FAIR REPRESENTATION IN THE EUROPEAN PARLIAMENT

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ABSTRACT

The number of seats currently apportioned to each nation in the European Parliament is far from the ideal of one-man, one-vote. It is likely to become even more so as populations shift and new nations join.

As European rather than national interests become more dominant, pressure is likely to build for representation more closely tied to populations. The merits of different approaches to meeting fair representation are evaluated and compared in terms of basic principles that underlie one-man, one-vote.

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1. Representation

The 434 seats of the European Parliament are currently apportioned among the ten member nations as follows: 81 to each of the Federal Republic of Germany, the United Kingdom, Italy, and France; 25 to the Netherlands; 24 to each of Belgium and Greece; 16 to Denmark; 15 to Ireland; and 6 to Luxembourg. Their proportional shares, on the other hand, are: 99.69, 91.03, 90.57, 85.71 for the "big four"; 22.32 for the Netherlands; 15.91 and 14.86 for Belgium and Greece; 8.22 for Denmark; 5.12 for Ireland; and 0.58 for Luxembourg. Why then was this apportionment chosen?

Throughout the building of the European Community the number of delegates allotted to each of the member states have been the result of political negotiation and compromise. Delegations were thought of as blocs standing together to represent national interests. This view still prevailed when, in 1976, the decision was made to expand the Assembly from 198 to 410 members, elected by direct universal suffrage. This decision has profound implications for the nature of representation in the Parliament.

How many seats to give each nation in the reformed Assembly was a hotly contested issue. A resolution adopted by the Assembly in 1975 enunciated three criteria to govern the allocation of seats.[1] The first and most significant of these is a widely shared concept of fair representation: "the highest degree of proportionality should be achieved between the number of inhabitants of a State and the number of its representatives in the European Parliament". Together with this basic proportionality principle came two more conditions: "all the important political

forces of a State should be represented in the European Parliament", and "the new distribution of seats should not lead to a reduction in the present number of any State's representatives". In effect these criteria impose a minimum required number of representatives for each nation (the second of them alone implying that the first must be satisfied). These numbers were: 36 each to the FRG, Italy, U.K., and France, 14 each to the Netherlands and Belgium, 10 each to Denmark and Ireland, and 6 to Luxembourg, for a total of 198.

The resolution also proposed a specific apportionment of 359 seats that amply satisfied the minimum requirements, but badly failed to meet the criterion of proportionality. Many competing proposals were advanced, and a deadlock developed. To resolve the deadlock, the French proposed that the *status quo* be maintained; simultaneously the Belgians put forward a plan that would add to the allocation of 198 seats that then existed 198 more apportioned according to populations. The final solution, based on the suggestion of the FRG to simply double the existing distribution, essentially satisfied the *status quo* position while admitting several delicate adjustments. Apparently, 72 (twice 36) did not suffice for the U.K. to allot seats internally among England, Scotland, Wales and Northern Ireland: the U.K. felt it needed 81. So the big four each got 81. In view of the populations, 28 was too much for Belgium and the Netherlands, 20 too much for Denmark and Ireland, and 12 too much for Luxembourg. 28 became 25; 20 became 15; and 12 became 6. But the Danes had instructions not to accept less than 16, and the Belgians, for internal reasons, preferred an even number, so Belgium ceded one seat to Denmark. The fact is that after much debate the members found it more expedient to adopt a compromise solution than no solution at all.

To students of the history of the United States the problem has a familiar ring. A considerable investment of time and thought was given to the apportionment of seats among the states at the Constitutional Convention in Philadelphia in 1787. The dominant philosophical ideal of the time was, as James Madison stated it, that the states "ought to vote in the same proportion in which their citizens would do if the people of all the states were collectively met", yet this was checked by the fear of the small states "solicitous to guard ... against an improper consolidation" of the larger states.[2] From this emerged a House apportioned among the states according to their populations but guaranteeing each at least one seat no matter how small, and a Senate with each state accorded two seats whatever its size. This concession of the larger to the smaller states (known as the Great Compromise) was necessary to create a federation of previously sovereign states. Very quickly, however, elected officials ceased to think of themselves as narrow sectional representatives of separate states, formed national political parties that transcended state boundaries, and came to represent people belonging to one, larger community.

The same development can already be discerned in the European Parliament. Trans-national parties have formed. Members of Parliament no longer vote in national blocs; instead of representing purely national interests they represent *people* in one larger European Community.

