes Held by Borough
Bklyn	31.55	1.89	1.58	3.47
Qns	26.75	1.60	1.34	2.94
Man.	20.19	1.21	1.01	2.22
Bnx	16.53	0.99	0.83	1.82
S.I.	4.98	0.30	0.25	0.55
TOTAL	100.00	5.99*	5.01*	11.00

210. This Table includes data presented in Plaintiff's Complaint, *id.* at 5-6, as well as other data provided by the author. The structure of this Table and the following Tables is of the author's design. In this and subsequent tables, an asterisk will indicate an error of 0.01 notes, which is caused by the necessary rounding off of decimal places.

211. *See id.* at 5.

212. *Id.*

213. *See id.* at 5-6.

Plaintiffs continued their analysis by comparing the "actual" number of votes held by each borough with the "ideal" number of votes it should hold—expressing the difference between the two as a percentage of the "ideal" number, which plaintiffs labeled as the "deviation."

Table 4[214]

Borough	"Actual"* Votes	"Ideal"** Votes	Difference	Difference Divided by "Ideal" or Percent Deviation***
Bklyn	2.89	3.47	−0.58	− 16.71%
Qns	2.60	2.94	−0.34	− 11.53%
Man.	2.21	2.22	−0.01	− 00.45%
Bnx	1.99	1.82	0.17	+ 9.34%
S.I.	1.30	0.55	0.75	+136.36%
TOTAL	10.99	11.00	—	153.07%

* From Table 2
** From Table 3
*** Negative numbers indicate under-representation; positive numbers indicate over-representation. "Total deviation" is calculated by adding the absolute value of the deviations of the most over-represented and under-represented constituencies.

The "extreme deviation" of the Board from ideal representation is then calculated by looking at the range between the most under-represented borough, Brooklyn with a 16.71% deviation, and the most over-represented borough, Staten Island with a 136.36% deviation. In this case that range totals 153.07%, truly a large deviation when one considers that the Supreme Court has not yet upheld a local government apportionment scheme with an "extreme" or "total" deviation in excess of 16.40%.[215]

There are, however, several problems with this model of Board of Estimate apportionment. The most narrow objection is that it expresses the deviations in terms of the number of votes each borough should control. The preferred mode of analysis focuses on the number of *constituents* each vote should represent, and then compares that to the number of constituents actually represented by a single vote. The simple explanation for this preference is that the latter analysis was adopted by the Supreme Court in *Abate v. Mundt*.[216] An analysis focusing on votes has two additional problems. First, it assumes that votes ideally should be distributed

214. *See id.*

215. *See* Mahan v. Howell, 410 U.S. 315, 319, 325 (16.40% deviation upheld), *modified on other grounds*, 411 U.S. 922 (1973); *see also* Abate v. Mundt, 403 U.S. 182, 184, 187 (1971) (11.90% deviation on the Rockland County Board of Supervisors upheld). Compare this with Brown v. Thomson, 103 S. Ct. 2690, 2698 (1983), discussed *infra* note 340 (De minimis marginal increase in deviation due to addition of one more county representative on Wyoming state legislature upheld. Court never reaches issue of overall 89% maximum deviation of legislature.). For a discussion of the varying standards to which federal, state and local districting schemes are held, see Sovern Commission Report, *supra* note 32, at 445-59.

216. *See* 403 U.S. 182, 184-87 (1971).

in strict arithmetic proportion to the underlying population, an assumption that is subject to criticism.[217] Second, it exacerbates the deviation by analyzing small numbers of votes rather than large numbers of constituents. This phenomenon, arising from the use of small numbers, was explicitly recognized in *Hadley v. Junior College District*[218] when the Supreme Court stated that a less exact standard might be appropriate when the deviation results from "the inherent mathematical complications in equally apportioning a small number of trustees among a limited number of component districts."[219]

B. *Plaintiffs' Second Mathematical Model of the Board of Estimate*

The problems described above can be dramatically illustrated when one compares the previous analysis used by the plaintiffs in their complaint[220] with that used in their brief before the Second Circuit Court of Appeals.[221] This latter analysis is more closely modeled after *Abate v. Mundt*[222] and results in a far smaller total deviation. In this analysis, the number of constituents represented by each vote on the Board is compared with an ideally apportioned Board on which there are 11 votes, with one-eleventh of the City, or 642,821 persons, represented by each vote. In other words, rather than calculating the deviation by reference to the difference between the ideal and actual number of *votes per group of constituents*,[223] this second model relies on the difference between the ideal and actual number of *constituents per vote*. Except for this single change, all data and underlying assumptions about the attribution of city-wide votes to borough constituents remain constant. As before, the plaintiffs assume that each borough is represented by a proportional share of the six votes cast by city-wide officials:

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217. See *infra* text accompanying notes 249-54.

218. 397 U.S. 50 (1970).

219. *Id.* at 58.

220. *See* Plaintiff's Complaint, *supra* note 204, at 5 (showing difference between ideal and actual numbers of votes per group of constituents).

221. *See* Brief for Plaintiffs-Appellants at 18, Morris v. Board of Estimate, 707 F.2d 686 (2d Cir. 1983) (model showing difference between ideal and actual number of constituents per vote) (available in files of *Fordham Law Review*) [hereinafter cited as Brief for Plaintiffs].

222. *See* 403 U.S. 182, 184-87 (1971).

223. See *supra* note 221.

Table 5 [224]

Borough	Population	Total* Votes	Actual Population Per Vote	Ideal Population Per Vote	Difference	Deviation
Bklyn	2,230,936	2.89	771,950	642,821	129,129	+20.1%
Qns	1,891,325	2.60	727,433	642,821	81,825	+13.2%
Man.	1,427,533	2.21	645,942	642,821	3,122	+ 0.5%
Bnx	1,169,115	1.99	587,495	642,821	−55,326	− 8.6%
S.I.	352,121	1.30	270,863	642,821	−371,959	−57.9%
TOTAL	7,071,030	10.99	—	—	—	78.0%

* Total votes are calculated in Table 2, *supra*.

Using this mode of mathematical analysis but without changing any of the underlying assumptions, the extreme deviation drops from 153% to 78.0% (20.1% +57.9%). This is an example of the substantial differences that result from choosing a particular mathematical analysis and from using larger, population figures as opposed to smaller, voting figures.

This analysis is also flawed, however, because it continues to distribute the six votes held by the city-wide officials among the boroughs in proportion to their underlying populations, a distribution that is politically unrealistic. Presumably city officials, such as the Mayor, Comptroller and City Council President, do not view themselves as obligated to each of the five boroughs in proportion to population: It is unlikely that these officials will consciously vote in Staten Island's self-interest 4.98% of the time and in Brooklyn's self-interest 31.55% of the time. The fact that these officials are elected city-wide means that their constituency is the entire City of New York, and the interests of the City as a whole are not necessarily the same as the sum of the discrete interests of each borough. For example, although no borough may desire a new jail to be located within its boundaries, the City's interest in creating new jail space may require that the will of one or more of the boroughs be overborne. A City official faced with the problem of inadequate jail space is presented with a fundamentally different issue than that which is presented to each of the Borough Presidents.

This is not to say that a borough or its Borough President cannot vote in a manner that reflects an enlightened self-interest and a concern for the common good. It is unrealistic, however, to assume that this possibility justifies the arbitrary distribution of votes held by city officials in a manner that implies that these votes are equivalent to those held by Borough Presidents. At the citizen level, the Borough President's vote is more controllable than the vote of a city official who is subject to pressures not only from other boroughs but from the city as a whole. Furthermore, any attempt to distribute these votes among the boroughs serves to ignore the most unique and deliberate aspect of the Board's

224. *See* Brief for Plaintiffs, *supra* note 221, at 18.

voting structure: The voting majority is legislatively mandated for these city officials on the very theory that their broader vision should prevail even against the combined opposition of the five Borough Presidents.[225]

225. In a memorandum prepared upon remand from the Second Circuit to the Eastern District of New York, the City defendants argued:

> [T]he Board's representation scheme is a function of both city-wide representatives (who control 55% of Board votes) and borough representatives. Any methodology which attempts to analyze the existing representation scheme must recognize this basic fact. By definition, the city-wide members represent the entire City and any attempt to allocate their votes to the borough representatives only results in a gross distortion of the Board's representation scheme.

Defendant's Memorandum, *supra* note 11, at 23. The voting structure that assures that the city officials hold a majority has remained unchanged since its inception in 1900. *See* 1900 Report, *supra* note 45, at 19. For a history of the Board of Estimate, see *supra* text accompanying notes 28-135. Intervenor-Defendant Frank Ponterio made a similar point when he asserted that

> [i]t is . . . no more legitimate to divide the mayor's two Board votes among the five boroughs than it is to divide the Staten Island Borough President's one Board vote among the towns of Port Richmond, West Brighton, Stapleton, Annadale, *et al.* Just as each borough president always represents the interests of his entire borough, the city-wide members always represent the interests of the entire city. Of course on specific issues, a city-wide member may favor the local interests of one borough over another. Nevertheless, this does not mean that members allocate certain fractions of themselves to specific communities.

Intervenor-Defendants' Memorandum of Law in Support of Motion to Deem Issues Resolved at 3, Morris v. Board of Estimate, 592 F. Supp. 1462 (E.D.N.Y. 1984). Ponterio analogized the plaintiffs' mathematical model to that used for the "shared floater" analysis of floterial districts, and suggested that the "aggregate" analysis for floterial districts is more appropriate to the Board of Estimate. *See id.* at 16. The analogy is interesting but politically inaccurate. The City of New York is not a floterial district or a collection of floterial districts within a larger political unit employing single-member districts. Rather, the city is an entire political unit, which is why neither the "shared floater" nor "aggregate methods" is truly satisfactory. Of the two, however, the "shared floater" analysis is slightly more politically realistic in general.

> Floterial districts are "superdistricts" [that] combine two or more component legislative districts. From this superdistrict one or more representatives are elected. In addition, each of the component districts may itself elect one or more legislators. Floterial districts are used to correct representational disparities among districts which by themselves deviate very far from the "average" or ideal district size. [Thus, f]loterial districts allow districting commissions to achieve population-based representation without altering natural political or geographic boundaries.

Sovern Commission Report, *supra* note 32, at 569.

If the floterial district analogy is applied to the Board of Estimate, then the entire City is considered a floterial district with three "floating" representatives casting two votes apiece, and with five component districts each electing one independent representative who casts one vote. Using the aggregate method, one calculates the deviation by examining the floterial district population (7,071,030 persons) and the overall number of representatives (11, if one considers each vote as one "representative"), which yields one representative (or vote) per 642,821 persons. However, this is identical to the calculation by which one finds the "ideal" or average size of a constituency. By definition, then, the aggregate method will yield a 0.00% total deviation, as opposed to the 78% total deviation one arrives at by using the shared floater method, in which each component district is considered to have its own representative plus a proportional share of the floating representatives. See *infra* Table 6. In fact, intervenor-defendant Ponterio acknowledges this very fact when he states that "since the aggregate ratios for the actual and ideal Board are

C. *The District Court's Mathematical Model of the Board*

On remand, the district court recognized the aforementioned problem of attributing city-wide votes, stating that "[a]ny quantitative method for analyzing the Board that attempts to allocate the citywide members' votes among the boroughs is inevitably arbitrary and ad-hoc."[226] In response, however, the district court chose not to search for a meaningful way to evaluate the effect of the majority bloc on Borough President voting powers, but instead opted to eliminate the bloc's role from consideration of the proper degree of representation to be accorded to each Borough President.[227] It analogized the Board to a legislature containing one representative from each of five districts and three members elected at-large, and pointed to numerous cases in which at-large seats were not considered when evaluating the single-member districts of similar bodies.[228] Further, it cited the Supreme Court's "reluctance to involve the

identical, a different measure must be defined." Ponterio's Affidavit, *supra* note 199, at 11.

Mr. Ponterio is correct in stating that a new standard against which to judge the Board must be defined in order to use the aggregate method. In the true floterial district situation, that standard would be the average district size over the entire political unit—for example, 10,000 persons per representative in a hypothetical county of twenty towns. However, if the floterial district and the entire political unit are identical, as is the case when the City is viewed as a floterial district for the Board, then the apportionment will necessarily be perfect when analyzed by the aggregate method, regardless of the actual distribution of borough and city votes. For example, if Richmond had 2 votes and Brooklyn had 0 votes, with all others unchanged, the aggregate analysis would still yield a deviation of 0.00%.

This points to the essential fallacy in applying the floterial district analogy in any form to New York City and its Board of Estimate. Floterial districts are used for correcting representational disparities in some but not all of the legislative districts in a given political unit. For example, the hypothetical county of twenty towns may have one floterial district covering three of the larger towns, so that citizens of that district may get some additional representation beyond that of their individually elected legislators. In addition, while the "floating" representative of several districts on a county or state legislative body may be viewed as representing each of his component districts somewhat in proportion to their populations, a representative elected by the entire county or state has a fundamentally different mission. The same is true for the city-wide officials on the Board, who are not properly viewed as sharing their representation among the boroughs, but as representing the City as a unified whole. For discussion of floterial districts, see generally Sovern Commission Report, *supra* note 32, at 567-92. For a discussion of the mathematical analyses of floterial districts, see Cosner v. Dalton, 522 F. Supp. 350, 355 n.8 (E.D. Va. 1981).

226. Morris v. Board of Estimate, 592 F. Supp. 1462, 1474 (E.D.N.Y. 1984) (quoting Appendix to Plaintiffs' Brief, Affidavit of Professor Brams at 5).

227. *See id.* at 1471.

