



1 Rules & Regulations of the Reform Scheme
for the Bombay Presidency 1909

Rules &c for (1) Council of State
(2) Legislative Assembly
(3) Provincial Legislative
Councils

2 ~~Rules & Regulations of the Revised & Consolidated~~
Rules under the Government of India Act, 1919

3 Rules for the electoral nomination of members
for the qualification of electors & members
the constitution of constituencies & the final
decision of disputes as to the validity of elections

4 Rules for the regulating the Course of business

5 Legislative Assembly Electoral Rules

6 Return showing the Results of Elections
in India (Cmd 1261) 1921

7 Royal Commission on Electoral System
— Report (Cd 5163)

The nomination and
election of additional members of the
Legislative Council of the Government of
Bombay. 1909.

V231, 31:91

9 D9

(2) Revised and consolidated rules relating
to the provincial legislative councils, the
Legislative Assembly and the Council of
State. 1920. V2, 3:kl 9FO

(3) Rules for the election and nomination
of members of the Council of State, for the
qualification of electors and members, the
constitution of constituencies and the
decision of doubts and disputes as to the
validity of elections. 1920

V2, 31:91 9FO

(4) Rules regulating the course of business in
the Council of State and the Legislative Assembly,
called the Indian Legislative Rules. 1920

V2, 3:kl 9FO

(5) Legislative Assembly Electoral Rules
1921
V2, 32:91 9FO

(6) Returns showing the results of
elections in India. 1921.

V2, 3:91 F1

(7) Report of the Royal Commission appointed to
enquire into electoral systems. Great Britain.
1908

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PART I.

Notification.

LEGAL DEPARTMENT.

Bombay Castle, 15th November 1909.

No. 767.—The following notification by the Government of India, Home Department, is republished :—

“No. 4212, dated the 15th November 1909.

In exercise of the power conferred by section 8, sub-section (2), of the Indian Councils Act, 1909 (9 Edw. VII, Ch. IV), the Governor General in Council has, with the approval of the Secretary of State for India in Council, appointed the 15th day of November 1909 as the date on which the provisions of the said Act shall come into operation for all purposes and for all Councils in British India.”

No. 768.—The following notification by the Government of India, Legislative Department, is republished :—

“No. 10, dated the 15th November 1909.

In exercise of the powers conferred by section 6 of the Indian Councils Act, 1909 (9 Edw. VII, Ch. IV), the Governor General in Council has, with the approval of the Secretary of State for India in Council, made the following Regulations for the nomination and election of Additional Members of the Legislative Council of the Governor of Bombay :—

1.—559

APPENDICES.

SUMMARY OF CONTENTS.

	Page.
APPENDIX 1.— <i>Extract from Paper by Professor E. J. Nanson on methods of Election to fill one seat</i>	39
The single vote method	39
The double vote method	40
Borda's method	40
Method of double elections	41
Ware's method	44
The Venetian method	45
Condorcet's practical method	46
Method proposed by the author	46
APPENDIX 2— <i>The Alternative Vote in Queensland and Western Australia</i>	52
<i>Queensland</i> —The Consolidation Act of 1905	52
<i>Western Australia</i> —The Electoral Act of 1907	54
Extracts from the report of the Chief Electoral Officer on the General Election of 1908	56
Pamphlet of instructions to voters	53
APPENDIX 3— <i>Systems of election in force in other countries</i>	60
The relative majority method	60
The second ballot	60
The limited vote	61
Proportional representation in Denmark	61
" " " Finland	62
" " " Serbia	63
" " " Sweden	63
" " " Switzerland	63
" " " Wurttemberg	64
APPENDIX 4— <i>The Belgian and French Systems</i>	64
The Belgian law of 1899	64
The movement for proportional representation in France	66
The French Bill of 1909	67
APPENDIX 5— <i>The Transferable Vote</i>	69
Tasmania, the Electoral Act of 1907	70
Rules proposed by the English Proportional Representation Society and embodied in the Municipal Representation Bill of 1908	74
Report of Committee on the Tasmanian election of 1909, and on the rules of the English Society	77
South Africa—History of the movement for proportional representation	86
Mr. Humphreys' Report on the Municipal Elections at Pretoria and Johannesburg	86

APPENDICES.

APPENDIX I.

EXTRACT from a paper read by Professor E. J. NANSON before the ROYAL SOCIETY OF VICTORIA, October 12th, 1882, on methods of election to fill one seat —

If there be several candidates for an office of any kind, and the appointment rests in the hands of several persons, an election is held to decide who is to receive the appointment. The object of such an election is to select, if possible, some candidate who shall, in the opinion of a majority of the electors, be most fit for the post. Accordingly, the fundamental condition which must be attended to in choosing a method of election is that the method adopted must not be capable of bringing about a result which is contrary to the wishes of the majority. There are several methods in use, and none of them satisfy this condition. The object of this paper is to prove this statement, and to suggest a method of election which satisfies the above condition.

Let us suppose, then, that several persons have to select one out of three or more candidates for an office. The methods which are in use, or have been put forward at various times, may be divided into three classes.

The first class includes those methods in which the result of an election is arrived at by means of a single scrutiny.

The second class includes those in which the electors have to vote more than once.

The third class includes those in which more than one scrutiny may be necessary, but in which the electors have only to vote once.

In describing these methods, the number of candidates will in some cases be supposed to be any whatever, but in other cases it will be assumed, for the sake of simplicity, that there are only three candidates. The case in which there are only three candidates is the simplest, and it is of frequent occurrence. I propose, therefore, to examine, for the case of three candidates, the results of the methods which have been proposed, and to show that they are erroneous in this case. This will be sufficient for my purpose, for it will be easily seen that the methods will be still more liable to error if the number of candidates be greater than three. I shall then discuss at some length the proposed method in the case of three candidates, and afterwards consider more briefly the case of any number of candidates.

Methods of the First Class

In the first class three methods may be placed, viz., the single vote method, the double vote method, and the method of Borda. In these methods the electors have only to vote once, and the result is arrived at by means of a single scrutiny.

The Single Vote Method.

This is the simplest of all methods, and is the one adopted for Parliamentary elections in all English-speaking communities in the case in which there is only one vacancy to be filled. As is well known, each elector has one vote, which he gives to some one candidate, and the candidate who obtains the greatest number of votes is elected. This method is used for any number of candidates, but in general the larger number of candidates the more unsatisfactory is the result.

In this method, unless some candidate obtains an absolute majority of the votes polled, the result may be contrary to the wishes of the majority. For, suppose that there are twelve electors and three candidates, A, B, C, who receive respectively five, four, and three votes. Then A, having the largest number of votes, is elected. This result, however, may be quite wrong, for it is quite possible that the four electors who vote for B may prefer C to A, and the three electors who vote for C may prefer B to A. If this were the case, and the question

That A is to be preferred to B

were put to the whole body of electors, it would be negatived by a majority of two, and the question

That A is to be preferred to C would also be negatived by a majority of two. Thus the single vote method places at the head of the poll a candidate who is declared by a majority of the electors to be inferior to each of the other candidates. In fact if A and B were the only candidates B would win, or if A and C were the only candidates C would win, thus B and C can each beat A, and yet neither of them wins. A wins simply because he is opposed by two men, each better than himself.