This new situation means, however, that representatives ought properly to represent equal numbers of constituents no matter in what nation they happen to reside. The present allocation is grossly distorted from this standpoint. For example, one representative of the F.R.G.stands for 759,420 people, whereas one representative of recently admitted Greece stands for 381,958 people: the voice of a Greek in electing a member of Parliament is *worth two times* that of a German. The large discrepancies in the representation of people in different nations may be seen by comparing their average constituency sizes (see Table 1). The more the Community unifies the less will its inhabitants be willing to accept such differences. The American experience confirms this: the Constitutional requirement to reapportion the House on the basis of a new census every ten years regularly provoked intense debates on the fairness of alternative proposals. Although clearly politically motivated, the discussion tended to center on two major issues: the proper choice of *method* of apportionment and the *total number of seats* to be distributed. These debates were fueled by constant shifts in the relative populations of the states and the admission of new states into the Union.

	Population (000's)	Representatives	No. people per Repr.
F.R.G.	61,513	81	759,420
Italy	56,168	81	693,432
U.K.	55,885	81	689,938
France	52,891	81	652,975
Netherlands	13,770	25	550,800
Belgium	9,818	24	409,083
Greece	9,167	24	381,958
Denmark	5,073	16	317,063
Ireland	3,162	15	210,800
Luxembourg	356	6	59,333
Total	267,803	434	617,058

Table 1. Number of people per representative (1976 populations)

The *ad hoc* character of the 1976 solution will undoubtedly provoke a parallel European experience. How many seats should be allotted to a new entrant? The one case so far is Greece, which received 24 seats – apparently because, while it was much smaller than the Netherlands and therefore deserved less than 25, it could be reasonably bracketed with Belgium and therefore get 24. Thus does one *ad hoc* solution beget another. And there will almost certainly be still more new entrants in the years to come, such as Portugal or Spain.

Shifting populations are further eroding the legitimacy of the present apportionment. Projections suggest that between 1976 and 1985 France's population will have increased by some 2 million and Germany's decreased by about the same amount. Such shifts should entail periodic reapportionments to maintain a fair balance among the voices of the people no matter where they happen to reside in the Community.

In short, much as in the stripling United States two hundred years ago, the natural force of events is likely to lead to a demand for representation in the Parliament more proportional to populations, and to the choice of a definite method or formula in advance that meets objective criteria of fairness.

The goal of this paper is, first, to define the ideal of proportionality and to explain the difficulties in meeting it precisely; next, to describe several historically important methods and how they would work under different assumptions about changes in populations and membership in the Community. This leads to a consideration of the fundamental fairness *principles* by which the merits of different methods can be evaluated. The conclusion is that there is exactly one method that is appropriate for future use in allocating seats in the Parliament.[3]

2. The Ideal Shares

Ideally, every delegate to the European Parliament should represent the same number of constituents. But the ideal cannot be met. Allocating seats precisely in proportion to populations is impossible because representatives are by nature indivisible: they do not come in half- or quarter-sizes. Further the practical provision for minimum numbers of representatives, designed to protect the interests of the smaller states, forces a modification in the ideal.

The ideal number of constituents per representative or *constituency size* is found by dividing the total population by the total number of seats. For the 1976 populations this gives an ideal constituency size of 617,058. A state's *pure quota* is its population divided by the constituency size. The pure quotas of the ten member states of the European Parliament are shown in Table 2.

Country	Population (000's)	Pure Quota	Minimum	Quota
F.R.G.	61,513	99.688	36	96.822
Italy	56,168	91.026	36	88.408
U.K.	55,885	90.567	36	87.963
France	52,891	85.715	36	83.250
Netherlands	13,770	22.316	14	21.674
Belgium	9,818	15.911	14	15.454
Greece	9,167	14.856	14	14.429
Denmark	5,073	8.221	10	10.000
Ireland	3,162	5.124	10	10.000
Luxembourg	356	0.577	6	6.000
Total	267,803	434	212	434

Table 2. Quotas for the European Parliament (1976 populations[4])

When minimum requirements are imposed, the concept of pure quota must be modified. The reason is evident from Table 2: if Denmark, Ireland, and Luxembourg got their minimum rquirements (10, 10, and 6 respectively) not enough seats would remain for the others to get even the whole numbers contained in their pure quotas. (Their sum is 416, which added to the 26 required for the smallest three gives a total of 442.)