228. *See id.* The examples cited by the court were: Perry v. City of Opelousas, 515 F.2d 639, 641 & n.2 (5th Cir. 1975) (five single-member and one at-large aldermanic district for city council); Latino Political Action Comm., Inc. v. City of Boston, 568 F. Supp. 1012, 1015 (D. Mass. 1983) (city council and school board to be comprised of nine district and four at-large members), *application for stay denied*, 716 F.2d 68 (1st Cir. 1983), *aff'd sub nom.* Bellotti v. Latino Political Action Comm., Inc., 104 S. Ct. 5 (1983); Cohen v. Maloney, 410 F. Supp. 1147, 1149-50 (D. Del. 1976) (eight single-member district representatives and four at-large members comprise the municipal council); Martin v. Venables, 401 F. Supp. 611, 613-14 & n.2 (D. Conn. 1975) (ten single member and

courts in statistical complexities, . . . absent reasons to indicate that a more complicated approach is required . . . ."[229] Thus, it concluded that a literal *Abate* test would suffice, and that on that basis the Board has an extreme deviation of 132.9%.[230]

The *Abate* test simply examines the ideal number of persons per representative as compared to the actual number.[231] According to the calculations of the district court in *Morris*, the "ideal" number is simply the city population (7,071,030) divided by the number of Borough Presidents (5) or 1,414,206 persons per Borough President (BP) or his vote.[232] Examining the actual situation, one sees that in Brooklyn there are 2,230,936 persons per BP vote. To find the "deviation from the norm" one expresses the difference between the ideal (1,414,206) and the actual (2,230,936) as a percentage of the ideal. Thus:

$$\frac{\text{ideal-actual}}{\text{ideal}} = \frac{1{,}414{,}206\text{-}2{,}230{,}936}{1{,}414{,}206} = \frac{-816{,}730}{1{,}414{,}206} = -57.7\%^{233}$$

The minus sign indicates that Brooklyn is under-represented on the Board.

For Staten Island, the calculation yields a deviation of 75.1% overrepresentation:

ideal population per BP vote = 1,414,206
actual population per BP vote = 352,121

$$\frac{\text{ideal-actual}}{\text{ideal}} = \frac{1{,}414{,}206\text{-}352{,}121}{1{,}414{,}206} = \frac{1{,}062{,}085}{1{,}414{,}210} = +75.2\%^{234}$$

The court then calculated the "maximum deviation,"[235] which is the pertinent figure used by the Supreme Court to evaluate legislative bodies,[236] and found a deviation of 75.2% + 57.7% or 132.9%.[237]

The problem with this approach is that it fails to take account of the city-wide officials' majority voting bloc. While it is true that many cases involving malapportioned bodies with single-member and at-large representatives have focused solely on the disparities among single-member

one at-large compose town council); Oliver v. Board of Educ., 306 F. Supp. 1286, 1289 (S.D.N.Y. 1969) (board of education composed of five borough representatives and two at-large appointees). Note that in none of the above cases were there more at-large than district representatives. Therefore, the analogy to the Board of Estimate is not entirely appropriate.

229. Morris v. Board of Estimate, 592 F. Supp. 1462, 1474 (E.D.N.Y. 1984) (quoting Boyer v. Gardener, 540 F. Supp. 624, 628 (D.N.H. 1982)).

230. *See id.* at 1475.

231. *See* Abate v. Mundt, 403 U.S. 182, 184 & n.1 (1971).

232. *See Morris*, 592 F. Supp. at 1475.

233. *See id.* at 1465-67, 1475.

234. *See id.*

235. *See id.* at 1475.

236. *See* Abate v. Mundt, 403 U.S. 182, 184 (1971).

237. *Morris*, 592 F. Supp. at 1475.

districts, none of these cases have presented a situation in which at-large representatives have a majority voting bloc.[238] This is a significant qualitative difference in the organization of the Board's voting structure, and provides exactly the " 'reasons to indicate that a more complicated approach is required.' "[239] Furthermore, it is possible to develop a mathematical model of the Board that takes into account the effect of this majority voting bloc on the value of borough-president votes while simultaneously refraining from any arbitrary attribution of city-wide officials' voting power to the boroughs.

V. AN ALTERNATIVE MATHEMATICAL ANALYSIS OF ONE-PERSON, ONE-VOTE COMPLIANCE

In order to develop a model that adequately reflects the distribution of power on the Board and describes the flow of that power to the citizen, one must focus on two problems. First, in order to equalize the representation for every city resident it is necessary to examine the nature of the "representation" to which each borough is entitled. This Article demonstrates that representation is best defined in terms of the citizen's effectiveness on the Board via his or her elected representative. From this will flow the conclusion that it is the ability to affect decisionmaking on the Board, and not merely the number of votes controlled, that measures effectiveness and representation. Second, it is necessary to examine the comparative effectiveness of the five Borough Presidents in light of the majority vote held by the city-wide officials. By approaching the problem this way one can avoid unrealistic political assumptions concerning the allocation of city-wide officials' votes among the boroughs and can achieve a more accurate mathematical statement of the present maldistribution of representation among boroughs.

A. *Defining Representation: Critical Votes Analysis of Multi-member Districts and Weighted Voting*

An effective analysis must first define the nature of representation and legislative power and then translate it into equality of representation at the citizen level. This is best done in the context of multi-member districts and weighted voting models. Multi-member districting assigns more representatives to the larger districts,[240] while weighted voting assigns more votes to the representatives of the larger districts.[241] The weighted voting model is particularly valuable in demonstrating the nature of legislative power and presents a likely alternative to the Board's present voting structure.

238. See *supra* note 228.

239. Morris v. Board of Estimate, 592 F. Supp. 1462, 1474 (E.D.N.Y. 1984) (quoting Boyer v. Gardener, 540 F. Supp. 624, 628 (D.N.H. 1982)).

240. *See* Sovern Commission Report, *supra* note 32, at 531-32, 535.

241. *See id.* at 618.

The one-person, one-vote principle of the fourteenth amendment's equal protection clause requires each citizen to have equal voting strength.[242] Unfortunately, despite its variety of explanations, the Supreme Court has never clearly defined the "voting strength" to be equalized. Where application of one-person, one-vote is limited to single member districting, clearly the solution is to equalize the population of the districts.[243] A specific definition of "voting strength" is unnecessary because each citizen gets the same degree of "representation," regardless of the meaning of that term.

The situation is quite different when weighted voting or multi-member districting is used to equalize the voting strength of citizens residing in districts that vary in population.[244] These techniques are "intended to compensate for the dilution of the voting strength of citizens in the larger district."[245] However, to decide how many extra legislators or votes—in other words, how much extra voting strength—the district must have, it is necessary first to define the "voting strength" to be equalized. Traditionally, legislatures and courts have equalized the constituency to which each representative is responsible.[246] This is intended to equalize each citizen's opportunity to affect the election of a candidate, and thus equalize each citizen's effect on governmental decisions. For example, with multi-member districting an arithmetic model results in five representatives for a 50,000-person District A and two representatives for a 20,000-person District B. With arithmetic weighted voting, District A's one representative would cast five votes, while District B's representative would cast two. This model is intuitively fair; for every 10,000 persons there is one legislative vote or one representative. The model employs the same perception of equal voting strength implicit in apportionment

242. The phrase "one-person, one-vote" seems to imply this interpretation. *See* Wesberry v. Sanders, 376 U.S. 1, 8 (1964) ("one man's vote . . . is to be worth as much as another's"); Reynolds v. Sims, 377 U.S. 533, 565 (1964) ("each citizen [must] have an equally effective voice in the election of members of his state legislature"); *cf.* Gray v. Sanders, 372 U.S. 368, 381 (1963) (one-person, one-vote principle derived from the Constitution).

243. *Cf.* Abate v. Mundt, 403 U.S. 182, 185 (1971) (While mathematical exactness in apportionment is not required, apportionment "must be based on the general principle on population equality.").

244. Although the election of legislators from single- or multi-member districts has long been the custom, weighted voting was seriously considered in the United States as long ago as the 1840's, during Kentucky's constitutional convention. Although the weighted voting plan was not adopted, the following virtues were cited: it preserves separate representation for each governmental unit or geographically cohesive area; it minimizes gerrymandering; it prevents creation of artificial districts containing communities of separate interest in order to meet mathematical quotas; it gives every citizen a properly equal and effective political voice; by preserving natural communities as separate districts, it minimizes jealousy and ill-will. *See* R. Dixon, Democratic Representation: Reapportionment in Law and Politics 516 n.40 (1968) (citing H. Thorpe, Constitutional History of the American People, 1776-1880, at 107-09 (1898)).

245. *Id.*; *see id.* at 531-32, 535.

246. *See id.* at 617-18.

plans that equalize the populations of single-member districts.[247]

Unfortunately, this arithmetic model can lead to anomalous results. For example, assume a four-district city. District A has 60,000 citizens, District B has 10,000, District C has 20,000, and District D has 10,000. With weighted voting, each district has one representative with Councilwoman A casting six votes, Councilman B casting one, Councilman C casting two and Councilman D casting one. The system is designed to give District A, which has 60% of the population, an identical 60% voice on the council. In fact, District A has 100% of the legislative power, because no combination of Representatives B, C and D can achieve a simple majority. Thus, only with Councilwoman A's support can any measure be passed. Furthermore, Councilwoman A can cast a majority vote even if she fails to get support from any other representative. Clearly in this situation the arithmetic model has failed to provide legislative power in proportion to the size of the underlying constituency, and it thus fails to achieve equal representation for each citizen.[248]

Because arithmetic models for weighted voting fail to equalize the voting power of citizens in large and small districts, it is necessary to choose another model. To do this, one must define exactly what is being equalized. In 1965 and 1966, J.F. Banzhaf suggested that voting strength at the citizen level is properly defined as the chance to elect the representa-

247. This sort of arithmetic model has been proposed, and in some cases adopted, by many states. New Mexico, for example, established a weighted voting plan for New Mexico's state legislature. *See* N.M. Stat. Ann. §§ 2-7-1- to -7-3 (1964), *repealed*, N.M. Stat. Ann. ch. 1, § 801, ch. 4, § 79 (1982). The plan was subsequently held to conflict with the state constitution. *See* Cargo v. Campbell, No. 33273 (Dist. Ct. of Santa Fe County, N.M. Jan. 8, 1964), in VI Nat'l Mun. League, Court Decisions on Legislative Reapportionment 80, 101-02 (1964). New Jersey once proposed a state weighted voting reapportionment plan, but it was invalidated on state law grounds prior to its adoption. *See* Jackman v. Bodine, 43 N.J. 491, 493, 205 A.2d 735, 736 (1964) (per curiam). Two other courts indicated in the early 1960's that weighted voting conflicted with their state law. *See* Fortner v. Barnett, No. 59965 (Ch., Hinds County, Miss. 1962), in I Nat'l Mun. League, Court Decisions on Legislative Reapportionment at 1-2; Brown v. State Election Bd., 369 P.2d 140, 149 (Okla. 1962). One court, however, discussed a weighted voting plan with approval in dictum. *See* Maryland Comm. for Fair Representation v. Tawes, 228 Md. 412, 439, 180 A.2d 656, 671 (1962), *rev'd on other grounds*, 377 U.S. 656 (1964). Finally, one court rejected weighted voting because it failed to equalize representation in aspects other than voting. *See* League of Neb. Muns. v. Marsh, 209 F. Supp. 189, 195 (D. Neb. 1962).

248. A similar problem develops in multi-member districting if, for example, District A has six representatives, District B has one, District C has two and District D has one. If District A's representatives vote as a bloc, once again District A gains 100% of the legislative power. This will often occur, because all six representatives must answer to the same constituency. However, these six representatives may not vote as a bloc on at least some issues. With weighted voting District A's one representative must cast all six of her votes either aye or nay; thus weighted voting is an easier model with which to analyze the hidden defects of the arithmetic model for apportioning legislative power. For a discussion of these problems with respect to the Indiana multi-member districts, see *infra* text accompanying notes 207-09. For an unusual example, in which a multi-member district has two representatives, each of whom holds thirty-five weighted votes, thus creating an anomalous situation in which weighted votes can be split, see *infra* note 271.

tive of one's choice.[249] This is further defined as the chance to cast a decisive or tie-breaking vote.[250] If each voter in every district has the same opportunity to have a decisive effect on the outcome of an election, then each voter arguably has equal voting strength. Banzhaf's model, however, leads to the conclusion that weighted voting should increase the number of votes held by larger districts roughly in proportion to the square root of their populations, not simply in proportion to their absolute size.[251]

Banzhaf's arguments can easily be illustrated.[252] Assume there exists a district (A) with three citizens, each able to cast a single vote for either a Democrat (D) or a Republican (R). There are 2^3 or eight possible voting combinations, as illustrated in Table 6. In each of these eight combinations, the capitalized votes are "decisive." If a decisive vote is changed from R to D or from D to R, with all other votes remaining constant, the election outcome will be different.

Table 6
Decisive Votes in a Three-Citizen District

Combination of Votes #	Voter 1	Voter 2	Voter 3	Winner
1	r	r	r	Republican
2	R	R	d	Republican
3	R	d	R	Republican
4	d	R	R	Republican
5	d	d	d	Democrat
6	D	D	r	Democrat
7	D	r	D	Democrat
8	r	D	D	Democrat
Number of Decisive Votes Held by Each Voter	4	4	4	Total Number of Decisive Votes=12

Of the eight election outcomes in this district, there are twelve opportunities to cast a decisive vote, and each voter holds exactly four of them. In other words, each citizen will be decisive in four out of eight, or one-half, of the election outcomes.

Next, assume there exists a five citizen district (B), in which 2^5 or 32 voting combinations are possible. Table 7 illustrates the results of the

249. *See* Banzhaf, *Weighted Voting Doesn't Work: A Mathematical Analysis*, 19 Rutgers L. Rev. 317, 319-21 (1965) [hereinafter cited as Banzhaf II]; Banzhaf I, *supra* note 193, at 1311.

250. *See* Banzhaf II, *supra* note 249, at 335.

251. See *infra* note 253.

252. For the model for this illustration, see Grofman & Scarrow, *The Riddle of Apportionment: Equality of What?*, 70 Nat'l Civic Rev. 242, 244-45 (1981). For Banzhaf's own examples, see Banzhaf II, *supra* note 249, at 342-43; Banzhaf I, *supra* note 193, at 1321.

possibilities for an election in such a district; again, capitalized votes are decisive.