Thus the single vote method does not satisfy the fundamental condition. It appears also not only that the best man may not be elected, but also that we are not even sure of getting in the second best man. It is clear that if any candidate obtain an absolute majority of the votes polled this error cannot occur. All we can say, then, about the single vote method is that if any candidate obtain an absolute majority the method is correct, but if no one obtains such a majority the result may be quite erroneous.

These results are well known, and consequently in elections under this plan great efforts are generally made to reduce the number of candidates as much as possible before the polling day, in order to avoid the return of a candidate who is acceptable to a small section only of the electors. This reduction can, in practice, be made only by a small number of the electors, so that the choice of a candidate is taken out of the hands of the electors themselves, who are merely permitted to say which of two or more selected candidates is least objectionable to them.

The Double Vote Method

In this method each elector votes for two candidates, and the candidate who obtains the largest number of votes is elected. This method is erroneous, for it may lead to the rejection of a candidate who has an absolute majority of votes in his favour, as against all comers. For suppose that there are twelve electors, and that the votes polled are, for A, nine, for B, eight, for C, seven, then A is elected. Now, in order to show that this result may be erroneous it is merely necessary to observe that it is possible that each of the seven electors who voted for C may consider C better than A and B, that is to say, an absolute majority of the electors may consider C to be the best man, and yet the mode of election is such that not only does C fail to win, but in addition he is at the bottom of the poll. This is an important result, we shall see presently the effect it has on other methods of election.

In the case in which there are only three candidates this method is, in fact, equivalent to requiring each elector to vote against one candidate, and then electing the candidate who has the smallest number of votes recorded against him.

Borda's Method.

This method was proposed by Borda in 1770, but the first published description of it is in the volume for 1781 of the "Memoirs of the Royal Academy of Sciences." For some remarks on the method see Todhunter's "History of Probability," p. 433, where the method is described. In the case of three candidates, it is as follows. Each elector has three votes, two of which must be given to one candidate, and the third vote to another candidate. The candidate who obtains the greatest number of votes is elected.

In order to show that this method may lead to an erroneous result, suppose that there are twelve electors, of whom five prefer A to B and B to C, whilst two prefer A to C and C to B, and five prefer B to C and

C to A. Then the votes polled will be, for A, fourteen; for B, fifteen, for C, seven. Thus B is elected. It is clear, however, that this result is wrong, because seven out of the whole twelve electors prefer A to B and C, so that, in fact, A has an absolute majority of the electors in his favour. Hence, then, Borda's method does not satisfy the fundamental condition, for it may lead to the rejection of a candidate who has an absolute majority of the electors in his favour.

It may be observed that the result of the poll on Borda's method may be obtained, in the case of three candidates, by adding together the corresponding results in the polls on the methods already described.

If there be n candidates, each elector is required to arrange them in order of merit, then for each highest place $n-1$ votes are counted, for each second place, $n-2$ votes, and so on, $n-r$ votes being counted for each r^{th} place, and no votes for the last place. The candidate who obtains the greatest number of votes is elected.

Borda does not give any satisfactory reason for adopting the method. Nevertheless he had great faith in it, and made use of it to test the accuracy of the ordinary or single vote method, and arrived at the extraordinary conclusion that in any case in which the number of candidates is equal to or exceeds the number of electors, the result cannot be depended upon unless the electors are perfectly unanimous. This in itself is sufficient to show that Borda's method must be capable of bringing about a result which is contrary to the wishes of the majority.

There is, however, another objection which is of great importance. Borda's method holds out great inducements to the electors to vote otherwise than according to their real views. For if an elector strongly desires the return of a particular candidate, he not only gives his two votes to that candidate, but he also takes care to give his remaining vote to the least formidable of the other candidates. The effect of this is to give a great advantage to second-rate candidates. Thus not only does Borda's method fail to interpret the true wishes of the electors, supposing that they vote honestly, but it holds out great inducements to them to vote otherwise than according to their real views.

Laplace discussed the question of the best mode of electing one out of several candidates, and by an analytical investigation was led to Borda's method*. He states distinctly that this method is the one indicated by the theory of probabilities. He then proceeds to point out the objection just stated, and expresses the opinion that the method would, without doubt, be the best if each elector would write the names of the candidates in what he thinks the order of merit. We have seen, however, that this is far from being the case.

Methods of the Second Class.

The simplest method of the second class is the French method of double elections. In this method each elector has one vote, as in the single vote method, already described. If, however, no candidate obtain an absolute majority of the votes polled, a second election is held. For this second election only the two candidates who obtained the largest number of votes at the first election can be candidates. The result is that the successful candidate is returned by an absolute majority of those who vote at the second election, so that it would appear, at first sight, that the successful candidate represents the views of a majority of the electors. We must not lose sight, however, of two facts, first, that all the electors who vote at the first election may not vote at the second election, second, that those who do so vote merely have to choose between the two remaining candidates, and that, consequently, they may not be represented in any sense by the candidate they vote for, they may merely be in the position of having a choice of evils.

This plan has frequently been proposed for adoption in England, and quite recently it has been proposed by more than one speaker in the Legislative Assembly of Victoria. The method is indeed a great

improvement on the present system of single voting, and if the election be merely a party contest, and neither side runs more than two candidates, the result cannot be wrong. But if these conditions be not satisfied, the method may easily lead to an erroneous result. The method may be used whatever be the number of candidates, but it is sufficient to show that it is erroneous in the case of three candidates only. This is at once done by a further consideration of the example already given in discussing the single vote method. For in that example C is at the bottom of the poll, and, according to the present system, he is rejected, and a second election is held to decide between A and B, because no one has an absolute majority at the first election. The result of the second election is, for A, five votes, for B, seven votes; so that B wins. In order to show that this result may be erroneous it is only necessary to suppose that the five electors who voted for A prefer C to B. For then, if the question

That C is to be preferred to B was put to the whole body of electors, it would be carried by a majority of four. Now, we have already seen that the question

That C is to be preferred to A would be carried by a majority of two. Hence, then, this method leads to the rejection of a candidate who is declared by the majority of the electors to be superior to each of the other candidates. This method, then, clearly violates the condition that the result must not be contrary to the wishes of the majority.

We may consider this example from a slightly different point of view. In discussing it under the single vote method, the important result arrived at was that A was inferior to each of the other candidates, and, therefore, ought to be at the bottom of the poll, instead of being at the top, as he was, in consequence of being opposed by two good men, B and C. Thus, instead of excluding C, as in the French method, A is the one who ought to be excluded. Having arrived at the result that A is to be excluded, the whole of the electors have now a right to decide between B and C. On putting this question to the issue, we find that C is preferred by the electors.

We see, then, that the French method may lead to error through throwing out the best man at the first election. And this is the only way in which it can err; for if there be a best man, and he survive the ordeal of the first election, he must win at the second, seeing that he is, in the opinion of the electors, better than each of his competitors.

Comparing the French method with the single vote method, we see that in the case of three candidates the worst candidate may be returned by the single vote method, but that it would be impossible for such a result to be brought about by the French method. By that method we are at least sure of getting the second best man, if we fail to get the best.