To find the fair shares of the states in the presence of minimum requirements, first compute the shares without requirements using the ideal constituency size, then reduce them in the same proportion by increasing the constituency size until the larger of the reduced shares or requirements, summed over all states, equals the number of seats to be apportioned. The *quota* of a state is its reduced share or requirement, whichever is larger. Table 2 shows the quotas for the European Parliament obtained by increasing the constituency size from 617,058 to 635,324. The quotas of Denmark, Ireland, and Luxembourg are the same as their minimum reuirements and the shares of the remaining states are reduced proportionally so that they sum up to the remaining 408 seats.

As the quotas are not whole numbers they must be rounded in some fashion. Ordinary rounding, in which fractions below .5 are dropped and those above .5 are rounded up, does not work because it may not result in the required number of seats. In Table 2, for example, ordinary rounding would yield 433 seats instead of the required 434. Therefore, some state having a fraction less than .5 must be rounded up. Which should it be?

3. Methods and Principles

The three best known and most used methods of apportionment have many aliases in both name and description.

The method of *greatest remainders* was first formulated by Alexander Hamilton[5] in 1792. One begins by giving to each nation the whole number contained in its quota. The seats left over are assigned to those states having the largest fractional remainders. For the example of Table 3 the first process allots 430 seats and the remaining 4 are given one each to the U.K., the F.R.G., the Netherlands and Belgium.

The greatest remainders method obeys the *quota principle* : that is, no state gets more than its quota rounded up –its *upper quota* – nor less than its quota rounded down – its *lower quota*. Thus Italy, with quota 88.408, gets either 88 or 89 seat, but *not* 87 or 90.

In any specific problem, some states will necessarily get more than their quotas and others less. For example, the greatest remainders method gives the FRG 97 seats when its fair share is 96.822 whereas France gets 83 seats with fair share 83.250. Thus this solution favors the FRG over France. But over many problems, an apportionment method should on average, give each state, whatever its size, its fair share. This is the *principle* of being *unbiased.*

			With Greece		Without Greece	
	Minima	Population (000's)	Quota	Greatest Remainders Apportionment	Quota	Greatest Remainders Apportionment
F.R.G.	36	61,513	96.822	97	96.927	97
Italy	36	56,168	88.408	88	88.505	89
U.K.	36	55,885	87.963	88	88.059	88
France	36	52,891	83.250	83	83.341	83
Netherlands	14	13,770	21.674	22	21.698	22
Belgium	14	9,818	15.454	16	15.470	15
Greece	14	9,167	14.429	14	-	-
Denmark	10	5,073	10	10	10	10
Ireland	10	3,162	10	10	10	10
Luxembourg	6	356	6	6	6	6
Total		267,803	434	434	420	420

Table 3. Greatest remainders apportionments with and without Greece -- showing violation of the independence principle (1976 populations)

The method of greatest remainders is unbiased. This is because the sizes of the remainders, which determine the states that get extra seats, are independent of the size of the states themselves. Thus, the chance that a state gets an extra seat is the same whatever its size.

The basic data of apportionment change over time. The populations of the states shift relative to one another, new states may join, others may drop out, and with these may come changes in the total number of Parliamentary seats. A method must be robust in the face of such changes.

If a state drops out (or joins) no transfer of seats among the remaining states should be necessary. This is the *independence principle*. The greatest remainders method violates this principle. Table 3 shows that with Greece in the Community, Italy would receive 88 seats and Belgium 16, whereas if Greece were to drop out with its 14 seats, then the method would force Belgium to give up one seat to Italy.

The greatest remainders method also violates the *population principle*. Suppose it were discovered that the populations of the FRG and the U.K. had both been over-counted by 200,000 persons, Italy over-counted by 10,000, and Belgium under-counted by 10,000. This gives the populations of Table 4. The apportionment differs only in that Italy, a state that *loses population, gains one seat*, whereas Belgium, a state that *gains population, loses one seat.*

This same example shows that the method of greatest remainders violates the *size principle*. For when 434 seats are allocated among the nations Belgium receives 15 seats, whereas if only 432 seats are to be shared Belgium's assignment jumps up to 16. Outcomes such as these that do not accord with changes in the data, are not robust.