Table 7
Decisive Votes in a Five-Citizen District

Combination of Votes #	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Winner
1	d	d	d	d	d	Democrat
2	d	d	d	d	r	Democrat
3	d	d	d	r	d	Democrat
4	d	d	r	d	d	Democrat
5	d	r	d	d	d	Democrat
6	r	D	D	D	r	Democrat
7	D	D	D	r	r	Democrat
8	D	D	r	D	r	Democrat
9	D	r	D	D	r	Democrat
10	r	D	D	D	r	Democrat
11	D	D	r	r	D	Democrat
12	D	r	D	r	D	Democrat
13	r	D	D	r	D	Democrat
14	D	r	r	D	D	Democrat
15	r	D	r	D	D	Democrat
16	r	r	D	D	D	Democrat
17	r	r	r	r	r	Republican
18	r	r	r	r	d	Republican
19	r	r	r	d	r	Republican
20	r	r	d	r	r	Republican
21	r	d	r	r	r	Republican
22	d	r	r	r	r	Republican
23	R	R	R	d	d	Republican
24	R	R	d	R	d	Republican
25	R	d	R	R	d	Republican
26	d	R	R	R	d	Republican
27	R	R	d	d	R	Republican
28	R	d	R	d	R	Republican
29	d	R	R	d	R	Republican
30	R	d	d	R	R	Republican
31	d	R	d	R	R	Republican
32	d	d	R	R	R	Republican
Number of Decisive Votes Held by Each Voter	12	12	12	12	12	Total Number of Decisive Votes=60

In this district of five citizens, each citizen casts twelve of the decisive votes; in other words, each citizen will be decisive in twelve out of thirty-two, or three-eighths, of the election outcomes.

Normally, arithmetic voting schemes would give District A's representative three votes and District B's representative five votes. The underlying assumption is that District A's voters would have five-thirds the voting strength of District B's voters. But this is not true if one defines voting strength as the power to cast a decisive vote. A voter in District A may cast a decisive vote in one-half of all election outcomes; in District B a voter may cast a decisive vote in three-eighths of all election outcomes. Smaller district voters thus hold one-half divided by three-eighths, or four-thirds, the voting strength of larger district voters. Therefore, to compensate properly, District A should have three weighted votes, and

District B should have four. Arithmetic solutions, which give District B five weighted votes, in effect over-represent the larger district. In fact, voting power will generally vary in proportion to the square root of the population.[253] This means that if one district is twice as populous as another, its voters have not one-half the power of those in the smaller district, but $1/\sqrt{2}$ or about two-thirds of their power. Thus, at the legislative level, if District X has a population of 20,000 and District Y has a population of 10,000, then Representative X should receive approximately three weighted votes and Representative Y should receive approximately two.[254]

One criticism of the Banzhaf model is that defining "voting strength" as the ability to cast a decisive vote is inaccurate. The opportunity to cast a tie-breaking vote is not likely to be the factor motivating a citizen

253.

If there are $N+1$ voters in a district, the number of voting combinations for two candidates is 2^{N+1}, because each voter may vote in two ways. An individual may cast a decisive vote only when all other voters are tied. Consequently, the number of combinations in which an individual casts a decisive vote is equal to twice the number of combinations in which the remaining voters are tied (for each tying combination the individual has two decisive votes, one for each candidate). The number of tying combinations for the remaining voters is

$$\frac{N!}{(N/2)!(N/2)!}$$

where N! is the factorial $(N)(N-1)(N-2),.,(1)$. Hence the ratio of the total number of combinations in which the individual casts the decisive vote to the total number of combinations is

$$\frac{(2)N!}{(N/2)!(N/2)!2^{N+1}}.$$

Using Stirling's approximation for the factorial, it can be shown that each individual would cast a decisive vote in approximately $1/\sqrt{2\P N}$ proportion of combinations.

M. Finkelstein, Quantitative Methods in Law 111-12 (1978) (footnote omitted).

254. The anomalous results which occur when an arithmetic model is used to calculate weighted voting can further be illustrated by examining the Nassau County Board of Supervisors in the year 1964. *See* Banzhaf II, *supra* note 249, at 339. That Board is composed of one supervisor from each of the major localities in the county, except that Hempstead, with over half the county's population, has two supervisors. *See id.* To compensate for population disparities among these localities, each supervisor was given one vote for every 10,000 persons in his or her locality. The net computer analysis, however, revealed the startling result that the supervisors of the three largest localities held 100% of the power, while the three other localities held no power at all to affect legislative decisions. For sources of the computer analyses, see *infra* note 298.

to vote.[255] More likely, the motivation is the opportunity to help a candi-

Nassau County System of Weighted Voting 1964

Municipality	Population (1960)	Number of Weighted Votes	Number of Combinations in Which Each Legislator Can Affect the Outcome
Hempstead (No.1)	728,625	31	16
Hempstead (No.2)		31	16
North Hempstead	213,225	21	0
Oyster Bay	285,545	28	16
Glen Cove	22,752	2	0
Long Beach	25,654	2	0

Id. at 339. Note that these drastic results are not found in larger legislative bodies. Compare the figures for New Jersey's once proposed weighted voting state senatorial reapportionment, calculated and presented by Banzhaf:

Analysis of Voting Power Under Weighted Voting in the New Jersey Senate

Counties of New Jersey	Number of Weighted Votes (Based on Population)	Percent of Total Votes	Percent of Actual Voting Power	Disparity (Error) in the Allocation of Voting Power with Respect to Mean
Essex	19.0	15.20	16.39	+7.85
Bergen	16.1	12.88	13.26	+2.96
Hudson	12.6	10.08	10.10	+ .24
Union	10.4	8.32	8.22	−1.23
Middlesex	8.9	7.12	6.98	−1.88
Passaic	8.4	6.72	6.58	−2.08
Camden	8.1	6.48	6.34	−2.22
Monmouth	6.9	5.52	5.37	−2.72
Mercer	5.5	4.40	4.26	−3.07
Morris	5.4	4.32	4.16	−3.66
Burlington	4.6	3.68	3.56	−3.21
Atlantic	3.3	2.64	2.55	−3.48
Somerset	3.0	2.40	2.31	−3.54
Gloucester	2.8	2.24	2.17	−3.26
Cumberland	2.2	1.76	1.70	−3.58
Ocean	2.2	1.76	1.70	−3.58
Warren	1.3	1.04	1.00	−3.70
Salem	1.2	.96	.92	−3.68
Hunterdon	1.1	.88	.85	−3.86
Sussex	1.0	.80	.77	−3.66
Cape May	1.0	.80	.77	−3.66

Id. at 336. As can be seen in this table, power shares do not deviate more than 11% from their "ideal" or percentage of total state population. However, if the representatives cast weighted votes in their small committees, then the undue power given to larger districts is once again quite out of proportion with their population. If, on the other hand, representatives each cast one vote when in committee, then larger districts are under-represented at the committee level.

255. *See* M. Finkelstein, *supra* note 253, at 112. Note that at the legislative level, Banzhaf's assumption may well be valid. On a small council, tie-breaking opportunities will be more frequent. Therefore, a decisive vote is of relatively more value to the legislator who holds it.

date to win by adding another vote. Seen in terms of a utility theory, a voter would put a lower value on his remote chance to break a tie than he would on his right to vote altogether.[256] While tiebreaking is clearly part of each vote's value, it is equally clear that it is not its entire worth.

This criticism, while valid, does not lead to abandoning Banzhaf's conclusion that traditional multi-member and weighted voting schemes overrepresent larger districts. In his analysis of these schemes, M.O. Finkelstein, teacher of legal statistics, suggests that a voter in a larger district feels his vote is less meaningful because any result will be carried by a larger number of votes, thus making his contribution less significant.[257] This perception is correct; over a run of elections, the variations in votes cast—the winning pluralities—will be larger in more populous districts, even if the districts are identical in all but size. Thus the voter is correct that in a larger district his vote is more frequently buried in large pluralities, reducing its contribution to the election of his candidate. However, the probability of any given plurality in a larger district is not twice its probability in a district half its size. In fact, that probability ratio is less than $\sqrt{2}$:1,[258] which suggests that Banzhaf's model is actually somewhat overcautious in its protection of larger districts. Certainly, weighted voting in proportion to anything greater than the square root of the population, as with the arithmetic model often used, is unwarranted by the "equal voting strength" standard.

This analysis of critical or decisive votes is even clearer at the legislative level, where the power to affect the outcome of any given vote is evidence of legislative effectiveness.[259] Thus, if a citizen's "representation" is to be measured by the effectiveness of his legislator, then one might well conclude that for every given number of constituents there should be a given number of critical votes held by each legislator.[260] The number of weighted votes held by each legislator will probably not be the same as the number of critical votes held. Thus, for example, if a county has three towns of 500, 400 and 200 persons respectively, the town supervisors sitting on the county board should have weighted votes that generate multiples of five, four and two critical votes respectively.

Of course, this model also has a flaw: It neglects the nonvoting functions of the legislator. As one court asked when faced with a weighted voting scheme in which one legislator had nine times as many votes as another: Is the former legislator

> permitted to make 9 times as many speeches, 9 times as many telephone calls and have 9 times as much patronage? When they serve on a committee together, does one legislator have 9 times as much power

256. *See id.*

257. *See id.*

258. A formal derivation can be found *id.* at 114-16, *reprinted in* Sovern Commission Report, *supra* note 32, at 634-36.

259. *See* Banzhaf II, *supra* note 181, at 328.

260. *See id.* at 328-35.

> on that committee? If the weighted system is not followed on Committee assignments then the disproportion which reapportionment seeks to correct is only partially corrected. If it is, meaningful representation by those who cast a small number of votes is lost.[261]

B. *Critical Votes Analysis and Weighted Voting in the New York Courts*

Despite this flaw, however, this form of weighted voting, which uses the Banzhaf analysis of critical votes, has been accepted by the courts of New York,[262] a state in which counties have traditionally been governed by boards of supervisors composed of one supervisor from each town, regardless of population.[263] To meet one-person, one-vote requirements, many of New York's counties have chosen to use weighted voting.[264] In *Iannucci v. Board of Supervisors*[265] New York's Court of Appeals ruled that these weighted voting schemes must be judged by whether each legislator's "power share" as calculated by the Banzhaf model, rather than his "weight" share as calculated by arithmetic models, is proportional to his or her town's population.[266] In fact, the court stated that a county should use a computer consultant to calculate these theoretical power shares accurately.[267]

The New York Court of Appeals reaffirmed its *Iannucci* decision in 1973, when Nassau County reapportionment was once again challenged in *Franklin v. Krause*.[268] Although the court again held that weighted voting is not per se unconstitutional for local government units,[269] it found that New York does not require a statistical analysis of power

261. Morris v. Board of Supervisors, 50 Misc. 2d 929, 933, 273 N.Y.S.2d 453, 456-57 (Sup. Ct. 1966).

262. *See, e.g.*, Franklin v. Krause, 32 N.Y.2d 234, 236-37, 298 N.E.2d 68, 69, 344 N.Y.S.2d 885, 887 (1973), *appeal dismissed*, 415 U.S. 904 (1974); Iannucci v. Board of Supervisors, 20 N.Y.2d 244, 251, 229 N.E.2d 195, 198, 282 N.Y.S.2d 502, 507 (1967).

263. *See* N.Y. Const. art. IX, § 1(a), (b), (h); Johnson, *An Analysis of Weighted Voting as Used in Reapportionment of County Governments in New York State*, 34 Alb. L. Rev. 1, 4 (1969).

264. *See generally* Johnson, *supra* note 263, at 16-38 (describing weighted voting plans of various counties).

265. 20 N.Y.2d 244, 229 N.E.2d 195, 282 N.Y.S.2d 502 (1967).

266. *See id.* at 252, 229 N.E.2d at 199, 282 N.Y.S.2d at 508.

267. *See id.* at 252-53, 229 N.E.2d at 199, 282 N.Y.S.2d at 508-09.

268. 32 N.Y.2d 234, 298 N.E.2d 68, 344 N.Y.S.2d 885 (1973), *appeal dismissed*, 415 U.S. 904 (1974).

269. *See id.* at 240 & n.1, 298 N.E.2d at 71 & n.1, 344 N.Y.S.2d at 890 & n.1. In WMCA, Inc. v. Lomenzo, 238 F. Supp. 916 (S.D.N.Y.), *appeal dismissed*, 379 U.S. 986, *aff'd*, 382 U.S. 4 (1965), *vacated in part as moot*, 384 U.S. 887 (1966) (not vacated as to constitutionality of fractional voting), a federal district court held that a fractional voting system is unconstitutional at the state legislative level. *See id.* at 924. Under this court's analysis, weighted voting, which is simply fractional voting with whole numbers, see *infra* text accompanying notes 280-82, would also be held unconstitutional. However, the court expressly reserved the question of the constitutionality of weighted and fractional voting for government organs below the state level. *See id.* at 924 n.2.

shares either.[270] In fact, however, computer analysis as required by the *Iannucci* court proved to be crucial to the success of the weighted voting plan approved in *Franklin*.[271]

The *Franklin* court, and others approving Nassau County's weighted voting, justify the use of this type of weighted voting by noting that a small board is the most efficient form of county government.[272] Furthermore, separate representation for each governmental unit— whether city, town or village—is desirable. Citing the recent line of Supreme Court cases allowing more flexibility in representative government for local bodies,[273] the court concluded that weighted voting is a sensible way to meet both these goals as well as the *Reynolds* one-person, one-vote requirement for equal voting strength.[274]

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270. *Franklin*, 32 N.Y.2d at 242, 298 N.E.2d at 72, 344 N.Y.S.2d at 891.

271. *See id.* at 242, 298 N.E.2d at 72-73, 344 N.Y.S.2d at 891-92. The Nassau County Board of Supervisors posed a unique problem. Because Hempstead contained over half the population of Nassau County, any weighted voting plan ostensibly giving it a commensurate power share would in fact allow it to pass any measure by a simple majority. The plan approved by the *Franklin* court set a "simple" majority at 71 votes (instead of 66) and a two-thirds majority at 92 votes (instead of 87) to eliminate this problem. *See id.* at 237, 298 N.E.2d at 69-70, 344 N.Y.S.2d at 888. The distribution of population, votes and power shares are presented in the following table:

Nassau County

Town	% of County Population	Votes	% Power Share	% Deviation* From Ideal
Hempstead	56.6	35+35**	55.00***	−1.6
Oyster Bay	23.0	32	20.30	−2.7
North Hempstead	16.5	23	13.00	−3.5
Long Beach	2.3	3	5.60	+3.3
Glen Cove	1.8	2	5.60	+3.8

See id. at 237, 298 N.E.2d at 69, 344 N.Y.S.2d at 887.

*This represents deviation from an "ideal" power share identical to the town's percentage of the total county population. Minus signs indicate a lower power share than the town's population would dictate; plus signs indicate a higher power share.