There is, however, a grave practical objection to this method. It is that a second polling may be necessary. This is of great importance; for in the case where the number of electors is large, as in a political election, great expense has to be incurred, not only by the authorities in providing the necessary machinery but also by the electors themselves in coming to the poll again. Besides this, the excitement of the election is kept up much longer than it would be if the whole matter could be settled by a single polling. There can, I think, be little doubt that this objection has been one of the chief obstacles with which the advocates of this method have had to contend. Accordingly, we find that the single vote method is employed, as a rule, in those cases in which there are some hundreds of electors and it would be inconvenient to hold a second election. On the other hand, when the number of electors is small, so that they can all meet together, and remain till a second or third election has been held, the number of candidates is generally reduced to two by means of a preliminary ballot or ballots. This very fact shows that the defects of the single vote method are recognised, because in those cases in which it is considered to be practicable to do so a preliminary election is held, so as to try to avoid the glaring defect

* "Journal de l'École Polytechnique," cahiers vii and viii, pp. 169, 170; "Théorie Analytique des Probabilités," pp. 101, 299; Todhunter's "History of Probability," pp. 547, 548.

of the single vote method—that is to avoid returning a candidate who is acceptable to a small section only of the electors. It is a mistake, however, to suppose that it is not practicable to hold one or more preliminary elections when the number of electors is large. It is generally thought that in order to do so a fresh set of voting papers must be used for the second election, and that this second election cannot be held till the result of the first is known, so that the electors have the expense and trouble of going to the poll a second time. This, at all events, appears to be the practice in France, Germany, and Italy. This, however, is not necessary for, by a very simple expedient, any number of preliminary elections, on any plan whatever, may be held by means of a single set of voting papers, and without troubling the electors to vote more than once. The expedient is to require each elector to indicate his order of preference amongst all the candidates. Once get this information from the electors, and we can tell how any elector will vote on any question that may be put as to the merits of the candidates. It is here assumed that an elector will not change his opinion during the course of the election. This expedient of making each elector indicate his order of preference amongst all the candidates is necessary in order to carry out Borda's method, which has been described above. Indeed, it was suggested by Borda himself. But Borda does not appear to have noticed that it might be made use of for a series of elections without requiring the electors to vote again, this appears to have been first pointed out by Condorcet. The idea of a preferential or comparative voting paper is one of the fundamental ones in Hare's system of proportional representation. We are not concerned with this subject here, as the only question under consideration is that of filling a single vacancy. It is, however, worthy of notice that the preferential voting paper which is such an important feature in Hare's system, is of such old origin, and that it was suggested by Condorcet as a means of filling several vacancies, which is the very question considered by Hare. The method of Condorcet, however, is quite different to that of Hare.

If the expedient here described were adopted, the French system would be free from the practical objection which has been indicated. It would still, however, be open to the objection that the result of the election might be contrary to the views of the electors. Notwithstanding this, the method would be a good practical one for elections on a large scale, it would be very suitable for party contests, and if neither side ran too many candidates, the result could not be wrong. The method, however, would be altogether unsuitable if there were three distinct parties to the contest. Under any circumstances, however, the method would be very little more complicated than the present system of single voting, and it would give much better results. If, however, it be considered desirable to reform the present electoral system so far as to introduce this French system of double elections, it would be as well to at once adopt the method of Ware, described below. This is the same, in the case of three candidates, as the French method, but in other cases it is a trifle longer. No difference whatever would be required in the method of voting, but only a little more labour on the part of the Returning Officer. The results of this method would be much more trustworthy than those of the French method.

Other Methods of the Second Class

Before passing on to the methods of the third class, it may be stated that each of the methods described under that heading may be conducted on the system of the second class. In order to do so, instead of using a preferential voting paper, as in the methods of the third class, we must suppose a fresh appeal made to the electors after each scrutiny. This, of course, would make the methods needlessly complex, and, in the case of a large number of electors, totally impracticable. This, however, is not the only objection to the methods of the second class. For if the electors be allowed to vote again after the result of one of the preliminary elections is known, information is

given which may induce an elector to transfer his allegiance from a candidate he has been supporting to another candidate whom he finds has more chance of success. A method which permits, and which even encourages, electors to change their views in the middle of the contest cannot be considered perfect. This objection does not apply to those cases in which there are only three candidates, or to any case in which all but two candidates are rejected at the first preliminary election, as in the French system.

There is another objection, however, which applies to all cases alike, it is that, at the first preliminary election, an astute elector may vote, not according to his real views, but may, taking advantage of the fact that there is to be a second election, vote for some inferior candidate in order to get rid, at the first election, of a formidable competitor of the candidate he wishes to win. If this practice be adopted by a few of the supporters of each of the more formidable competitors, the result will frequently be the return of an inferior man.

On account of these objections, I consider it unnecessary to enter into any further details as to the methods of the second class.

Methods of the Third Class.

In the methods of the third class each elector makes out a list of all the candidates in his order of preference, or, what comes to the same thing, indicates his order of preference by writing the successive numbers, 1, 2, 3, &c.; opposite the names of the candidates on a list which is supplied to him. Thus one voting only is required on the part of the electors. These preferential or comparative lists are then used in a series of scrutines, and the methods of the third class differ from one another only in the way in which these scrutines are conducted. Three different methods, which may be called Ware's method, the Venetian method, and Condorcet's practical method, have been proposed for use, and these will now be described.

Ware's Method.

This method is called Ware's method because it appears to have been first proposed for actual use by W. R. Ware of Harvard University.* The method was, however, mentioned by Condorcet,† but only to be condemned. This method is a perfectly feasible and practicable one for elections on any scale, and it has recently been adopted by the Senate of the University of Melbourne. It is a simple and obvious extension of the French system, and it is obtained from that system by two modifications, viz—

- (1) The introduction of the preferential or comparative method of voting, so as to dispense with any second voting on the part of the electors.
- (2) The elimination of the candidates one by one, throwing out at each scrutiny the candidate who has fewest votes, instead of rejecting at once all but the two highest.

In the case in which there are three candidates only, the second modification is not necessary. It will, perhaps, be convenient to give a more formal description of this method. The mode of voting for all methods of the third class has already been described, it remains, therefore, to describe the mode of conducting the scrutines in Ware's method.

At each scrutiny each elector has one vote, which is given to the candidate, if any, who stands highest in the elector's order of preference.

The votes for each candidate are then counted, and if any candidate has an absolute majority of the votes counted, he is elected.

But if no candidate has such an absolute majority, the candidate who has fewest votes is excluded, and a new scrutiny is proceeded with, just as if the name of such excluded candidate did not appear on any voting paper.

Successive scrutines are then held until some candidate obtains on a scrutiny an absolute majority of the votes counted at that scrutiny. The candidate who obtains such absolute majority is elected.

* See "Hare on Representation," p. 353.

† "Œuvres," 1804, vol. xiii, p. 243.

It is obvious that this absolute majority must be arrived at sooner or later.

It is clear, also, that if on any scrutiny any candidate obtain a number of votes which is greater than the sum of all the votes obtained by those candidates who each obtain less than that candidate, then all the candidates having such less number of votes may be at once excluded.

Ware's method has been shown to be erroneous for the case of the three candidates in the remarks on the French method, of which it is in that case a particular form. It is easy to see that if there be more than three candidates the defects of this method will be still more serious.

The objection to this method, concisely stated, is that it may lead to the rejection of a candidate who is considered by a majority of the electors to be better than each of the other candidates. At the same time, the method is a great improvement on the single vote method, and the precise advantage is that whereas the single vote method might place at the head of the poll a candidate who is considered by a majority of the electors to be worse than each of the other candidates, it would be impossible for such a candidate to be elected by Ware's method.