	Minima	Population (000's)	Quota	Greatest Remainders Apportionment	Quota	Greatest Remainders Apportionment
F.R.G.	36	61,313	96.656	97	96.182	96
Italy	36	56,158	88.529	89	88.095	88
U.K.	36	55,685	87.784	88	87.353	87
France	36	52,891	83.379	83	82.970	83
Netherlands	14	13,770	21.707	22	21.601	22
Belgium	14	9,828	15.493	15	15.417	16
Greece	14	9,167	14.451	14	14.380	14
Denmark	10	5,073	10	10	10	10
Ireland	10	3,162	10	10	10	10
Luxembourg	6	356	6	6	6	6
Total		267,403	434	434	432	432

Table 4. Greatest remainders apportionments for slightly modified 1976 populations -- showing violation of population and size principles

These violations of principle come about because this approach uses ***remainders*** to determine the priority for "extra" seats rather than the ***relative sizes*** of the states. The remainders of large states change more rapidly in absolute amount than those of small states when the total number of seats to be apportioned changes, a state is added or dropped, or there are some small shifts in the population data. This can cause changes in priority for receiving extra seats which is not consistent with proportionality.

The method commonly called ***d'Hondt's***[6] (also known as Hagenbach-Bischoff's, highest averages, and greatest divisors) was actually first proposed by Thomas Jefferson[7] in 1792. Begin by computing the fair shares or quotas using the ideal constituency size. Then increase all the shares in the same proportion by reducing the constituency size until the whole numbers contained in the increased shares (or the minimum requirements, whichever is larger) summed over all states, equals the total number to be apportioned.

The largest constituency size (or "common divisor") for which the correct sum is obtained is the d'Hondt ***divisor*** (in this case 629,654) and the associated shares (or minimum requirements, whichever is larger) are the d'Hondt ***numbers***. For example, the U.K.'s d'Hondt number is 88.755 so it receives 88 seats and France's is 84.0001 so it is assigned 84 (see Table 5).

D'Hondt's method assures each state at least its lower quota, because the d'Hondt numbers used to determine the apportionment are larger than the quotas. However, d'Hondt's method may not be ***near quota***, in the following sense: taking one seat from France and transferring it to the Netherlands would bring ***both*** closer to their quotas. Moreover, although this example does not show it, the method can give to large states more seats than its upper quota,[8] so it does not necessarily obey the quota principle.

	Minima	Quota	d'Hondt number	d'Hondt apportionment
F.R.G.	36	96.822	97.693	97
Italy	36	88.408	89.204	89
U.K.	36	87.963	88.755	88
France	36	83.250	84.000	84
Netherlands	14	21.674	21.869	21
Belgium	14	15.454	15.593	15
Greece	14	14.429	14.559	14
Denmark	10	10	10	10
Ireland	10	10	10	10
Luxembourg	6	6	6	6
Total	-	434	-	434

Table 5. D'Hondt apportionment (1976 populations)

D'Hondt's method is strongly biased in favor of the larger states. This can be observed in practice: for example, France receives 84 seats when it deserves only 83.250 and the Netherlands 21 when it deserves 21.674. This happens systematically because the d'Hondt numbers of the larger states differ from the quotas by larger absolute amounts than those of the smaller states. For example, in Table 5 the FRG's d'Hondt number is 0.871 larger than its quota, while Greece's is only 0.170 larger. So the chance that a state receives more seats than its lower quota is much greater for the big states than for the small.

On the other hand, the method of d'Hondt satisfies the independence, population, and size principles. If a state and the number of seats it deserves is dropped (or vice versa) then the identical d'Hondt numbers give the solution for the states that remain. If between two apportionments some state's population decreases but its representation increases, then its d'Hondt number must also have increased; hence any state whose population increases cannot have a smaller d'Hondt number and so it cannot have received fewer seats. Finally, if more seats are to be allocated then the d'Hondt numbers that change all increase, so no state can possibly lose a seat.

The method of *major fractions* (known in some countries as Sainte-Lagüe's[9], in others as odd numbers) was first proposed by Daniel Webster[10] in 1832. Begin by computing the fair shares of all states using the ideal constituency size. Then change all the shares in the same proportion by altering the constituency size until the whole numbers closest to the altered shares (or minimum requirements, whichever are larger), summed over all states, equals the total number to be apportioned.