**Hempstead has two supervisors, each able to cast 35 votes, for a total of 70 votes for the town.

***Commentators claim that because Hempstead's two supervisors most often vote as a bloc, its 70 votes are actually closer to a 90% power share. *See* Grofman & Scarrow, *supra* note 252, at 250. See *infra* note 274.

272. *See* 32 N.Y.2d at 238, 298 N.E.2d at 70, 344 N.Y.S.2d at 888-89; *see also* League of Women Voters v. Nassau County Board of Supervisors, 737 F.2d 155, 172 (2d Cir. 1984) (Nassau County plan, as modified to accord with 1980 census figures, approved again), *cert. denied*, 105 S. Ct. 783 (1985).

273. *See* Franklin v. Krause, 32 N.Y.2d 234, 239-40, 298 N.E.2d 68, 70-71, 344 N.Y.S.2d 885, 889-90 (1973) (citing Mahan v. Howell, 410 U.S. 315, *modified on other grounds*, 411 U.S. 922 (1973); Abate v. Mundt, 403 U.S. 182 (1971); Kirkpatrick v. Preisler, 394 U.S. 526 (1969)), *appeal dismissed*, 415 U.S. 904 (1974). For examples of earlier New York cases rejecting weighted voting because Supreme Court standards were stricter, see Graham v. Board of Supervisors, 18 N.Y.2d 672, 674, 219 N.E.2d 870, 870-71, 273 N.Y.S.2d 419, 421 (1966); Morris v. Board of Supervisors, 50 Misc. 2d 929, 932, 273 N.Y.S.2d 453, 456 (Sup. Ct. 1966).

274. *See Franklin*, 32 N.Y.2d at 241-42, 298 N.E.2d at 72, 344 N.Y.S.2d at 891. For

Only one federal court has had occasion to consider the use of the weighted voting in a legislative body. In *WMCA, Inc. v. Lomenzo*,[275] the Southern District of New York considered the four alternative apportionment schemes adopted by the New York State legislature.[276] The alternatives were recommended by Governor Nelson Rockefeller's Citizen's Committee on Reapportionment,[277] and included two plans that employed fractional voting.[278] Fractional voting allows each district to have one representative, but some representatives from less populous districts get only a fraction of one vote.[279] For example, under plans C

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further information on county reapportionment schemes using weighted voting, see Johnson, *supra* note 263. Unfortunately, weighted voting properly apportioned according to Banzhaf's model can produce anomalous results if subject to even minor but uneducated tinkering. This can be seen most clearly in New York, where some counties use "modified" weighted voting, in which a town's weighted votes are divided among two or three representatives instead of being held by only one. The courts invariably interpret a town's "power share" as the sum of the "power shares" of its representatives. Thus, for example, Hempstead Township has two representatives on Nassau County's six member board. See *supra* note 271. Each Hempstead representative casts 35 votes. As calculated by Banzhaf's index, each Hempstead representative holds 27.8% of the county board power, and thus the courts see the town's power share as 55%, which is close to its proportion of the county population. If only one representative held 70 votes, Hempstead's power share would be a disproportionate 88.9%. Unfortunately, the two representatives act more as one legislator than as two:

> [T]he two representatives invariably vote together as a bloc for reasons which are obvious to even a casual observer, but reasons which had to be ignored under the *Iannucci* guidelines: they shared common town identity, occupy the two top administrative posts in the town, are elected at the same time, and invariably come from the same political party. Thus, Hempstead's actual power share is much closer to 88.9 percent than to 55.6 percent. The courts have never acknowledged the distortions in the measurement of power share which stem from "modified" weighted voting.

Grofman & Scarrow, *supra* note 252, at 250.

The Court of Appeals has not addressed this objection to Nassau County's weighted voting scheme. The computer analyst presenting the weighted voting scheme in Franklin v. Krause, 32 N.Y.2d 234, 236-37, 298 N.E.2d 68, 69, 344 N.Y.S.2d 885, 887-88 (1973), *appeal dismissed*, 415 U.S. 904 (1974), portrayed the Hempstead voting share as 55%. *See id.* at 237, 298 N.E.2d at 69, 344 N.Y.S.2d at 887. It is not clear whether an objection to modified weighted voting was ever presented in the case, and therefore it is not clear whether the New York Court of Appeals has squarely held in favor of modified weighted voting.

New York's Court of Appeals has clearly held that weighted voting, whether pure or modified, is permissible for county government, if the weighted votes are calculated according to a Banzhafian "power share" model. *See id.* at 242, 298 N.E.2d at 72-73, 344 N.Y.S.2d at 892.

275. 238 F. Supp. 916 (S.D.N.Y.), *appeal dismissed*, 379 U.S. 986, *aff'd*, 382 U.S. 4 (1965), *vacated in part as moot*, 384 U.S. 887 (1966) (not vacated as to constitutionality of fractional voting).

276. *See id.* at 919-20.

277. New York Report of the Citizens' Committee on Reapportionment to Governor Nelson A. Rockefeller 36-40 (1964) [hereinafter cited as Report on Reapportionment]. The chairman of the Committee was William Hughes Mulligan, then Dean of the Fordham University School of Law.

278. *See id.* at 39-40.

279. *See* WMCA, Inc. v. Lomenzo, 238 F. Supp. 916, 923-24 (S.D.N.Y.), *appeal dis-*

and D recommended by the Citizen's Committee, thirty-nine and forty-seven members of the Assembly respectively would have had fractional votes ranging from three-fourths to one-sixth of a vote.[280]

Fractional voting and weighted voting are essentially identical. Both are usually calculated by the arithmetic model disfavored in *Iannucci*.[281] In this respect, both over-represent the voting power of larger communities. In addition, both skew the distribution of nonlegislative functions, such as making speeches, sitting on committees, and intervening on behalf of constituents. With weighted voting, a representative with twenty votes to compensate for his larger constituency has only one-twentieth of the time for each constituent's request for personal attention. Similarly, under fractional voting, an assemblyman representing a sparsely populated district with a population one-sixth as large as the norm may have only one-sixth of the vote of other assemblymen, but he has six times the time for personal attention to his constituents. It was this failure to equalize the nonvoting functions of legislators[282] that led the court in *WMCA, Inc. v. Lomenzo* to comment that fractional voting discriminates against more densely settled areas of the state.[283]

These same concerns for equalizing nonvoting representative functions led the New York Supreme Court to invalidate a weighted voting plan in 1966,[284] prior to the *Iannucci* and *Franklin* decisions by the New York Court of Appeals. That court felt that weighted voting gives undue influ-

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missed, 379 U.S. 986, *aff'd*, 382 U.S. 4 (1965), *vacated in part as moot*, 384 U.S. 887 (1966) (not vacated as to constitutionality of fractional voting).

280. Plan C envisaged a 65-member Senate, with each senator to have one vote. The 186-member Assembly would cast only 165 votes, because 39 members would have fractional votes ranging from 3/4 to 1/6 of a vote. Plan D, which the Legislature most favored, had an identical Senate plan and a 174 member Assembly casting 150 votes, with 47 members casting 3/4 to 1/6 of a vote each. *See id.* at 919-20; Report on Reapportionment, *supra* note 277, at 23, 24, 36-40.

281. *See* Sovern Commission Report, *supra* note 32, at 626-27, 636 n.13, 637-38 n.23 (discussing fractional voting in *Lomenzo* in terms of weighted voting and *Iannucci*).

282. If voting were the only important function of a legislator, the scheme of fractional voting in Plans D and C would probably not offend the "basic standard of equality" among districts. But legislators have numerous important functions that have little to do with voting; participation in the work of legislative committees and party caucuses debating on the floor of the legislature, discussing measures with other legislators and executive agencies, and the like.

WMCA, Inc. v. Lomenzo, 238 F. Supp. 916, 923 (S.D.N.Y.), *appeal dismissed*, 379 U.S. 986, *aff'd*, 382 U.S. 4 (1965), *vacated in part as moot*, 384 U.S. 887 (1966) (not vacated as to constitutionality of fractional voting).

283. *See id.* at 924. The Citizens' Committee believed that fractional voting did not lead to the same operational difficulties created by weighted voting—that is, committee chairmanships, committee voting and the adequacy with which a multi-vote legislator could represent his constituents. For this reason, it did not recommend weighted voting. *See* Report on Reapportionment, *supra* note 277, at 36-40. One commentator feels that fractional voting actually under-represents smaller communities because the only legislator to whom they have recourse has so little voting influence. *See* R. Dixon, *supra* note 244, at 519.

284. *See* Morris v. Board of Supervisors, 50 Misc. 2d 929, 932-33, 273 N.Y.S.2d 453, 456-57 (Sup. Ct. 1966).

ence to the multi-vote legislator, because such a legislator will be lobbied more often, and his or her opinion will have more weight, whether or not it is more soundly reasoned.[285] The court concluded that this violates basic democratic principles:

> A deliberative, democratic body should require the application of the concept of "one man, one vote" within the body itself so that a rational debate amongst the representatives may take place. All of the personal attributes and characteristics of the elected legislator, his diligence, intelligence, ability, practicality, interest and knowledge concerning pending legislation should not be frustrated by the weight of a colleague who may be able to cast 8, 10 or 12 times his vote on any given issue.[286]

The federal court in *Lomenzo*, after finding that these inequities of nonlegislative functions are crucial, held that Plans C and D violate the fourteenth amendment.[287] Its holding might have been limited to fractional voting alone, but throughout its opinion the court consistently failed to find any distinction between weighted and fractional voting. Furthermore, in a footnote to its opinion, the court stated: "We express no opinion on the use of fractional or weighted voting either as a temporary device to remedy malapportionment or in governmental organs below the state level."[288]

Clearly the *Lomenzo* court perceived its holding as applicable to both weighted and fractional voting. While this dictum does leave open the possibility of using either system at the local level, it has led at least some commentators to claim that both weighted and fractional voting are constitutionally suspect.[289] Unfortunately, the Supreme Court has never considered this issue. The State's appeal from this aspect of the *Lomenzo* decision was never resolved: In 1966, following judicial reapportionment of the legislature and agreement of all parties, the Supreme Court "vacated as moot" the judgment of the district court as to Plans C and D.[290]

The closest the Supreme Court ever came to considering the arithmetic versus the Banzhafian models of weighted voting was in its 1971 decision in *Whitcomb v. Chavis*.[291] That case concerned reapportionment of Indiana's multi-member districts.[292] Fractional voting and weighted voting were not present in the Indiana plan, nor were they considered by the Court. However, Banzhaf's statistical analysis of weighted voting was

285. *See id.* at 933, 273 N.Y.S.2d at 457.

286. *Id.*

287. WMCA, Inc. v. Lomenzo, 238 F. Supp. 916, 924 (S.D.N.Y.) *appeal dismissed*, 379 U.S. 986, *aff'd*, 382 U.S. 4 (1965), *vacated in part as moot*, 384 U.S. 887 (1966) (not vacated as to constitutionality of fractional voting).

288. *Id.* at 924 n.2.

289. *See, e.g.*, National Mun. League, Forms of Local Representation 16 (1981); Boyd, *Local Electoral Systems: Is There a Best Way?* 65 Nat'l Civic Rev. 136, 140 (1976).

290. *See* Lomenzo v. WMCA, Inc., 384 U.S. 887 (1966).

291. 403 U.S. 124 (1971).

292. *See id.* at 127.

presented by the plaintiffs to support their argument that the arithmetic model over-represents larger multi-member districts in the same way it over-represents larger districts given weighted votes.[293] The *Whitcomb* Court rejected this argument because it did "not take into account any political or other factors which might affect the actual voting power of the residents, which might include party affiliation, race, previous voting characteristics or any other factors which go into the entire political voting situation."[294]

The *Whitcomb* Court was probably correct; the Banzhaf model is not fully applicable to multi-member districting because it necessarily assumes that all representatives of a single multi-member district will invariably vote as a bloc.[295] Clearly this is unrealistic.[296]

Thus, there is still some uncertainty concerning the acceptability of Banzhafian weighted voting, particularly with respect to nonvoting legislative functions. Fortunately, this problem does not have much applicability to the Board of Estimate, whose members' functions are primarily limited to negotiation and voting. Regardless of the duties to their constituents in their other capacities, the power of Board members to vote and affect the decisions made by the Board is the primary power that their constituents expect to be exercised at the Board level.

VI. AN ALTERNATIVE MATHEMATICAL MODEL OF THE BOARD OF ESTIMATE

It is clear that Banzhafian weighted voting has been adopted by many New York courts and counties,[297] and that the federal court objections to weighted voting are probably not applicable to the Board of Estimate's primarily voting functions. Employing the Banzhafian analysis to the present Board by using the computer program developed in 1983 by the author and a research associate at Columbia University,[298] the current

293. *See id.* at 144-46 & n.23.

294. *Id.* at 146 (quoting Record at 39).

295. See *supra* notes 249-54 and accompanying text.

296. Justice Harlan noted that the multi-member districting arithmetic model is similarly theoretical and divorced from political reality, stating that the only difference between the false simplicity of the Court's model and that of Banzhaf's was that in the latter instance, the "calculations . . . cannot be done on one's fingers." 403 U.S. at 168 & n.2 (Harlan, J., dissenting). This is probably true. Because multi-member district representatives are subject to an identical constellation of political forces, they are likely to vote as a bloc on a variety of issues, if not on all. This is exemplified by the experience of Hempstead's two representatives to the Nassau County Board of Supervisors, discussed *supra* note 271.

297. See *supra* notes 262-86 and accompanying text.

298. The program was developed by the author and Mr. Ates Dagli, formerly a research associate with the Center for Social Sciences, Columbia University School of International and Public Affairs. Inspiration for the computer program designed to generate these weighted votes, which was done in Pascal on Columbia University's IBM 4341 equipment, was drawn from Johnson, *supra* note 263. It should be noted that the program was designed to use revised census figures that were not available at the time the Board of Estimate litigation began. These figures differ very slightly from the figures used

distribution of power shares is shown to be far in excess of constitutional limits.

The key advantage to this alternative analysis is its focus on the Borough Presidents' ability to affect a decision—to cast a critical vote—in light of the larger number of votes held by each city official. In other words, this analysis does not attempt in any way to distribute the city officials' votes among the boroughs. Instead it examines every one of the 2^8 or 256 voting patterns possible on the eight-member Board[299] and analyzes the number of instances a Borough President can be decisive despite the power held by city officials. Thus, it acknowledges the majority voting power of the city officials, and incorporates that fact into its calculation of the critical voting power of the Borough Presidents. When each Borough President's power is compared to the size of the underlying constituency, and the resulting distribution of power among borough officials is analyzed, there is no need to once again look at the voting power of city officials.