To illustrate fully the difference between the two methods and the defects of each, suppose that there are several candidates, A, B, C, D, P, Q, R, and that in the opinion of the electors each candidate is better than each of the candidates who follow him in the above list, so that A is clearly the best, B the second best, and so on, R being the worst, then on the single vote method R may win, on Ware's method A, B, C, D, P, may be excluded one after another on the successive scrutines, and at the final scrutiny the contest will be between Q and R, and Q, of course, wins, since we have supposed him better than R in the opinion of the electors. Thus the single vote method may return the worst of all the candidates, and although Ware's method cannot return the worst, it may return the next worst.

A great point in favour of Ware's method is that it is quite impossible for an astute elector to gain any advantage for a favourite candidate by placing a formidable competitor at the bottom of the list. On account of its simplicity, Ware's method is extremely suitable for political elections. In cases of party contests, the strongest party is sure to win, no matter how many candidates are brought forward. The successful candidate, however, will not always be the one most acceptable to his own party.

The Venetian Method.

For the sake of simplicity, I describe this method for the case of three candidates only. Two scrutines are held, at the first scrutiny each elector has two votes, which are given to the two candidates, one to each, who stand highest in the elector's order of preference. The candidate who has fewest votes is then rejected, and a final scrutiny is held between the two remaining candidates. At the final scrutiny each elector has one vote, which is given to that one of the remaining candidates who stands highest in the elector's order of preference. The candidate who obtains most votes at the final scrutiny is elected.

This method is very faulty, it may lead to the rejection of a candidate who has an absolute majority of the electors in his favour. For we have seen, in discussing the double vote method, that such a candidate may be rejected at the first scrutiny. In fact, unless the candidate who has fewest votes at the first scrutiny has less than N votes, where $2N$ is the number of electors, we cannot be sure the result is correct. For, for anything we can tell, the candidate who is rejected at the first scrutiny may be, in the opinion of an absolute majority of the electors, the best man for the post. If, however, the candidate who has fewest votes on the first scrutiny has less than N votes, then the method will certainly give a correct result. For, since there are only three candidates, to require an elector to vote for two candidates comes to exactly the same thing as to ask him to vote against

one candidate. Now, if with the two votes any candidate got less than N votes, it is clear that there are more than N votes against him, for each candidate must be marked first, or second, or third on each paper. Thus, in the opinion of an absolute majority, the candidate is worst than each of the other candidates, and, therefore, ought not to be elected. Unless, therefore, the lowest candidate has less than N votes, this method violates the fundamental condition.

I do not know that the method has ever been used in the form here described; but in the still more objectionable form of the second class, which differs from the one just described only by dispensing with the preferential voting paper, and allowing the electors to vote again after the result of the first scrutiny is known, it is exceedingly common, and is frequently used by Committees. An instance, which was fully reported in the Melbourne papers, occurred some time ago in the selection of a candidate to stand on the constitutional side at the last election for Boroondara. It is fair, however, to say that the result of the method appears to have been correct in that case, but that was due to accident, and not to the method itself.

If there be more than three candidates the method is very complicated, and the defects are more serious. It seems, however, hardly worth while going into any details in the cases.

Condorcet's Practical Method

This method was proposed in 1793 by Condorcet, and appears to have been used for some time at Geneva. It is described at pp 36-41 of vol. xv. of "Condorcet's Collected Works" (edition of 1804), and may be used in the case of any number of candidates for any number of vacancies. We are at present concerned only with the case of a single vacancy, and for the sake of simplicity I describe Condorcet's method for the case in which there are only three candidates.

Two scrutines may be necessary in order to ascertain the result of the election in this method. At the first scrutiny, one vote is counted for each first place assigned to a candidate, and if any candidate obtains an absolute majority of the votes counted he is elected. But if no one obtain such an absolute majority a second scrutiny is held. At the second scrutiny one vote is counted for each first place, and one vote for each second place, exactly as in the first scrutiny on the Venetian method, and the candidate who obtains most votes is elected. At first sight we might suppose that this method could not lead to error. Comparing it with the Venetian method, described above, we see that Condorcet supplies a remedy for the obvious defect of the Venetian method—that is to say, the rejection of a candidate who has an absolute majority is now impossible. A little examination, however, will show, as seems to have been pointed out by Lhuillier,* that the method is not free from error. For, let us suppose that there are sixteen electors, of whom five put A first and B second, five put C first and B second, two put A first and C second, two put B first and A second, and two put C first and A second. Then the result of the first scrutiny will be, for A, B, C, seven, two, seven votes respectively. Thus no one having an absolute majority, a second scrutiny is necessary. The result of the second scrutiny will be—for A, B, C, eleven, twelve, and nine votes, respectively. Thus B, having the largest number of votes is elected. This result, however, is not in accordance with the views of the majority of the electors. For the proposition, "B is better than A," would be negated by a majority of two votes, and the proposition, "B is better than C," would also be negated by a majority of two votes, so that in the opinion of the electors B is worse than A and also worse than C, and, therefore, ought not to be elected.

Summing up the results we have arrived at, we see that each of the methods which have been described may result in the return of a candidate, who is considered by a majority of the electors to be inferior to each of the other candidates. Some of the methods—viz, the double vote method, the method of Borda,

* See Montucla's "Histoire des Mathématiques," vol iii, p 421.

and the Venetian method—may even result in the rejection of a candidate who has an absolute majority of votes in his favour as against all comers. It would, however, be quite impossible for such a result to occur on the single vote method, or the methods of Ware and Condorcet.

Method proposed

Having pointed out the defects of the methods in common use, it now remains to describe the method proposed for adoption, and to show that it is free from these defects. It consists merely in combining the principle of successive scrutines with the method of Borda, and at the same time making use of the preferential voting paper, so that the proposed method belongs to the third class. I propose, first, to describe and discuss the method for the case of three candidates, and then to pass on to the general case in which there may be any number of candidates.

Let us suppose, then, that there are three candidates, A, B, C. Each elector writes on his voting paper the names of two candidates in order of preference, it being clearly unnecessary to write down a third name. If we prefer it, the three names may be printed on the voting paper, and the elector may be required to indicate his order of preference by writing the figure 1 opposite the name of the candidate of his first choice, and the figure 2 opposite the name of the candidate of his second choice, it being clearly unnecessary to mark the third name. In order to ascertain the result of the election two scrutines may be necessary.

At the first scrutiny two votes are counted for each first place and one vote for each second place, as in the method of Borda. Then if the two candidates who have the smallest number of votes have each not more than one-third of the whole number of votes, the candidate who has most votes is elected, as in the Borda method. But if one only of the candidates has not more than one-third of the votes polled (and some candidate must have less), then that candidate is rejected, and a second scrutiny is held to decide between the two remaining candidates. At the second scrutiny each elector has one vote, which is given to that one of the remaining candidates who stands highest in the elector's order of preference. The candidate who obtains most votes at the second scrutiny is elected.

The method may be more briefly described as follows—

Proceed exactly as in Borda's method, but instead of electing the highest candidate, reject all who have not more than the average number of votes polled. If two be thus rejected, the election is finished, but if one only be rejected, hold a final election between the two remaining candidates on the usual plan.