The largest constituency size (or "common divisor") for which the correct sum is obtained is called the *Webster divisor* (in this case 634,666) and the associated shares (or minimum requirements, whichever are larger) are the *Webster numbers*. For example, Italy's Webster number is 88.5001 so it receives 89, Belgium's 14.470 so it receives 14 (see Table 6). Sometimes the Webster numbers are greater than the

quotas, sometimes smaller (e.g., for the apportionment of 434 seats of Table 4 they are smaller).

The method of major fractions does not invariably stay within the quota: it is mathematically possible for a state either to receive more seats than its upper quota or less than its lower quota. But in practice the likelihood of this happening is nil. It *always* stays near the quota. It is also unbiased because the Webster numbers have the same chance of being greater than the quotas as being smaller, and the chance that a state has a remainder above or below .5 is the same regardless of its size. Finally, Webster's method satisfies the independence population, and size principles for exactly the same reasons that d'Hondt's does.

	Minimum	Quota	Webster number	Major fractions apportionment
F.R.G.	36	96.822	96.922	97
Italy	36	88.408	88.500	89
U.K.	36	87.963	88.054	88
France	36	83.250	83.337	83
Netherlands	14	21.674	21.696	22
Belgium	14	15.454	15.470	15
Greece	14	14.429	14.444	14
Denmark	10	10	10	10
Ireland	10	10	10	10
Luxembourg	6	6	6	6
Total	-	434	-	434

Table 6. Major fractions apportionment (1976 populations)

The case is summarized in Table 7. Not one of the three methods meets all principles. In fact there is *no* method that satisfies *all* the principles. However, the method of major fractions satisfies all of the principles except quota, and for all practical purposes it satisfies that one too. Moreover it is the *only one* among all possible methods that does so.

Methods / Principles	Greatest remainders	D'Hondt	Major fractions
quota	Yes	No	Almost
near quota	Yes	No	Yes
unbiased	Yes	No	Yes
population	No	Yes	Yes
independence	No	Yes	Yes
size	No	Yes	Yes

Table 7. Methods meeting principles

D'Hondt's is the one and only method that satisfies the population, membership and size principles and always assures each state its lower quota. However, it is very biased in favor of the larger states and frequently gives large states seats in excess of their upper quotas.[11]

The greatest remainders method is unbiased and always satisfies the quota principle, but it frequently violates the population, independence, and size principles.

The conclusion seems inescapable that the method of major fractions comes closest to meeting the principles of one-man, one-vote.

4. Implementation

The European Parliament is only one of three policy making institutions of the Community, along with the Council of Ministers and the Commission. Its explicit powers are not extensive, although its potential influence may be great. In the words of one authority, "Its task is primarily that of providing a democratic input into the Community decision making process and providing an on-going forum for debate on Community matters."[12]

The historical evolution of representation in federal systems and the theory explained in the preceding sections lead to certain conclusions and recommendations concerning the future allocation of seats among the member nations of the European Parliament. The formation of parties across national boundaries will inevitably lead to greater integration and pressure for representation in proportion to populations. Sooner or later, as populations shift and new states enter the European Community, the existing allocation will lose any justification it may once have had.

What are the requirements for a solution with more enduring legitimacy?

First, some provision must be made for a periodic census of populations, for example every 5 or 10 years. Only thus can growing and changing populations be reflected promptly and fairly by changes in representation. Further, the numbers on which representation is based must be made consistent for all member states. Whether the basis should be the number of voters or the number of inhabitants, or should include overseas citizens, noncitizens, illegal immigrants, or prisoners is a matter for the legislators to decide.

Second, some definite *method* of apportionment must be established by law to prevent the inevitable scramble for seats that would otherwise result after each census. The choice in terms of satisfying the most principles of fairness is the method of major fractions.

Third, there must be a definite and equitable procedure for assigning representation to new states. One approach is to determine the number of seats the entering state would deserve based on the estimate of its population at the previous census date. The precise number assigned would depend of course on the method being used. Under the method of major fractions the largest common divisor used to find the previous apportionment would be applied to the new state as well. For example, if Portugal were to enter the Community, then its 1976 population of 9,664,000 would be divided by the 1976 Webster divisor of 634 666, resulting in a Webster number of 15.227 and so an allocation of 15 seats and the other delegations would stay the same, since Webster's method satisfies the independence principle.