Table 8
Classic Critical Voting Analysis of Present Board of Estimate

Member	City Population	Votes Held	Critical Votes	Gross Power	Relative Power	Error	Deviation
Bklyn BP	31.55%	1	48	8.70%	20%	−11.55%	− 36.61%
Qns BP	26.75%	1	48	8.70%	20%	− 6.75%	− 25.23%
Man. BP	20.19%	1	48	8.70%	20%	− 0.19%	− 0.94%
Bnx BP	16.53%	1	48	8.70%	20%	+ 3.47%	+ 20.99%
S.I. BP	4.98%	1	48	8.70%	20%	+15.02%	+301.61%
Mayor	*	2	104	18.84%	*	*	*
Comptlr	*	2	104	18.84%	*	*	*
C.C. Pres.	*	2	104	18.84%	*	*	*
TOTAL	100.00%	11	552 (BP: 240)	100.02%	100.00%	*	+338.22%

Table 8 presents an analysis of the power distribution on today's

by the parties. For example, the revised figures calculate Brooklyn's share of the city population at 31.67%, rather than 31.55% as stated by the litigants, *see* Morris v. Board of Estimate, 592 F. Supp 1462, 1465 (E.D.N.Y. 1984). See *supra* note 202. The program and the printouts of the test runs are available at the Legislative Drafting Research Fund mentioned *supra* note *. For the sake of consistency, the figures presented in this Article are based on the earlier census figures used by the litigants. See *supra* notes 202-10 and accompanying text.

The research was prepared for and presented to the Sovern Commission. Sovern Commission, *supra* note 32, at 125-46 (Minutes of the Meetings of the Charter Revision Commission: Oct. 15, 1982; Nov. 4, 1982; Dec. 9 1982). The Commission, however, did not make recommendations concerning the Board of Estimate, finding that while

> the Commission was, of course, aware of the pending litigation . . . and it considered the possibility of need for changes in the election, composition or functions of the Board . . . it was the Commission's judgement that it should not deal with issues relating to the Board of Estimate while these were in litigation . . . .

Id. at 66-67.

299. See *supra* note 253 and accompanying text.

Board. Brooklyn, with 31.55% of the City's population, has one weighted vote. This allows its Borough President to cast a decisive or "critical" vote in 48 of the 552 (8.70%) opportunities in which a single member can affect the outcome of the Board's decision by changing his vote, and in 48 of the 240 (20%) opportunities in which any one of the Borough Presidents can affect the outcome. The 20% figure is important: It is a measure of Brooklyn's effectiveness relative to that of the other boroughs. The 20% figure should then be compared to Brooklyn's proportion of the overall City population, 31.55%. In an ideal apportionment of critical votes, the two figures would be identical.[300] Instead, the relative power is 11.55 percentage points lower than the population percentage. This can be expressed as a "deviation" by looking at the percentage point error as a fraction of the population percentage: 11.55/31.55, for a 36.61% deviation. The minus sign in the last column, labeled "deviation," indicates that Brooklyn is under-represented on the Board. Staten Island, with 4.98% of the population, also holds 20% of the critical votes held in sum by the Borough Presidents, for an error of 15.02 percentage points and a deviation of greater than 300% over-representation. The extreme deviation between the most under-represented borough (Brooklyn) and the most over-represented borough (Staten Island) is thus an enormous 338.22%.

This analysis, too, suffers from the influence of the mathematical model. Specifically, its calculation of the deviation suffers from the same defect as that of the model presented in the plaintiffs' complaint: It utilizes small numbers (here, percentages) rather than population figures.[301] In other words, it calculates the deviation by comparing the percentage of power a Borough President should have with the percentage of power he does have. Although this is the calculation used by the New York Court of Appeals,[302] it can be improved to bring the calculation closer to that used in traditional, simple models of deviations in single-member district plans.[303]

To do this, the total number of critical votes that are controlled by the Borough Presidents must be examined: Here, that number is 240. Each

300. "Ideally, in any weighted voting plan, it should be mathematically possible for every member of the legislative body to cast the decisive vote on legislation in the same ratio which the population of his constituency bears to the total population. Only then would a member representing 5% of the population have, at least in theory, the same voting power (5%) under a weighted voting plan as he would have in a legislative body which did not use weighted voting—e.g., as a member of a 20-member body with each member entitled to cast a single vote. This is what is meant by the one-man, one-vote principle as applied to weighted voting plans for municipal governments.

Iannucci v. Board of Supervisors, 20 N.Y.2d 244, 252, 229 N.E.2d 195, 199, 282 N.Y.S.2d 502, 508 (1967).

301. See *supra* notes 218-25 and accompanying text.

302. *See* Iannucci v. Board of Supervisors, 20 N.Y.2d 244, 252, 229 N.E.2d 195, 199, 282 N.Y.S.2d 502, 508 (1967).

303. *See* Sovern Commission Report, *supra* note 32, at 517-21.

of those critical votes should represent equipopulous groupings of citizens. As there are 7,071,030 persons in New York,[304] each critical vote should ideally represent 7,071,030/240 or 29,463 persons per critical vote. Next, the number of persons actually represented by the critical votes controlled by each Borough President should be examined. For example, Brooklyn has a population of 2,230,936,[305] and the Brooklyn Borough President holds 48 critical votes, for an average of 46,477 Brooklyn residents per critical vote held by their representative on the Board. Obviously this is an example of under-representation, the degree of which can be calculated by comparing the ideal population per critical vote with the actual population per critical vote, and expressing the difference as a percentage of the ideal population.

Actual Brooklyn Population Per Critical Vote		=	46,477
Ideal Population Per Critical Vote		=	29,463
Difference		=	17,014
$\frac{\text{Difference}}{\text{Ideal}}$	$= \frac{17{,}014}{29{,}463}$	=	57.7%

Brooklyn, therefore, is 57.7% under-represented on the present Board. Similarly, Staten Island's 352,121 residents have a Borough President who controls 48 critical votes, for an average of 7,336 persons per critical vote, or a deviation of 75.10% over-representation.[306]

Table 9
Modified Critical Vote Analysis of the Present Board of Estimate

Member	Population	Votes Held	Critical Votes	Ideal Population Per Critical Vote	Actual Population Per Critical Vote	Deviation
Bklyn BP	2,230,936	1	48	29,463	46,477	−57.75%
Qns BP	1,891,325	1	48	29,463	39,403	−33.74%
Man. BP	1,427,533	1	48	29,463	29,470	−00.94%
Bnx BP	1,169,115	1	48	29,463	24,357	+17.33%
S.I. BP	352,121	1	48	29,463	7,336	+75.10%
Mayor	7,071,030	2	104	*	*	*
Cmptlr.	7,071,030	2	104	*	*	*
C.C. Pres.	7,071,030	2	104	*	*	*
TOTAL	*	11	552 (BP: 240)	*	*	132.85%

Table 9 calculates the deviations for each borough, using this modified method. As can be seen, Brooklyn is the most under-represented bor-

304. See *supra* text accompanying note 202.
305. See *supra* text accompanying note 202.
306. 29,463−7,336 = 22,127.
22,127/29,463= approx. 75.10%.

ough, and Staten Island the most over-represented. The total deviation of the present Board is thus 132.85%.

It may not be intuitively obvious why two mathematical models employing the same perceptions of political reality—that city-wide officials' votes cannot be arbitrarily distributed among Borough Presidents and that power on the Board is best measured by one's ability to cast a decisive or "critical" vote—can result in different mathematical degrees of malapportionment. It is the result of the same problem that crops up in plaintiffs' analysis as first presented in their complaint: By focusing on small numbers, one can inadvertently exacerbate the deviation.[307]

In fact, both forms of calculation are aimed at answering the same question: Does every person have an equally effective voice? In other words, in a city of 7,071,030 persons, each person should control 1/7,071,030 of all the critical votes available to the five Borough Presidents. To this extent, both the classic and the modified models are identical. The only difference between the two is the manner in which one calculates the degree to which present voting schemes differ from this ideal. The classic method states that Brooklyn's 2,230,936 residents represent 31.55% of the City population and should have 31.55% of the critical votes held by Borough Presidents, rather than the mere 20% they now have. This is the same as saying that there ought to be 29,463 Brooklyn residents per critical vote held by the Borough President, rather than the 46,477 residents per vote at present. The former statement suggests that the Brooklyn Borough President ought to have more critical votes. The latter statement suggests that either the Borough President ought to have more critical votes for his constituents or that the size of his constituency should be reduced. As it is not possible to depopulate a borough, both statements invariably suggest that the Borough President needs more critical votes on the Board.

Thus, the only difference in the models is in their comparison of ideal to actual power. The classic model states that Brooklyn's 20% power share is 11.55 percentage points lower than its rightful 31.55% share. By dividing 11.55 by 31.55, one concludes that Brooklyn is 36.6% underrepresented.

But why divide the percentage difference by the ideal if these percentages are just a shorthand for expressing population differences? The real concern is the number of persons represented by each critical vote. Stating that Brooklyn has 31.55% of the City's population simply means that Brooklyn has 2,230,936 of the total 7,071,031 City residents; stating that it has a 20% relative power share simply means that it controls 48 of the 240 critical votes held by Borough Presidents. By directly examining the actual population per critical vote as compared to the ideal population per critical vote, three goals are achieved: (1) examination of the data directly, rather than through possibly misleading shorthand representa-

307. See *supra* notes 218-25 and accompanying text.

tions, such as percentages; (2) a framing of the analysis in the traditional terms used by courts examining single-member district plans—that is, by population per seat on the legislature;[308] and (3) an elimination of the exacerbation of deviation figures caused by using small numbers—percentage points—rather than large numbers—population figures.

Another advantage to this modified critical vote analysis is that it lends itself to modeling the political assumptions embedded in plaintiffs' analysis of the Board[309] in *Morris*. Specifically, if one must accept the premise that city-wide officials' power can be mathematically distributed among the Borough Presidents because these city-wide officials represent the entire city and so afford representation to each city resident in addition to his or her representation via the Borough President, one can still use the modified critical vote analysis to demonstrate the Board's malapportionment. Although the author does not favor such a political assumption, an advantage of this mathematical model is that it can be adapted to varying models of political power sharing on the Board.

As shown in Table 8, the present voting structure on the Board results in 552 critical votes, of which 312 are controlled by city officials. If one distributes those 312 critical votes among the Borough Presidents in proportion to the populations they represent, then Brooklyn would be attributed 98 critical votes in addition to the 48 its Borough President controls, Queens would be attributed 83 of the city-wide officials' critical votes, and so forth. If there are 552 critical votes in total, and 7,071,030 city residents, then each critical vote should represent 12,810 persons. However, if one compares the number of critical votes controlled by each borough through its Borough President and the critical votes attributed to it from those of the city-wide officials, one again finds that some boroughs are substantially over- or under-represented.

308. See *supra* notes 202-06 and accompanying text. Note, too, that this analysis focuses on relative power among the Borough Presidents, thus eliminating *direct* consideration of the city-wide officials' power. This is similar to the district court's decision to focus on apportionment of power among the borough presidents without regard to the "at-large" city-wide officials. *See* Morris v. Board of Estimate, 592 F. Supp. 1462, 1471, 1474 (E.D.N.Y. 1984). See *supra* text accompanying notes 226-39. However, this model improves upon the district court's analysis by *indirectly* considering the effect of the city-wide officials' votes, because the model calculates all critical votes including the number each Borough President controls despite the superior voting power of the Mayor, Comptroller and City Council President.

309. See Plaintiff's Complaint, *supra* note 204, at ¶¶ 12-14.

Table 10
Modified Critical Vote Analysis of Present Board/City-wide Votes Attributed to Each Borough

Borough	Pop.	Attributed City-wide Critical Votes	Borough President Critical Votes	Total Critical Votes	Actual Pop. Per Critical Vote	Ideal Pop. Per Critical Vote	Deviation
Bklyn	2,230,936	98	48	146	15,280	12,810	−19.28%
Qns	1,891,325	83	48	131	14,438	12,810	−12.71%
Man.	1,427,533	63	48	111	12,861	12,810	−00.40%
Bnx	1,169,115	52	48	100	11,691	12,810	+ 8.74%
S.I.	352,121	16	48	64	5,501	12,810	+57.05%
TOTAL	7,071,030	312	48	552	*	*	76.33%

Table 10 demonstrates that even if one arbitrarily attributes citywide votes to the various boroughs,[310] thus ameliorating some of the effects of the malapportionment of Borough President votes, the Board of Estimate's voting structure still features a very sizable deviation of over 76%.

VII. A Proposal for a New, Weighted Voting Structure for the Board of Estimate

Whether one uses classic critical vote analysis to find a deviation of 338%, modified critical vote analysis to find a deviation of 133%, or modified critical vote analysis with attribution of city-wide critical votes to the boroughs to find a deviation of 76%, the deviation of the present Board is almost certainly too large to be justified. This is so regardless of the strength of the interest to preserve counties—which in New York City coincide with the boroughs—as the bases of political representation on the Board.[311] However, lower deviations may be obtained by using weighted votes to correct the representational disparities. Limiting the possibilities to whole number weights of less than ten and to a city official bloc retaining a bare majority, a mere 26% extreme deviation can be achieved if the weighted votes are: Brooklyn 6; Queens 5; Manhattan 4; Bronx 3; Staten Island 1.[312] Table 11 illustrates such a Board.

310. This is not politically realistic, however. See *supra* text accompanying note 225.

311. For a discussion of the state interest that may justify deviations, see *infra* text accompanying notes 320-76.

312. The optimal weights were generated by testing 1500 permutations of weighted votes, using the following ranges: Brooklyn 4-8 votes; Queens 4-8 votes; Manhattan 3-7 votes; Bronx 3-6; Staten Island 1-3 votes. There were several sets of weighted votes that generated the same minimum extreme deviation. For example, weighted votes of Brooklyn-8, Queens-7, Manhattan-5, Bronx-4 and Staten Island-1 will result in the same distribution of critical votes and relative power as the set 6, 5, 4, 3, 1 used in the text. The latter set was chosen for its close approximation of the votes that would be generated by using an arithmetic model. The result is a set of votes that is both intuitively and mathematically fair.