In order to show that the proposed method is free from the defects above described it is necessary and it is sufficient to show that if the electors consider any one candidate, A, say, superior to each of the others, B, and C, then A cannot be rejected at the first scrutiny. For if A be not rejected at the first scrutiny he cannot fail to win at the second scrutiny. Let therefore the whole number of electors be $2N$, and let the number who prefer B to C be $N+a$, and consequently the number who prefer C to B be $N-a$; similarly, let the number who prefer C to A be $N-b$, and therefore the number who prefer A to C be $N-b$, and let the number who prefer A to B be $N+c$, and therefore the number who prefer B to A be $N-c$. Then it is easy to see that the numbers of votes polled by A, B, C at the first scrutiny will be

$$2N-b+c, 2N-c+a, 2N-a+b$$

respectively. For if the compound symbol AB be used to denote the number of electors who put A first and B second, and similarly for other cases, it is clear that A's score at the first scrutiny will be

$$2AB+2AC+BA+CA$$

Now this expression can be written in the form

$$(AB+AC+CA)+(AC+AB+BA),$$

and it is clear that the three terms in the first pair of brackets represent precisely the number of electors who prefer A to B, which number has already been denoted by $N+c$. In the same way the remaining three terms represent the number of electors who prefer A to C,

which number has been denoted by $N-b$. Hence the score of A on the first scrutiny is $2N-b+c$. In exactly the same way it may be shown that the scores of B, C are $2N-c+a$ and $2N-a+b$ respectively. The sum of these numbers is $6N$, as it ought to be. Thus $2N$ is the mean or average of these three numbers, and consequently the highest of the three candidates must have more than $2N$ votes, and the lowest must have less than $2N$ votes. Now, let us suppose that a majority of the electors prefer A to B, and likewise that a majority prefer A to C, then c must be positive, and b must be negative. Hence the score of A, which has been shown to be $2N-b+c$, is necessarily greater than $2N$, for it exceeds $2N$ by the sum of the two positive quantities— b and c . Thus A has more than $2N$ votes, that is, more than one-third, or the average of the votes polled. He cannot, therefore, be rejected, at the first scrutiny, so that B or C or both must be rejected at the first scrutiny. If either of the two B and C be not rejected, A must win at the second scrutiny, for there is a majority for A against B, and also against C. Hence, then, it has been demonstrated that if the opinions of the electors are such that there is a majority in favour of A as against B, and likewise a majority in favour of A as against C, the method of election which is proposed will certainly bring about the correct result, whereas it has been shown by the consideration of particular examples that the methods in ordinary use may easily bring about an erroneous result under these circumstances. Thus the proposed method cannot bring about a result which is contrary to the wishes of the majority, so that the proposed method satisfies the fundamental condition.

The method which is proposed has, I think, strong claims. It is not at all difficult to carry out. The result will, as often as not, be decided on the first scrutiny. We simply require each elector to put down the names of two of the three candidates in order of preference. Then for each first name two votes are counted, and for each second name one vote is counted. The number of votes for each candidate is then found. The third part of the sum total may be called the average, then all candidates who are not above the average are at once rejected. The lowest candidate must, of course, be below the average. The second is just as likely to be below as above the average. If he is below, the election is settled, but if he is above the average, a second scrutiny is necessary to decide between him and the highest candidate.

Case of Inconsistency

We have now to consider what is the result of the proposed method in those cases in which there is not a majority for one candidate against each of the others. The methods which have been described have been shown to be erroneous by examining cases in which either one candidate has an absolute majority of the electors in his favour, or a candidate A is inferior to B and also to C, or a candidate A is superior to B and also to C. Now it is not necessary that any of these cases should occur. If a single person has to place three candidates in order of preference he can do so, and it would be quite impossible for any rational person to arrive at the conclusions—

$$\begin{array}{lll} \text{B is superior to C} & - & - & - & (1) \\ \text{C is superior to A} & - & - & - & (2) \\ \text{A is superior to B} & - & - & - & (3) \end{array}$$

When, however, we have to deal with a body of men, this result may easily occur, and no one of the candidates can be elected without contradicting some one of the propositions stated above. If this result does occur, then, no matter what result any method of election may give, it cannot be demonstrated to be erroneous. We have examined several methods, and all but the one now proposed have been shown to lead to erroneous results in certain cases. It may fairly be urged, then, that that method which cannot be shown to be erroneous in any case has a greater claim to our consideration than any of the other methods which can be shown to be erroneous. On this ground alone I think the method proposed ought to be adopted for all cases.

We can, however, give other reasons in favour of the method proposed. We have seen that it gives

effect to the views of the majority in all cases except that in which the three results (1), (2), (3) are arrived at. In this case there is no real majority, and we cannot arrive at any result without abandoning some one of the three propositions (1), (2), (3). It seems most reasonable that that one should be abandoned which is affirmed by the smallest majority. Now, if this be conceded, it may be shown that the proposed method will give the correct result in all cases. For it is easily seen that the majorities in favour of the three propositions (1), (2), (3) are respectively $2a$, $2b$, $2c$. Hence, then, in the case under consideration, a , b , c , must be all positive. Let us suppose that a is the smallest of the three. Then we abandon the proposition (1), and consequently C ought to be elected. Now let us see what the proposed method leads to in this case. B's score at the first scrutiny is $2N - c + a$, and this is necessarily less than $2N$, because c is greater than a , and each is positive. Again C's score is $2N - a + b$, and this is necessarily greater than $2N$, because b is greater than a , and each is positive. Thus B is below the average, and C is above the average. Therefore, at the first scrutiny B goes out and C remains in. If A goes out also, C wins at the first scrutiny. But if A does not go out, C will beat A at the second scrutiny. Thus C wins in either case, and therefore the proposed method leads to the result which is obtained by abandoning that one of the propositions (1), (2), (3) which is affirmed by the smallest majority. We have already seen that in the case in which the numbers a , b , c are not all of the same sign, the proposed method leads to the correct result. Hence, then, if it be admitted that when we arrive at three inconsistent propositions (1), (2), (3) we are to abandon the one which is affirmed by the smallest majority, it follows that the proposed method will give the correct result in all cases.

We have, then, arrived at two results. First, that if the electors affirm any two of the propositions (1), (2), (3), and affirm the contrary of the remaining one, and so affirm three consistent propositions, then the result of the method of election which is here proposed will be that which is the logical consequence of these propositions, whilst the methods in ordinary use may easily give a different result. Second, that if the electors affirm the three propositions (1), (2), (3) which are inconsistent, then the result of the method proposed is that which is the logical consequence of abandoning that one of the three propositions which is affirmed by the smallest majority.

Another way of applying Proposed Method.

The method may be stated in another form, which may sometimes be more convenient. For each first place count one vote, then, if any candidate has an absolute majority, elect him. But if not, count in addition one vote for each second place, then, if the lowest candidate has not got half as many votes as there are electors, reject him and proceed to a final scrutiny between the remaining two. But, if not, take the aggregate for each candidate of the results of the two counts, then reject all who have less than one-third of the votes now counted, and, if necessary, proceed to a final scrutiny.