Fourth, to protect the interests of the smallest states, equitable minima must be fixed in advance. The present minima originated in making sure that all the major forces of a state would be represented. For Luxembourg this originally meant a minimum of 3 representatives but was later doubled to 6. The result is that the average citizen of Luxembourg has 12 times more representation than does a citizen of the FRG. While the choice of minima is ultimately up to the members of the European Community, simple equity and common sense suggest that they should be reduced -- perhaps to one-half their present values, or perhaps to a uniform minimum of 1 per state -- instead of increased as is past practice.

It is essential, however, that the minima be fixed. A politically tempting alternative is to legislate that no state can ever lose seats in a redistribution. This can yield one of two results, both deleterious: either the total number of seats increases without limit, resulting in a hopelessly unwieldy body; or if the number of seats is fixed but no state can lose, then as populations shift proportional representation eventually ceases to exist.

If the method of major fractions were adopted and Portugal admitted on the basis of its 1976 population, Portugal would receive 15 seats and the Parliament would grow to 449 seats. Reapportionments based on projected 1985 populations under three different hypotheses of fixed minima -- a uniform guarantee of 1 seat to each state, the "old" minima, and the "old" divided by 2 -- are given by way of illustration in Table 8.

	Population (000's)	Quota (Min 1)	Maj. frac. Appt.	Quota (Min old÷2)	Maj. frac. Appt.	Quota (Min old)	Maj. frac. Appt.
F.R.G.	59,614	95.320	95	94.895	95	92.894	93
Italy	57,078	91.265	91	90.858	91	88.942	89
U.K.	56,164	89.804	90	89.403	89	87.518	88
France	54,829	87.669	88	87.278	87	85.437	85
Netherlands	14,250	22.785	23	22.683	23	22.205	22
Portugal	10,206	16.319	16	16.246	16	15.904	16
Belgium	9,840	15.734	16	15.663	16	15.333	15
Greece	9,477	15.153	15	15.086	15	14.768	15
Denmark	5,187	8.294	8	8.257	8	10	10
Ireland	3,538	5.657	6	5.632	6	10	10
Luxembourg	358	1	1	3	3	6	6
Total	280,541	449	449	449	449	449	449

Table 8. Major fractions apportionments (1985 projected populations[13])

NOTES

1. *Elections to the European Parliament by Direct Universal Suffrage*, Draft Convention with Explanatory Statement, Special Issue based on Patijn report (Doc. 368/74), (Resolution adopted 14 January 1975).
2. *Writings of James Madison*, Vol. III, Ed. Gaillard Hunt, G.P. Putnam, New York, 1902, p. 385.
3. The discussion that follows is based on theory that is fully developed in M.L. Balinski and H.P. Young, *Fair Representation: Meeting the Ideal of One- man, One- vote*, Yale University Press, New Haven and London, 1982.
4. The population data was taken from: *Demographic Yearbook, Historical Supplement*, United Nations, New York, 1979.
5. Harold C. Syrett (ed.), *The Papers of Alexander Hamilton*, Vol. XI, New York and London, Columbia University Press, 1966, pp. 226-230, Opinion sent to George Washington on April 4, 1792.
6. V. d'Hondt, *La représentation proportionnelle des partis par un électeur*, Ghent, 1878.
7. Paul Leicester Ford (ed.), *The Works of Thomas Jefferson*, Vol. VI, New York and London, G.P. Putnam's Sons, 1904, pp. 463-470. "Opinion on the Bill Apportioning Representatives" sent to George Washington on April 4, 1792.
8. For example, according to the 1980 U.S. census, California's quota is 45.653 but d'Hondt's method would assign it 48 seats.

9. Sainte-Lagüe, "La représentation et la méthode des moindres carrés," *Comptes Rendus de l'Académie des Sciences*, 151(1910), 377-78.

10. *The Writings and Speeches of Daniel Webster*, Vol. VI, National Edition, Little, Brown and Company, Boston, 1903, pp. 101-123. Address to the United States Senate, April 5, 1832.

11. These very properties of d'Hondt's method commend it for proportional representation systems where it is frequently used.

12. John Fitzmaurice, *The European Parliament*, Saxon House, Westmead, Farnborough, Harts., England, 1978, p. 8.

13. *Basic Statistics of the Community 1980*, Statistical Office of the European Communities, Luxembourg, 1980.