It should be noted that if weighted votes are allowed to range as high as 70 or 80 votes per person, it is possible to achieve an even lower deviation. Conversation of author with Steven Brams, Professor of Political Science, New York University (Feb. 12, 1985).

Table 11
Classic Critical Vote Analysis of Alternative Board of Estimate

Member	City Population	Votes Held	Critical Votes	Gross Power	Relative Power	Error	Deviation
Bklyn BP	31.55%	6	84	15.56%	33.33%	+1.78	+ 5.64%
Qns BP	26.75%	5	60	11.11%	23.81%	−2.94	−10.99%
Man. BP	20.19%	4	48	8.89%	19.05%	−1.14	− 5.65%
Bnx BP	16.53%	3	48	8.89%	19.05%	+2.52	+15.25%
S.I. BP	4.98%	1	12	2.22%	4.76%	−0.22	− 4.42%
Mayor	*	7	96	17.78%	*	*	*
Comptlr	*	7	96	17.78%	*	*	*
C.C. Pres.	*	7	96	17.78%	*	*	*
TOTAL	100.00%	40	540	100.01%	100.00%	*	26.24%

This illustrates the power distribution on the Board that would result if the larger boroughs each received a greater number of votes. Staten Island's Borough President, representing 4.98% of the city's population, could cast a decisive vote in 12 of the 252[313] opportunities in which a Borough President may affect the outcome of the Board's decision. This would not disenfranchise Staten Island, but it would limit its effectiveness on the Board to a figure much more in proportion to its size. Similarly, Brooklyn and Queens would gain much more powerful voices on the Board. This prevents the dilution of the voting power of citizens in the larger boroughs. These weighted votes can be readjusted after each census to reflect the changing populations of the boroughs.

The modified critical vote analysis, illustrated in Table 12, results in a similar finding for the extreme deviation of such a Board of Estimate. The similarity results because this weighted-voting Board is very close to being perfectly apportioned, which eliminates some of the "small-number" effects embedded in the classic analysis.[314]

313. As seen in Table 11, the total of 252 is the aggregate number of critical votes of the Borough Presidents.,

314. See *supra* notes 218-25 and accompanying text.

Table 12
Modified Critical Vote Analysis of Alternative Board of Estimate

Member	Population	Votes Held	Critical Votes	Ideal Pop. Per Critical Vote	Actual Pop. Per Critical Vote	Deviation
Bklyn BP	2,230,936	6	84	28,060	26,559	+ 5.40%
Qns BP	1,891,325	5	60	28,060	31,522	−12.34%
Man. BP	1,427,533	4	48	28,060	29,740	− 5.99%
Bnx BP	1,169,115	3	48	28,060	24,357	+13.20%
S.I. BP	352,121	1	12	28,060	29,343	− 4.57%
Mayor	7,071,030	7	96	*	*	*
Comptlr	7,071,030	7	96	*	*	*
C.C. Pres.	7,071,030	7	96	*	*	*
TOTAL	*	40	540 (BP: 252)	*	*	25.54%

Thus, modified critical vote analysis demonstrates that the total deviation on this alternative Board, which uses weighted voting, is reduced to 25.54%.

It is again useful to demonstrate the effect of attributing city-wide officials' power to the various boroughs in proportion to their populations. Such an attribution is by definition perfectly apportioned, and thus ameliorates the effects of any malapportionment in weighted votes of 6, 5, 4, 3 and 1.

Table 13
Modified Critical Vote Analysis of Alternative Board with City-wide Votes Attributed to Each Borough

Borough	Population	Attributed City-wide Critical Votes	Borough President Borough Vote	Total Critical Votes	Actual Population Per Critical Vote	Ideal Pop. Per Critical Vote	Deviation
Bklyn	2,230,936	91	84	175	12,748	13,095	+2.65%
Qns	1,891,325	77	60	137	13,805	13,095	−5.42%
Man.	1,427,533	58	48	106	13,467	13,095	−2.84%
Bnx	1,169,115	48	48	96	12,178	13,095	+7.00%
S.I.	352,121	14	12	26	13,543	13,095	−3.42%
TOTAL	7,071,030	288	252	540	*	*	12.42%

As can be seen from Table 13, weighted votes 6, 5, 4, 3, and 1, combined with the power of city-wide officials to the various boroughs, results in a finding of a mere 12.42% deviation. However, as noted earlier, this is a politically unrealistic mathematical model of the actual functioning of the Board.[315] While the voting pattern proposed in Tables 11 and 12 would result in a more substantial deviation of 26%, it is the voting structure that comes closest to the perfect apportionment one can

315. See *supra* text accompanying note 225.

achieve using either the Banzhafian or the arithmetic model for weighted voting, if the weighted votes are limited to less than ten.

Although it is generally true that courts focus on the extreme deviation present in majoritarian voting, it is still instructive to analyze the power distribution under less frequently used voting conventions.[316] Tables 14, 15 and 16 present classic critical vote analyses of power shares on the Board when voting is by: (1) simple majority without the Mayor;[317] (2) two-thirds majority without the Mayor;[318] and (3) three-fourths majority, respectively.[319]

Table 14
Simple Majority Without the Mayor

Member	City Population	Votes Held	Critical Votes	Gross Power	Relative Power	Error	Deviation
Bklyn BP	31.55%	6	48	19.35%	35.29%	3.74	+11.85%
Qns BP	26.75%	5	32	12.90%	23.53%	−3.22	−12.04%
Man. BP	20.19%	4	32	12.90%	23.53%	3.34	+16.54%
Bnx BP	16.53%	3	16	6.45%	11.76%	−4.77	−29.03%
S.I. BP	4.98%	1	8	3.23%	5.88%	0.90	+18.07%
Mayor	*	0	0	0.00%	*	*	*
Comptlr	*	7	56	22.58%	*	*	*
C.C. Pres.	*	7	56	22.58%	*	*	*
TOTAL	100.00%	33	248	99.99%	99.99%	*	47.10%

Table 14 demonstrates that when a simple majority is formed without the Mayor, as, for example, on budgetary approval votes, Staten Island would be almost 20% more powerful than its population merits. Conversely, the Bronx would be almost 30% less powerful than its population deserves. Modified critical vote analysis yields an extreme deviation of 55.88%, with the Bronx 40.54% under-represented and Staten Island 15.34% over-represented.

316. *See* Johnson, *supra* note 263 (discussing less frequently used voting conventions). For examples of the application of the one-person, one-vote principle to a supermajority voting situation, see Pokorny v. Board of Supervisors, 59 Misc. 2d 929, 931-34, 302 N.Y.S.2d 358, 361-64 (Sup. Ct. 1969), and Shilbury v. Board of Supervisors, 54 Misc. 2d 979, 979-83, 284 N.Y.S.2d 124, 126-30 (Sup. Ct. 1967).

317. *See* New York City Charter ch. 6, § 120(d), ch. 9, § 222(c) (1976) (expense and capital budget approval).

318. *See id.* ch. 6, § 121(b), ch. 9, § 223(c) (1976 & Supp. 1984-85) (overruling mayor's budget veto).

319. *See id.* ch. 8, § 200(2) (1976 & Supp. 1984-85) (zoning regulation changes).

Table 15
Two-Thirds Majority Without the Mayor

Member	City Population	Votes Held	Critical Votes	Gross Power	Relative Power	Error	Deviation
Bklyn BP	31.55%	6	30	17.65%	31.91%	0.36	+ 1.14%
Qns BP	26.75%	5	26	15.29%	27.66%	0.91	+ 3.40%
Man. BP	20.19%	4	22	12.94%	23.40%	3.21	+15.90%
Bnx BP	16.53%	3	10	5.88%	10.64%	−5.89	−35.63%
S.I. BP	4.98%	1	6	3.53%	6.38%	1.40	+28.11%
Mayor	*	0	0	0.00%	*	*	*
Comptlr	*	7	38	22.35%	*	*	*
C.C. Pres.	*	7	38	22.35%	*	*	*
TOTAL	100.00%	33	170	99.99%	99.99%	*	63.74%

Table 15 demonstrates that the Bronx will be under-represented in situations requiring a two-thirds majority without the Mayor, such as when the Board votes to consider overruling a mayoral veto of the budget. Staten Island, however, will be almost 30% over-represented on such votes. Modified critical vote analysis yields an extreme deviation of 77.4%, with Staten Island 21.98% over-represented and the Bronx 55.42% under-represented.

Table 16
Three-Fourths Majority Vote

Member	City Population	Votes Held	Critical Votes	Gross Power	Rel. Power	Error	Deviation
Bklyn BP	31.55%	6	32	15.38%	32.00%	+0.45	+ 1.43%
Qns BP	26.75%	5	24	11.54%	24.00%	−2.75	−10.28%
Man. BP	20.19%	4	24	11.54%	24.00%	+3.81	+18.87%
Bnx BP	16.53%	3	16	7.69%	16.00%	−0.53	− 3.21%
S.I. BP	4.98%	1	4	1.92%	4.00%	−0.98	−19.68%
Mayor	*	7	36	17.31%	*	*	*
Comptlr	*	7	36	17.31%	*	*	*
C.C. Pres.	*	7	36	17.31%	*	*	*
TOTAL	100.00%	40	208	100.00%	100.00%	*	38.55%

Table 16 demonstrates that Manhattan will be over-represented and that Staten Island will be under-represented on the three-fourths majority votes used to overrule City Planning Commission decisions concerning zoning regulations. Modified critical voting yields an extreme deviation of 40.37%, with Staten Island 24.49% under-represented and Manhattan 15.88% over-represented.

Although these tables demonstrate some very large deviations in the weighted-voting structure for the Board, they also demonstrate that these deviations do not consistently work to the disadvantage of a particular borough. Further, it is to the deviations presented by the more commonly used, simple-majority voting scheme that the courts generally look when assessing compliance with one-person, one-vote requirements.

In this case, that deviation is roughly 26%. It remains to be considered whether such a deviation can pass constitutional muster.

VIII. JUSTIFYING DEPARTURES BY THE BOARD OF ESTIMATE FROM STRICT ADHERENCE TO ONE-PERSON, ONE-VOTE REQUIREMENTS

A. *In General*

In *Reynolds v. Sims*[320] the Supreme Court stated that "[p]opulation is . . . the starting point for consideration and the controlling criterion for judgment in legislative apportionment controversies."[321] Nevertheless, from its early decision in *Reynolds* to its most recent pronouncement in *Brown v. Thomson*,[322] the Supreme Court has maintained that departures from strict equality of district size for representation at the state or local level may be tolerated if based on "legitimate considerations incident to the effectuation of a rational state policy"[323] and on an "honest and good faith effort to construct districts . . . as nearly of equal population as is practicable."[324] It has been emphasized that the one-person, one-vote rule is not intended to act as a "[roadblock] in the path of innovation, experiment, and development among units of local government."[325] The Court has recognized that local needs and local pressures may vary, and that "[a]n unrealistic overemphasis on raw population figures, a mere nose count in the districts, may submerge these other considerations and itself furnish a ready tool for ignoring factors that in day-to-day operation are important to an acceptable representation and apportionment arrangement."[326]

Thus, any state or local apportionment that varies from strict population equality is subject to two inquiries: first, whether the plan may "reasonably be said to advance [a] rational state policy,"[327] and second,

320. 377 U.S. 533 (1964).

321. *Id.* at 567.

322. 103 S. Ct. 2690 (1983).

323. Reynolds v. Sims, 377 U.S. 533, 579 (1964); *see* Brown v. Thomson, 103 S. Ct. 2690, 2696 (1983); Gaffney v. Cummings, 412 U.S. 735, 742 (1973); Mahan v. Howell, 410 U.S. 315, 325, *modified on other grounds*, 411 U.S. 922 (1973); Abate v. Mundt, 403 U.S. 182, 185 (1971); Avery v. Midland County, 390 U.S. 474, 484-85 (1968); Swann v. Adams, 385 U.S. 440, 444 (1967); Roman v. Sincock, 377 U.S. 695, 710 (1964); Davis v. Mann, 377 U.S. 678, 692 (1964); *cf.* Chapman v. Meier, 420 U.S. 1, 25 (1975) (proferred state interest considered inadequate); Sailors v. Board of Educ., 387 U.S. 105, 110-11 (1967) (state allowed to experiment in different electoral procedures).

324. Reynolds v. Sims, 377 U.S. 533, 577 (1964); *see* Brown v. Thomson, 103 S. Ct. 2690, 2695-96 (1983); Gaffney v. Cummings, 412 U.S. 735, 748-49 (1973); Mahan v. Howell, 410 U.S. 315, 324-25, *modified on other grounds*, 411 U.S. 922 (1973). *But cf.* Swann v. Adams, 385 U.S. 440, 445 (1967) (good faith by itself is insufficient).

325. Avery v. Midland County, 390 U.S. 474, 485 (1968); *see* Sailors v. Board of Educ., 387 U.S. 105, 109 (1967).

326. Gaffney v. Cummings, 412 U.S. 735, 749 (1973).

327. Mahan v. Howell, 410 U.S. 315, 328, *modified on other grounds*, 411 U.S. 922 (1973).

"whether the population disparities among the districts that have resulted from the pursuit of this plan exceed constitutional limits."[328]

The Supreme Court has had relatively little opportunity to address the first inquiry—to define a "rational state policy." However, one policy that the Court has acknowledged since its early decision in *Reynolds* is that "[a] State may legitimately desire to maintain the integrity of various political subdivisions . . . ."[329] The Court explained its reasoning:

> Several factors make more than insubstantial [the] claims that a State can rationally consider according political subdivisions some independent representation . . . . Local governmental entities are frequently charged with various responsibilities incident to the operation of state government. In many states much of the legislature's activity involves the enactment of so-called local legislation, directed only to the concerns of particular political subdivisions. And a state may legitimately desire to construct districts along political subdivision lines to deter the possibilities of gerrymandering.[330]

The Court has applied this reasoning in several subsequent cases, and has used it to test the validity of State justifications for deviations.[331] Thus, in *Swann v. Adams*,[332] the Court disallowed a 26% deviation in the State Senate and a 34% deviation in the State House "for the failure of the State to present or the District Court to articulate acceptable reasons . . . ."[333] In contrast, the Court upheld plans in *Abate v. Mundt*[334] and *Mahan v. Howell*.[335] The *Mahan* plan featured a 16% extreme deviation among House districts, but the state legislature had the specific power to enact local legislation affecting a particular subdivision, and the Court reasoned that such power over the subdivision justified independent representation along political subdivision boundaries.[336]

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328. *Id.*

329. Reynolds v. Sims, 377 U.S. 533, 578 (1964); *see* Mahan v. Howell, 410 U.S. 315, 321-22, *modified on other grounds*, 411 U.S. 922 (1973); Abate v. Mundt, 403 U.S. 182, 185 (1971); Swann v. Adams, 385 U.S. 440, 444 (1967); Davis v. Mann, 377 U.S. 678, 686 (1964).