This process will give the same final result as the method already described. This is readily seen as follows. 1st, if any one has an absolute majority on the first places, the election is settled at the first scrutiny, and the result is manifestly correct, and therefore the same as that of the proposed method. 2nd, if no one has an absolute majority on the first places, but some one has on first and second places less than half as many votes as there are electors, it is manifest that more than half the electors consider that candidate worse than each of the others, so that he ought to be rejected, and hence the result of the final scrutiny will be correct, and therefore in accordance with that of the proposed method. 3rd, if neither of the above events happen, we take the aggregate. Now (as has already been remarked) the result of taking the aggregate is to give us exactly the same state of the poll as in the first scrutiny of the proposed method. Thus the second way of applying the method will give the same final result as the proposed method. This second way is very convenient,

for if there be an absolute majority for or against any candidate, it is made obvious at the first or second count, and the election is settled with as little counting as possible. The two counts are conducted on well-known plans, and if the circumstances are such that either of these necessarily gives a record result, that result is adopted. But if it is not obvious that a correct result can be arrived at, then we take the mean, or what comes to the same thing, the aggregate of the two counts. This might appear to be a rule of thumb, and on that account may perhaps commend itself to some persons. This is not the case, however, and it is remarkable that that which might be suggested as a suitable compromise in the matter should turn out to be a rigorously exact method of getting at the result in all cases. The view of the proposed method which has just been given shows exactly what modifications require to be made in Condorcet's practical method in order to make it accurate.

* * * * *

Cases of more than Three Candidates

It remains now to state and examine the method proposed for the case in which there are more than three candidates.

A series of scrutinies are held on Borda's system of voting, and all candidates who on any scrutiny have not more than the average number of votes polled on that scrutiny are excluded. As many scrutinies are held as may be necessary to exclude all but one of the candidates, and the candidate who remains uneliminated is elected.

The method proposed cannot lead to the rejection of any candidate who is in the opinion of a majority of the electors better than each of the other candidates, nor can it lead to the election of a candidate who is in the opinion of a majority worse than each of the other candidates. These results are an extension of those already proved for the case of three candidates.

* * * * *

Incomplete Voting Papers

There is a point of some practical importance to be considered in connection with the proposed method. If the number of candidates was large, some of the electors might not be able to make out a complete list of the candidates in order of preference. We have then to consider how voting papers, on which the names are not all marked in order of preference, are to be dealt with. Such a voting paper may be called incomplete. In order to examine this question, let us first suppose, for the sake of simplicity, that there are only three candidates A, B, C, and that the votes tendered are of one of the forms AB, BA, C, that is to say, that all the electors who put A first put B second, that all who put B first put A second, and that all who vote for C mark no second name. In accordance with the proposed method, for each paper of the form AB, two votes would be given to A and one to B; and for each paper of the form BA, two votes would be given to B and one to A. The question arises however. Is a paper of the form C, that is, a plumper for C, to be counted as one vote or as two votes for C? If it be counted as one vote only, it is clear that C might be defeated even if he had an absolute majority of first votes in his favour. For if we suppose $AB=BA=a$, and $C=c$, it is clear that the scores of A and B will each be equal to $3a$, and that of C to c . Thus C will be defeated unless $c > 3a$, but if $c > 2a$, there is an absolute majority for C. Hence, then we may be led into error if each plumper for C be counted as one vote only. If, on the other hand, a plumper be counted as two votes it is clear that C might win even if there were an absolute majority against him. For the score of C will now be $2c$, and C will win if $2c > 3a$. But if $2c < 4a$, there is an absolute majority against C. Thus we should also be led into error if each plumper be counted as two votes. If, however, we agree to count a plumper as three halves of a vote, neither of these errors could occur. This course is readily seen to be the proper one in any case of three candidates, for it clearly amounts to assuming that the electors who plump for C are equally divided as to the merits of A and B. For if a' , b' , c' denote the numbers of plumpers for A, B, C respectively,

and if we agree to consider all the electors who plump for A as being equally divided as to the merits of B and C, the effect of the a' plumpers for A would be to give 2 a' votes to A, and $\frac{1}{2} a'$ each to B and C. Now, as we are only concerned with the differences of the totals polled for each candidate, we see that the result of the first scrutiny will be the same if we take away $\frac{1}{2} a'$ votes from each candidate. Thus the result will come out the same if we give $\frac{2}{3} a'$ votes to A, and none to B or C, so far as the plumpers are concerned. Similarly the result will not be altered if the b' plumpers for B be counted, as $\frac{2}{3} b'$ votes for B and nothing for C and A, and so for C's plumpers. Thus the final result will be in accordance with the views of the electors, if each plumper be reckoned as three halves of a vote.

The assumption that the electors who plump for A are equally divided as to the merits of B and C, appears to be perfectly legitimate, for the electors have an opportunity of stating their preference, if they have one, and as they have, in the case supposed, declined to express any, it may be fairly concluded that they have none.

At the final scrutiny (if held), all plumpers for the candidate who has been rejected will have no effect.

If there be more than three candidates, and incomplete papers are presented, we should have to make a similar assumption, viz, that in all cases where the preference is not fully expressed, the elector has no preference as regards the candidates whom he has omitted to mark on his voting paper. Thus, for example, if there be four candidates, A, B, C, D, a plumper for A ought to count as two votes for A and none for B, C, D. Again, a voting paper on which A is marked first and B second, and on which no other names are marked, ought to count as two and a half votes for A and three halves of a vote for B. If there be more than four candidates the varieties of incomplete papers would be more numerous, and the weights to be allotted to each would be given by more complicated rules. Practically it would be best to count one vote for each plumper in the case in which only one candidate is marked on a voting paper, one for the last, and two for the first, when two names only are marked on a voting paper, one for the last, two for the next, and three for the first, when three names only are marked on a voting paper, and so on, giving in all cases one vote to the candidate marked lowest on any paper, and as many votes to the candidate marked first as there are names marked on the paper. By this means the rules for computing the votes would be the same in all cases and at all scrutinies. We have seen, it is true that this method may lead to error. The error has the effect of decreasing the votes for the candidates who are marked on any incomplete paper, and it arises solely in consequence of the papers being incomplete. Thus, if the electors do not fully express their preference, the effect is to injure the chances of their favourite candidates. If, then, we adopt the plan just described for incomplete papers, it will be sufficiently simple for practical purposes, and its use will tend to elicit from electors a full statement of their various preferences.

Cases of Equality

No case of equality can occur in the proposed method except when all the candidates poll exactly the same number of votes on a scrutiny, for if less than the whole number of candidates have the same number of votes in any scrutiny, if that common number be not greater than the average, all the equal candidates are excluded. If it be greater no one of them is excluded, and in either case we pass on to another scrutiny.

If on any scrutiny all the candidates poll exactly the same number of votes, that number, of course, must be the average, and it is necessary that some one should have a casting vote. If it is thought proper to do so,

one casting vote can then be made to settle the election, by allowing the casting vote to decide who is to win. But if it is thought that this is giving too much weight to the casting vote, then we may permit the casting vote to decide who is to be excluded, and then proceed to a fresh scrutiny between the remaining candidates. It will be observed, however, that the chance of a casting vote being required at any scrutiny except the last, when only two candidates remain, is very minute, seeing that it depends upon all the candidates polling exactly the same number of votes on a scrutiny.

Statement of Method

It is convenient to give here a formal statement of the method which it is proposed should be used when incomplete papers are presented.

Each elector is furnished with a list of the candidates in alphabetical order, upon which he indicates his preference amongst the candidates by placing the figure 1 opposite the name of the candidate of his first choice, the figure 2 opposite the name of the next in order of preference, the figure 3 opposite the next, and so on, to as many names as he pleases.

It is, of course, unnecessary to mark all the names, it is sufficient to mark all but one. In what follows, if all the names be marked, it is unnecessary to pay any attention to the name marked lowest in order of preference.