330. Reynolds v. Sims, 377 U.S. 533, 580-81 (1964).

331. *See* Mahan v. Howell, 410 U.S. 315, 321-22, *modified on other grounds*, 411 U.S. 922 (1973); Abate v. Mundt, 403 U.S. 182, 185 (1971); Swann v. Adams, 385 U.S. 440, 444 (1967); Davis v. Mann, 377 U.S. 678, 686-87 & n.2 (1964).

332. 385 U.S. 440 (1967).

333. *Id.* at 443.

334. *See* 403 U.S. 182, 185 (1971) ("[A] desire to preserve the integrity of political subdivisions may justify an apportionment plan which departs from numerical equality.")

335. 410 U.S. 315, *modified on other grounds*, 411 U.S. 922 (1973). The Court stated:

> We are not prepared to say that the decision of the people of Virginia to grant the General Assembly the power to enact local legislation dealing with the political subdivisions is irrational. And if that be so, the decision of the General Assembly to provide representation to subdivisions *qua* subdivisions in order to implement that constitutional power is likewise valid when measured against the Equal Protection Clause of the Fourteenth Amendment.

Id. at 325-26; *see* Davis v. Mann, 377 U.S. 678, 686 (1964) ("the state has a tradition of respecting the integrity of the boundaries of cities and counties in drawing district lines").

336. *See* 410 U.S. at 327-28.

The use of politicial subdivisions to justify large deviations recently reached its most dramatic application in *Brown v. Thomson*,[337] in which the Court upheld Wyoming's policy of granting each county at least one representative.[338] Wyoming's counties, which perform numerous and significant administrative functions, were characterized by the district court as "a major form of government in the State."[339] While the procedural stance of the case rendered the decision primarily applicable to the marginal increase in the deviation created when a single sparsely populated county was granted a legislative seat, the state plan as a whole featured a huge 89% deviation.[340]

Other justifications for divergence from one-person, one-vote requirements have been cited, such as "the maintenance of compactness and contiguity in legislative districts or the recognition of natural or historical boundary lines,"[341] especially when applied "free from any taint of

337. 103 S. Ct. 2690 (1983).

338. *Id.* at 2699-700.

339. Brown v. Thomson, 536 F. Supp. 780, 784 (D. Wyo. 1982), *aff'd*, 103 S. Ct. 2690 (1983). The policy in *Brown* was supported by a statement of legislative purpose, *see* 103 S. Ct. at 2694 n.4 (quoting 1981 Wyo. Sess. Laws ch. 76, § 3), and by a finding of the lower court that the various counties had "different and distinctive" needs, *id.* at 2695 n.5 (quoting Brown v. Thomson, 536 F. Supp. at 784) and that

> the counties are the primary administrative agencies of the State government. It has historically been the policy of the State that counties remain in this position.
>
> The taxing powers of counties are limited by the Constitution and some State statutes. Supplemental monies are distributed to the counties in accordance with appropriations designated by the State Legislature. It comes as no surprise that the financial requirements of each county are different. Without representation of their own in the State House of Representatives, the people of Niobrara County [a sparsely settled county] could well be forgotten.

Id. (quoting Brown v. Thomson, 536 F. Supp. at 784). *But see* Chapman v. Meier, 420 U.S. 1, 25 (1975) ("It is far from apparent that North Dakota policy currently requires or favors strict adherence to political lines."); Kilgarlin v. Hill, 386 U.S. 120, 124 (1967) (per curiam) (no demonstration of "why or how respect for the integrity of county lines required the particular deviations").

340. In its narrow terms, the *Brown* case concerns only the differential disparity caused by the county's one representative:

> Appellants deliberately have limited their challenge to the alleged dilution of their voting power resulting from the one representative given to Niobrara County. The issue therefore is not whether a 16% average deviation and an 89% maximum deviation, considering the state apportionment plan as a whole, are constitutionally permissible. Rather, the issue is whether Wyoming's policy of preserving county boundaries justifies the additional deviations from population equality resulting from the provision of representation to Niobrara County.

Brown v. Thomson, 103 S. Ct. 2690, 2698 (1983) (citations omitted).

341. Swann v. Adams, 385 U.S. 440, 444 (1967). With respect to congressional districting the Court has stated:

> Any number of consistently applied legislative policies might justify some variance, including, for instance, making districts compact, respecting municipal boundaries, preserving the cores of prior districts, and avoiding contests between incumbent Representatives. As long as the criteria are nondiscriminatory . . . these are all legitimate objectives that . . . could justify minor population deviations.

Karcher v. Daggett, 103 S. Ct. 2653, 2663 (1983).

arbitrariness or discrimination."[342] It should be noted that one of the key factors in the *Brown* decision was the proof that respect for political boundaries had been an even-handed policy of the state for many decades.[343]

B. *The Board of Estimate Weighted Voting Proposal*

New York City's Board of Estimate exhibits many, but not all, of the characteristics of local government that the Supreme Court has singled out for special protection from the stress caused by searching for perfect population equality. While boroughs do not serve as a major form of government, they do have a significant role, through the borough boards and the local community boards, in land use planning decisions.[344] Because planning is one of the Board of Estimate's most significant activities,[345] the Borough President can serve as a conduit for rapid transfer of information between the borough board and the Board of Estimate. Land use planning decisions can have a profound effect upon a particular locale as well as upon the entire city,[346] and the Board of Estimate has been the principal body in which such potentially competing interests have been "deliberately institutionalized."[347] Furthermore, with New York City's uniquely high real estate values,[348] land use planning is one of the most politically charged functions of municipal government.

In addition, there have been numerous opportunities for structural change during the century-long history of the Board of Estimate.[349] With the exception of minor changes in voting patterns, respect for borough integrity and representation has been constant, flowing from the original

342. Roman v. Sincock, 377 U.S. 695, 710 (1964).

343. *See* Brown v. Thomson, 103 S. Ct. 2690, 2696 (1983) ("The State's policy of preserving county boundaries is based on the state Constitution, has been followed for decades, and has been applied consistently throughout the State."); *see also* Mahan v. Howell, 410 U.S. 315, 328 (state "consistently applied policy to have at least one house of its bicameral legislature responsive to voters of political subdivisions as such"), *modified on other grounds*, 411 U.S. 922 (1973); Abate v. Mundt, 403 U.S. 182, 186-87 (1971) (deviation allowed due to long history in New York of maintaining integrity of local units of government within each county).

344. See *supra* text accompanying notes 107-22.

345. See *supra* text accompanying note 47.

346. Witness, for example, the transformation in the local economy of Staten Island and the financial climate of the entire city as a result of the recent decision to build a billion dollar teleport satellite communications center and office park. *See* New York State Sen. Fin. Comm., Remedies of a Proud Outcast: The Legal Probability and Implications of Restructuring the Government and Boundaries of the City of New York 21 (1983); *see also id.* at 14 (the effects on the city as a whole of the land use decision regarding the Fresh Kills landfill in Staten Island).

347. Kramarsky Report, *supra* note 6, at 15, *reprinted in* Joint App., *supra* note 6, at A-174.

348. For examples of the relative values of real estate in New York City, compare the values of New York City properties with the values of properties elsewhere. For listings of both, see, for example, N.Y. Times, Mar. 10, 1985, § 8 (real estate); *id.* Mar. 3, 1985, § 8 (real estate).

349. See *supra* text accompanying notes 28-140.

position set forth by the drafters of the 1901 Charter, who stated that the power of the Board "to determine the amount of money to be expended out of the treasury of the city in public work in each borough make[s] it proper that the boroughs should have a direct representation on the Board."[350] This continuing policy of independent borough representation has been applied consistently and without "any taint of arbitrariness."[351] While many of the real variations in the character of the borough populations[352] have now been replaced by variation in the characters of the neighborhoods within the boroughs,[353] there is still an emotional and historical identification with one's borough and with its history as an entity

350. Brief for Intervenor-Defendant Robert A. Straniere at 12-13, Morris v. Board of Estimate, 592 F. Supp. 1462 (E.D.N.Y. 1984) (quoting Report of the Charter Revision Comm'n, New York Assembly Documents, Vol. 12, No. 40, at xxv (1901)).

351. Roman v. Sincock, 377 U.S. 695, 710 (1964). It may be argued that the at-large elections for Borough President are an invidious form of discrimination against the City's minority population; at-large elections have been singled out for special attention by the Department of Justice. *See* Sovern Commission Report, *supra* note 32, at 529-56. It is true that Staten Island, which is the most over-represented borough on the Board, also has the smallest minority population. *See id.* at 433 (10.96%). However the Bronx, which is also over-represented, is 65.81% Black, Hispanic and Asian. *Id.* While it may be argued that the recent amendments to the Voting Rights Act Amendments of 1982, Pub. L. No. 97-205, 96 Stat. 131 (codified at 42 U.S.C. §§ 1973, 1973b, 1973aa-1a, 1973aa-6 (1982)), which abolished the "intent to discriminate" test set forth in City of Mobile v. Bolden, 446 U.S. 55, 62 (1980), *see* 1982 U.S. Code Cong. & Ad. News 177, 179, 192-93, 196-221, would now allow challenges to the Board based upon the dilution of minority votes due to at-large election of the Borough President, the rapid changes in the City's minority population may make the issue moot. In fact, this issue had not even been raised by any of the parties to the Board of Estimate litigation until the New York Civil Liberties Union filed its brief before the Eastern District of New York on remand from the Second Circuit decision. The brief stated:

> [T]he Board has seldom included minority members. . . . Minority persons who have served on the Board have found themselves beseiged [sic] by minority constituents of other borough presidents who are unable to obtain effective advocacy for their neighborhood concerns from their own representatives. Moreover, the structure of the Board makes it unlikely that low-income, minority communities will generally receive fair representation, since borough presidents will continue to owe primary allegiance to the white, middle class constituencies that nominate them, fund their campaigns, and provide their margins of elections.

Plaintiffs' Memorandum of Law in Support of Their Motion for Summary Judgment on Remand from the Second Circuit at 84, Morris v. Board of Estimate, 592 F. Supp. 1462 (E.D.N.Y. 1984) [hereinafter cited as Plaintiffs' Memorandum].

352. "The city is much too big to be governed as a single centralized unit. It is also too varied in its population and its occupations. It is also too old in the traditions of local independence." Kramarsky Report, *supra* note 6, at 15 (quoting Walter Lippmann, New York Herald Tribune, April 28, 1936), *reprinted in* Joint App., *supra* note 6, at A-174.

353. The New York Civil Liberties Union's Memorandum includes affidavits of several public officials and comparisons of capital budget expenditures in various community districts throughout the city. These are intended to demonstrate that "people living in Brownsville in Brooklyn are more likely to find a greater community of interest with people in the South Bronx than with the residents of Brooklyn Heights . . . ." Plaintiffs' Memorandum, *supra* note 351, at 48 (quoting City Council Fin. Comm. Chairman Edward Sadowsky). However, even plaintiffs concede that Staten Island has remained a rather homogeneous community marked by unique interests. *Id.* at 47.

separate and apart from the consolidated metropolitan area.[354]

Finally, the Borough President's office continues to function as a more accessible place to which citizens can go when seeking assistance for specific projects. This role was acknowledged in the 1975 study of the history and function of the Board:

> The ability of the community leaders to bring their problems directly to the Borough Presidents contributes to citizen participation in government. It is unique to the office that a Borough President, as a member of the Board of Estimate, is able to approach the solution of local conflicts with an intimate knowledge of city-wide problems, policies and programs. Bringing the attributes of chief executive of his borough to the deliberations of the Board is a vital balancing force.[355]

These insights are reflected in the testimony heard at the 1983 public hearings held in each borough by the Sovern Commission when it sought public opinion on a number of proposed charter amendments.[356] Representatives of city, borough and community organizations testified to the relative accessibility of the Borough President's office and to the usefulness of its direct line to City government. For example, the president of a local community school board testified that it has often sought the Borough President's help

> in school affairs, [and] in community affairs as well. We view the position of the Borough President as a liaison between the residents of Queens and the government, through his association with the city government and his insight into the needs of the borough, which vary, not only borough-wise but from community to community.[357]

Other testimony from the Executive Director of the Queensboro Public Library revealed that there are public services organized along borough lines that seek and receive special help from the Borough President's dual role.[358] She characterized her organization as

> a very lonely library system. It is one of three in New York City and . . . we have a real identity problem.
>
> Our needs are primarily financial. To achieve these needs, we have to hurdle OMB [Office of Management and Budget] at the office of the Mayor.
>
> . . . .

354. Interesting to note here is the fact that many subway and elevated lines in the boroughs, such as the BMT lines in Brooklyn, have directional signs saying "To the City" to indicate a line heading into Manhattan. For an example, see the Newkirk Avenue station of the BMT as shown in the film "Next Stop, Greenwich Village."

355. Kramarsky Report, *supra* note 6, at 115, *reprinted in* Joint App., *supra* note 6, at A-275.

356. *See* Sovern Commission Report, *supra* note 32, at 75-77.

357. Transcripts of the New York City Charter Revision Comm'n Pub. Hearings, Queensborough Hall, at 58 (Jan. 21, 1983) (statement of Ms. Arlene Fleishman, President of Community School Bd. 25 in Queens) (available in files of *Fordham Law Review*).

358. *See id.* at 82-83 (statement of Ms. Constance Cooke, Executive Director, Queensboro Public Library).

> In the city government, which is historically Manhattan-oriented, libraries and other services in Queens need a champion for their fair share of funds.[359]

In her testimony, the Executive Director stated that the Borough President "has become a voice for the Queensboro Public Library, both here in Queens and at the Board of Estimate."[360] Similarly, the President of La Guardia Community College of the City University testified in favor of the Queens Borough President, who was loyal to campuses located within his borough, having used his Board of Estimate position to obtain building funds.[361]

Nevertheless, regardless of how worthy the policy to maintain a political subdivision's identity,

> even the consistent and nondiscriminatory application of a legitimate state policy cannot justify substantial population deviations throughout the State where the effect would be to eviscerate the one-person, one-vote principle. In short . . . there is clearly some outer limit to the magnitude of the deviation that is constitutionally permissible even in the face of the strongest justifications.[362]

The difficult task then becomes to identify that outer limit.

In contrast to congressional districting, which is subject to a stringent one-person, one-vote requirement based on article I of the Constitution[363] and which has led to numerous decisions requiring near perfect equality of district populations,[364] fourteenth amendment-based one-person, one-vote requirements for elections of state and local officials have been more lenient: In fact, it has been held that deviations of less than 10% are de minimis and do not establish a prima facie constitutional violation absent a showing of intentional discrimination.[365]

When deviations exceed the 10% mark, however, consideration must be given to "the character as well as the degree"[366] of the malapportionment. While it is true that "[t]here must be flexibility in assessing the size of the deviation against the importance, consistency, and neutrality of the

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359. *Id.*

360. *Id.* at 82.

361. *See id.* at 70 (statement of Dr. Joseph Shenker, President of La Guardia Community College of the City University).

362. Brown v. Thomson, 103 S. Ct. 2690, 2699-700 (1983) (O'Connor, J., concurring).

363. Representatives to Congress are to be chosen "by the People of the several States." U.S. Const. art. 1, § 2; *see* Wesberry v. Sanders, 376 U.S. 1, 13 (1964).

364. *See, e.g.*, Karcher v. Daggett, 103 S. Ct. 2653, 2665 (1983) (0.6984% deviation impermissible because plan was not a good faith effort to achieve population equality using best available data); White v. Weiser, 412 U.S. 783, 790 (1973) (districts not as mathematically equal as possible); Wells v. Rockefeller, 394 U.S. 542, 544 (1969) (failure to meet standard of equal representation for equal numbers of people as nearly as practicable); Wesberry v. Sanders, 376 U.S. 1, 7-8 (1964) (same).

365. Connor v. Finch, 431 U.S. 407, 418 (1977); *see* White v. Regester, 412 U.S. 755, 761-64 (1973) (9.9% is de minimis); Gaffney v. Cummings, 412 U.S. 735, 737, 740-41 (1973) (7.83% is de minimis).

366. Reynolds v. Sims, 377 U.S. 533, 581 (1964).

state policies"[367] and that "a desire to preserve the integrity of political subdivisions may justify an apportionment plan which departs from numerical equality,"[368] it is also true that "a State's policy urged in justification of disparity in district population, however rational, cannot constitutionally be permitted to emasculate the goal of substantial equality."[369]

Using these guidelines, the Supreme Court has approved deviations as high as 16.4%.[370] Further, the Court has hinted that considerations of integrity for political subdivision boundaries may be sufficient to justify deviations up to 30%. In *Swann v. Adams*[371] the Court stated, "*De minimis* deviations are unavoidable, but variations of 30% among senate districts . . . can hardly be deemed *de minimis* and none of our cases suggests that differences of this magnitude will be approved *without a satisfactory explanation grounded on acceptable state policy.*"[372] In *Swann*, however, the deviations were "unjustified on the basis offered by the State":[373] In other words, they could not "reasonably be said to advance a rational state policy."[374] In fact, no showing of a need to maintain political boundaries was made at all.[375] If such a showing had been made, it is possible that such deviations could have been tolerated, as the larger deviation of 89% in the background of the *Brown* case was left untouched.[376]

C. *Constitutionality of the Proposal*

The Court has yet to consider any case in which strong and valid public policy reasons were demonstrated for malapportionment, but the deviation was simply too large to justify. Thus, to determine if a deviation of 26% is constitutionally permissible, one must return for guidance to the seminal language in *Reynolds*. After acknowledging the importance of political boundaries, contiguity, compactness and history, the

367. Brown v. Thomson, 103 S. Ct. 2690, 2699 (1983) (O'Connor, J., concurring).

368. Abate v. Mundt, 403 U.S. 182, 185 (1971).

369. Mahan v. Howell, 410 U.S. 315, 326, *modified on other grounds*, 411 U.S. 922 (1973).

370. *See id.* at 329.

371. 385 U.S. 440 (1967).

372. *Id.* at 444 (emphasis added).

373. *Id.* at 446.

374. Mahan v. Howell, 410 U.S. 315, 328, *modified on other grounds*, 411 U.S. 922 (1973).

375. *See Swann*, 385 U.S. at 445; *see also* Cohen v. Maloney, 410 F. Supp. 1147, 1151 (D. Del. 1976) (holding that an 18% deviation among councilmanic districts is unacceptable). Although the defendant in *Cohen* asserted that the district lines preserved ethnic homogeneity and followed the natural boundaries of a river, the court found no evidence that such policies had ever before been articulated or used in any previous districting effort. The policies thus failed to qualify as historical and even-handed policies applied in all municipal districting efforts. *See id.* at 1153-54.

376. It must again be noted, however, that the *Brown* decision does not explicitly approve the 89% deviation; the question of overall malapportionment of Wyoming's legislature was not before the Court. See *supra* note 340.

Court directed the states to make an "honest and good faith effort"[377] to achieve population equality. It then stated that

> if, even as a result of a clearly rational state policy of according some legislative representation to political subdivisions, population is submerged as the controlling consideration in the apportionment of seats in the particular legislative body, then the right of all of the State's citizens to cast an effective and adequately weighted vote would be unconstitutionally impaired.[378]

In other words, if the population deviation is the smallest that can achieve legitimate state purposes, and if the effort to achieve equal voting strength remains paramount, then the deviation will probably be allowed.

The present Board of Estimate cannot meet this test. If the policy to be achieved is equal representation for each borough qua borough, then the 330% deviation (133% by modified calculations)[379] is arguably the smallest that can result when this goal is achieved. But this policy by its very definition fails to keep population equality as the "controlling consideration."[380] If, on the other hand, the policy is to allow each borough a single representative on the Board and thus to keep political boundaries intact, then this is not the smallest deviation that will permit this goal to be achieved. As was demonstrated earlier, a deviation of approximately 26% will result if Banzhafian weighted voting is used to give the larger boroughs more votes on the Board.[381] This would ensure equal voting strength for all city residents, yet permit the Borough Presidents to continue in their roles as conduits of information, expertise and influence between the boroughs and the City.

In light of the strong policy reasons for maintaining the Borough President seats on the Board, the 26% deviation certainly deserves constitutional approval. Banzhafian weighted voting for the Board of Estimate would permit periodic reapportionment of the weighted votes to reflect the changing population of the City. It would maintain the presence of each of the Borough Presidents as an advocate for his or her borough and retain the flexibility of a small legislative body unhampered by subcommittees and elaborate procedure. Finally, the Banzhafian model does not reduce Staten Island to the "status of an observer";[382] it merely reduces Staten Island's voting power to an amount in proportion to its population, as required by *Reynolds* and its progeny.[383] As the Second Circuit stated when considering precisely this point, "the fact that a minority may regularly be overshadowed by its more populous neighbors under a

377. Reynolds v. Sims, 377 U.S. 533, 577 (1964).
378. *Id.* at 581.
379. See *supra* text accompanying notes 299-307.
380. Reynolds v. Sims, 377 U.S. 533, 581 (1964).
381. See *supra* Pt. VII.
382. Kramarsky Report, *supra* note 6, at 117 (commenting on the effect of weighted voting for the Board), *reprinted in* Joint App., *supra* note 6, at 277.
383. See *supra* notes 320-43 and accompanying text.

proportional voting scheme is one characteristic of a representative democracy."[384] In fact, the weighted voting scheme proposed in this article provides "a constitutionally permissible way of blending majority control with minority representation and other legitimate needs of local government."[385]

The alternatives to weighted voting are not easy to implement. Creating delegations to the Board from the large boroughs will destroy the small size and resulting flexibility that has marked its history and been cited as its strength.[386] Specially elected "estimators" could substitute for the Borough Presidents on the Board, but to avoid representational disparities, such estimators would have to be elected city-wide. Although residency requirements and borough-specific primaries could guarantee one "favorite-son" estimator from each borough, city-wide elections themselves create problems. First, the estimators would have to answer to all the city residents when they seek election, possibly reducing their effectiveness as representatives of their boroughs of residence. Second, city-wide elections entail much higher costs than borough elections, making it even more difficult for underfunded candidates to run. Third, city-wide elections can dilute the vote of ethnic and racial minorities. As minorities now have a substantial presence in Brooklyn, Manhattan, and the Bronx, such a dilution could hinder their efforts to elect sympathetic candidates to sit on the Board, and might run afoul of the Voting Rights Act as amended in 1982.[387] Further, such a plan removes the Borough Presidents from the Board, their most powerful platform for lobbying on behalf of their boroughs' interests.[388] Finally, it is possible that the Borough Presidents are better able than "estimators" to counteract executive authority, because they have close ties to the county organizations of the Democratic Party, with all their attendant political influence.[389]

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384. Morris v. Board of Estimate, 707 F.2d 686, 691 (2d Cir. 1983).

385. *Id.*

386. *See* Goodman Commission Report, *supra* note 107, at 84-86. See *supra* Pt. I.

387. *See* Voting Rights Amendments of 1982, Pub. L. No. 97-205, 96 Stat. 131 (codified at 42 U.S.C. §§ 1973, 1973b, 1973aa-1a, 1973aa-6 (1982)). In 1980, Blacks, Hispanics, Asians and other non-White groups comprised 43% of the New York City population. Sovern Commission Report, *supra* note 32, at 433. Brooklyn had a 43% minority population, Manhattan a 50% minority population and the Bronx a 66% minority population. *Id.* (percentages rounded off to the nearest point). By contrast, Queens had a 29% minority population and Staten Island a mere 11% minority population. *Id.* These figures were developed by the author from census tract data supplied to the Justice Department by the 1981 New York City Districting Commission. *See id.* at 431. The underlying data has some methodological flaws, and therefore this analysis was adapted to err on the side of caution; thus, the minority population may be somewhat larger than these figures would indicate. *See id.*

For a discussion of the 1982 amendments to the Voting Rights Act, *see* Sovern Commission Report, *supra* note 32 at 463-79.

388. For a description of the Borough Presidents' power on the Board of Estimate, see *supra* text accompanying notes 123-28.

389. For a discussion of the role of the county party organizations, see *supra* text accompanying notes 136-40.

If Borough Presidents were to appoint delegates to the Board in an effort to escape the *Hadley v. Junior College District*[390] "elected body" trigger that subjects a body to one-person, one-vote requirements, then the question reserved in *Sailors v. Board of Education*[391]—whether the Constitution allows a legislative body to be appointed[392]—becomes relevant. This not only opens up entirely new questions of constitutional law that are certainly prone to further litigation, but it invites yet further efforts toward the essentially fruitless search for a definition of a "legislative" body. If, in order to avoid such inquiries, the Board were to be stripped of its clearly legislative budgetary powers, the result could be a serious dislocation in city government, unless this change were accompanied by a full scale reconsideration of the Charter and the structure of New York City government.[393] Certainly a new Charter Revision Commission might conclude that the Board should be stripped of some or all of its powers, with these functions to flow to the Mayor, the Council, the boroughs, city agencies and community boards. However, this kind of change should result from deliberation and a new philosophy of city government. If in fact the Constitution is not to be a "roadbloc[k] in the path of innovation, experiment and development,"[394] then Banzhafian weighted voting offers an opportunity to provide independent representation to each borough, roughly equal weight to each citizen's vote, and the preservation of an institution of government steeped in history, tradition and necessity.

CONCLUSION

The structure of New York City government has been forged by the pressures of party politics, geographic necessity and ethnic diversity. Its

390. 397 U.S. 50, 56 (1970).

391. 387 U.S. 105 (1967).

392. *See id.* at 109-10.

393. Actually, the City Council Committee on Government Operations has recently resurrected a bill to strip the Board of Estimate of its budgetary authority. *See* The Council of the City of New York, A Local Law, Int. No. 282 (Dec. 14, 1982) (available in files of *Fordham Law Review*). However, at the hearings held on May 2, 1984, the Committee was warned that even without its budgetary powers, the Board may well exercise governmental powers sufficient to subject it to one-person, one-vote requirements. In fact, stripping the Board of such budgetary authority may well open the door to fresh litigation over the quality of the remaining powers, subjecting city government to further years of uncertainty. Nevertheless, Mayor Koch has said that he would consider stripping the Board of its budgetary authority, if only to reduce the power of any Board reconstructed to meet one-person, one-vote requirements. *See Koch Plans Action if Estimate Board Suit is Lost*, N.Y. Times, Apr. 8, 1984, at 43, col. 1. Such a new Board would necessarily provide much less power for the Staten Island Borough President and would spur the Staten Island secessionist movement. *See Report says 'City' of Staten Island would meet its bills, have a surplus*, Staten Island Advance, June 20, 1983, at 1, col. 1. Reducing the power of the Board might mollify the Staten Island leaders. A bill to create a state charter revision commission for the City of New York was introduced in the State Assembly on March 30, 1984. *See* Assembly Bill A.1251, 1985-86 Regular Sess. (Jan. 15, 1985).

394. Avery v. Midland County, 390 U.S. 474, 485 (1968).

Board of Estimate is a rather unique structure, but the problems it faces are common to local governments throughout the nation. The resolution of the Board of Estimate litigation is likely to have an impact on other municipalities, not only with respect to identifying the best mathematical models of political power, but also with respect to defusing the tensions between equal voting power for each citizen and the preservation of historical, political, geographic, or ethnic constituencies.

This Article traces the history of the Board of Estimate, giving particular attention to power sharing between the central government and the subordinate borough governments. In light of this background, it evaluates the constitutionality of the Board's current formulation, and an alternative formulation proposed by the author. It concludes that only through this new formulation of voting power can the Board of Estimate's balance of majority power and minority representation be preserved, while remaining within the confines of the one-person, one-vote requirements of the fourteenth amendment. It is the author's hope that these materials will be of use to charter revision efforts both in New York City and in other cities around the country.