The mode of dealing with the papers is as follows — For the lowest candidate marked on any paper count one vote, for the next lowest two votes, for the next three votes, and so on, till the highest is reached, who is to receive as many votes as there are names marked on the paper. The total number of votes for each candidate is then to be ascertained, and thence the average number polled. All candidates who have not polled above the average are then to be excluded. If more than one candidate be above the average, then another scrutiny must be held as between all such candidates.

In counting up the votes for the second, or any subsequent scrutiny, no attention must be paid to the names of any candidates who have been excluded.

As many scrutinies as may be necessary must be held, so that finally all the candidates but one are excluded, and the last remaining candidate is elected.

Practical Details

In order to show precisely the amount of labour which would be required to carry out the proposed method, it may be as well to state what appears to be the most convenient way of making up the result. As in the ordinary methods, it would be necessary to have a poll-book in which to keep a tally of the votes. In this book the names of the candidates should be printed from the same type as the ballot papers are printed from. Each ballot-paper should be placed with the names in a line with the corresponding names in the poll-book, and the numbers written opposite to the names on each ballot paper should then be copied into the successive columns of the poll-book. In this way the risk of error in transcription would be exceedingly small, and any error which was made would be at once detected on placing the ballot paper side by side with the column in which its numbers are recorded. When this is done many of the columns would contain vacant spaces. In every vacant space in each column write a number greater by unity than the largest number copied from the voting paper into that column. After doing this add up the figures in each row, then find the mean or average of the sums. Every candidate who has a sum equal to or greater than the average is to be excluded. A little consideration will show that this process will give the same result as the method described above. When the papers have once been copied into the poll-book as just described, all subsequent scrutinies that may be necessary can be conducted without handling the voting papers again.

APPENDIX 2.

THE ALTERNATIVE VOTE IN QUEENSLAND AND WESTERN AUSTRALIA.

QUEENSLAND.

Sections 20-26 of the Electoral Act of 1892 as incorporated in the Consolidation Act of 1905.

Provisions for securing Absolute Majority of Votes

*78A In the succeeding sections of this Act the term "absolute majority of votes" means a number of votes greater than one half of the number of all the electors who vote at an election, exclusive of electors whose ballot papers are rejected, but the casting vote of the returning officer, when given, shall be included in reckoning an absolute majority of votes.

*78B When a poll is taken at an election a candidate shall not, except as hereinafter provided, be elected as a member unless he receives an absolute majority of votes.

*78C Notwithstanding the provisions of the seventy-third section of this Act, an elector may, if he thinks fit, indicate on his ballot paper the name or names of any candidate or candidates for whom he does not vote in the first instance, but for whom he desires his vote or votes to be counted in the event of any candidate or candidates for whom he votes in the first instance not receiving an absolute majority of votes, and, if he indicates more than one such candidate, may indicate the order in which he desires that his vote or votes shall be counted for any such candidate or candidates.

Such indication shall be made by writing the figures 2, 3, or any subsequent number, opposite to the name or names of the candidate or candidates for whom he does not vote in the first instance, but for whom he desires his vote or votes to be so counted, and the order indicated by such numbers shall be taken to be the order in which he desires his vote or votes to be so counted.

Provided always that no mere irregularity or error in writing such figures shall invalidate the vote or votes given by an elector in favour of any candidate or candidates in the first instance if the ballot paper of such elector is otherwise in order.

†78D When one member only is to be returned at the election, if there is no candidate who receives an absolute majority of votes, all the candidates except those two who receive the greatest number of votes shall be deemed defeated candidates.

The vote of every elector who has voted for a defeated candidate shall be counted for that one (if any) of the remaining two candidates for whom he has indicated in the manner aforesaid that he desires his vote to be counted.

The vote so counted for such remaining candidates shall be added to the votes originally given for them, and the candidate who receives the greatest number of votes, including the votes so counted (if any), shall be elected.

‡78E. When two members are to be returned, and there are not more than four candidates, the two candidates who receive the greatest number of votes shall be elected.

‡78F When two members are to be returned, and there are more than four candidates, if there is no candidate who receives an absolute majority of votes, all the candidates except those four who receive the greatest number of votes shall be deemed defeated candidates.

The vote or votes of every elector who has voted for a defeated candidate or defeated candidates shall be counted for that one or those two of the remaining four candidates for whom the elector has not voted in the first instance but for whom he has indicated in the

manner aforesaid that he desires his vote or votes to be counted.

The votes so counted for such remaining candidates shall be added to the votes originally given for them, and the candidate who receives the greatest number of votes, including the votes so counted (if any) shall be elected.

If only one candidate receives an absolute majority of votes, he shall be elected.

In that case all the other candidates except those two who receive the next greatest number of votes shall be deemed defeated candidates.

The vote of every elector who has voted for a defeated candidate shall be counted for that one (if any) of the remaining two candidates for whom the elector has not voted in the first instance but for whom he has indicated in the manner aforesaid that he desires his vote to be counted.

The votes so counted for such remaining candidates shall be added to the votes originally given for them, and the candidate who receives the greatest number of votes, including the votes so counted (if any) shall be elected.

‡78G When two or more candidates, neither of whom is elected, receive an equal number of votes, the returning officer shall decide by his casting vote which of them have or has the greatest number of votes.

||78H. If an elector writes a figure opposite to the name of a candidate for whom he votes in the first instance, the ballot paper shall not be rejected for that reason only.

The State is divided into 61 electoral districts, of which 11 return two members.

The Commission received a report on the working of the system in which it is stated that "it must be freely admitted that the contingent vote is not a success in elections returning more than one member; in such elections it is too complicated and leads to results not intended by the voter. The tendency in all the Australian States is now towards constituencies returning one member only. If in the United Kingdom or elsewhere it be desired to create constituencies returning more than one member the contingent vote would be of little or no use, and the only alternative would be a second ballot."

WESTERN AUSTRALIA.

Electoral Act of 1907

127—(1) The elector shall mark his vote on the ballot paper by placing the numeral 1 opposite the name of the candidate for whom he votes.

(2) If there are more candidates than two the elector shall mark the ballot paper by placing the numeral 1 opposite the name of the candidate for whom he votes as his first preference, and he may give contingent votes for the remaining candidates, or any of them, by placing numerals 2, 3, 4 (and so on as the case requires) opposite their names, so as to indicate by such numerical sequence the order of his preference.

138 A ballot paper shall be informal—

- (a) if it is not initialled by the presiding officer, or in the case of a postal ballot paper, not signed and dated by a postal vote officer; or
- (b) if it is marked in any other manner than in sections ninety-two [Postal Vote] and one hundred and twenty-seven provided, or
- (c) if it has upon it any mark or writing not authorised by this Act which, in the opinion of the Returning Officer, will enable any person to identify the elector, or

* Sections 20 to 23 of Act of 1892 inserted, 61 Vict, No 26, Schedule

† "This" substituted for "the Principal," 61 Vict, No 26, Schedule

‡ Sections 24 to 26 of Act of 1892 inserted, 61 Vict, No 26, Schedule

|| Section 27 of Act of 1892 inserted, 61 Vict, No. 26, Schedule

- (d) if it does not indicate the elector's vote or first preference for one candidate, or
- (e) if no mark is indicated on it, or, in the case of a postal ballot paper, no name of any candidate written on it.
- 139—(1) A ballot paper shall not be informal for any reason other than the reasons enumerated in the last preceding section, but shall be given effect to according to the elector's intention so far as his intention is clear
- (2) In particular a ballot paper shall not be informal by reasons only of—
- (a) the elector having indicated his vote or first preference by a cross instead of the numeral 1, or
- (b) in the case of a postal ballot paper, the preferential numbering of the names written on such ballot papers having been omitted, and if the names are written on the postal ballot paper without preferential numbering, it shall be deemed that the elector's preference is indicated by the order in which the names are written on the ballot paper
- 140 The Governor may appoint Assistant Returning Officers to count the votes at any one or more polling places—
- (a) in outlying portions of a Province or District, or
- (b) where the polling place is so far distant from the chief polling place that such appointment is necessary to ascertain the result of the election with expedition
141. The procedure at the count of votes by the Deputy and Assistant Returning Officers shall be as follows—
- (1) Each Deputy Returning Officer shall open all ballot boxes from the polling places within his district, and each Assistant Returning Officer shall open all ballot boxes at his polling place
- (2) The Deputy or Assistant Returning Officer shall count all the votes on the ballot papers found in the boxes opened by himself, rejecting all informal ballot papers, and ascertain—
- (a) the number of votes for each candidate, if there are only two candidates, or
- (b) if there are more than two candidates, the number of first preference votes given for each candidate, and shall make and keep a record of the total number of votes for each candidate counted by him from each of such ballot boxes.
- (3) Each Deputy Returning Officer shall certify by indorsement on the copy of the writ received by him the number of votes or first preference votes, as the case may be, given for each candidate within the district for which he acts, and transmit the copy of the writ so indorsed to the Returning Officer
- (4) Each Assistant Returning Officer shall certify in writing, addressed to the Returning Officer, the number of votes or first preference votes, as the case may be, given for each candidate at his polling place
- (5) A Deputy or Assistant Returning Officer may communicate to the Returning Officer by telegraph the number of votes or first preference votes, as the case may be, recorded for each candidate within the district or at the polling place for which he is appointed, and the Returning Officer, in ascertaining the result of the poll, may act upon the information so received
- (6) Each Deputy or Assistant Returning Officer shall—
- (a) Enclose in one packet all the used ballot papers, in another packet all unused ballot papers, and in another packet all copies of rolls, butts of ballot papers, books, or other papers or documents used at the election or in connection therewith, and all telegrams, letters, or other papers received from the Returning Officer or any other electoral officer, and
- (b) Seal up the several packets and indorse the same with a description and the number of the contents thereof respectively, and the name of the district or the polling place, as the case may be, and the date of the polling, and sign the indorsement, and forthwith forward the said packets to the Returning Officer
- * * *
- 143.—(2) The procedure at the count of the votes by the Returning Officer for each Province or District, if there are more candidates than two, shall be as follows—
- (a) The Returning Officer shall—
- (i) open all ballot boxes not opened by Deputy or Assistant Officers;
- (ii) arrange the ballot papers under the names of the respective candidates and place in a separate parcel all those on which a first preference is indicated for the same candidate, rejecting informal ballot papers, and
- (iii) count all the first preference votes given for each candidate respectively, and
- (iv) make and keep a record of the number of votes counted by him from each ballot box
- (b) The Returning Officer shall then—
- (i) ascertain from the written or telegraphic returns received from Deputy or Assistant Returning Officers the number of first preference votes given for each candidate in districts or at polling places where the ballot boxes have been opened by such Deputy or Assistant Returning Officers, and
- (ii) add the first preference votes so given for each candidate to the votes counted by himself in favour of each such candidate, so as to ascertain, for the whole Province or District, the number of first preference votes polled by each candidate respectively
- (c) The candidate who has received the largest number of first preference votes shall, if such number constitutes an absolute majority of votes, be declared by the Returning Officer duly elected.
- (d) If no candidate has an absolute majority of votes the Returning Officer—
- (i) shall open the packets of ballot papers received from the Deputy or Assistant Returning Officers, and deal with the ballot papers contained therein as prescribed by subsection (1) of this section, adding such ballot papers to those previously counted by himself for each candidate, and
- (ii) shall then declare the candidate who has obtained the fewest first preference votes to be a defeated candidate, and each ballot paper counted to him shall (unless exhausted) be distributed among the non-defeated candidates next in order of the electors' preference
- (e) After such distribution the number of votes given to each non-defeated candidate shall again be ascertained
- (f) If no candidate then has an absolute majority of votes the process of declaring the candidate who has the fewest votes to be defeated, and distributing each of his ballot papers (unless exhausted) amongst the non-defeated candidates next in order of the voters' preference shall be repeated, and the votes recounted after every such redistribution until one candidate has obtained an absolute majority of votes, and such candidate shall then be declared duly elected
- Provided that when only two candidates remain undefeated, and neither has obtained an absolute majority, the candidate who has obtained the largest number of votes shall be declared duly elected.

(3)—(a) Every ballot paper, not rejected as informal, shall be counted in every count until it becomes exhausted, when it shall be rejected in all further counts.

(b) When a candidate is declared defeated, any ballot paper counted to him shall be deemed to be exhausted if there is not indicated upon it a consecutive preference for a candidate not declared defeated.

EXTRACTS FROM THE REPORT OF THE CHIEF ELECTORAL OFFICER ON THE GENERAL ELECTION OF 1908.

"Referring to the new Electoral Act, 1907, in its relation to the preparatory work for the election, the principal new feature is undoubtedly the provisions dealing with what is known as the 'preferential voting system'. Bearing in mind the fact that the returning officers had had no previous experience of the system referred to, I took special steps, in ample time prior to polling day, to thoroughly initiate them into the intricacies of the preferential count. For this purpose each returning officer was supplied with 100 ballot papers, marked in such a manner as might be expected under the present 'non-compulsory' preferential system. These ballot papers were prepared with the object of affording returning officers an opportunity of satisfying themselves, by actual experience, that the eventualities as regards 'transferred' and 'exhausted' votes, &c, were properly understood. A form was also forwarded to each, showing the position of parties presupposed by the ballot papers submitted, and at the foot of such form a tabulated blank was provided for the purpose of recording the count. Each returning officer was then invited to send in the results of his count. In addition to the foregoing I drew up, and had printed, a complete set of instructions for the guidance of returning and presiding officers—the first of the kind ever issued in this State. These instructions, which covered every possible contingency to be faced before, during, and after the poll, contained precise information in regard to the counting of votes under the preferential system. I am glad to say that the great majority of the returning officers readily grasped what was required of them in connection with the new provisions of the Act, and it is satisfactory to me to know that the experiment of having a trial count proved of great assistance to all concerned.

"So far as this department is concerned, the conduct of the elections does not, I am pleased to report,

appear to have brought to light any serious defects in the arrangements made.

"As regards the question of preferential voting, I find that in 13 districts only, out of the 40 where contests took place, were more than two candidates nominated, and, consequently, this system of voting used. Speaking generally in regard to the novel method of voting, it would seem that the fears expressed as to the likelihood of a much increased "informal vote list" have not been borne out by experience (the percentage being 1.22 only), although the new system appears to have been better understood in some districts than in others. The result of the preferential voting in the 13 districts shows that in five of them, viz., Guildford, Irwin, Wellington, Williams, and York, the candidates who had the highest number of votes in the first count had also an absolute majority, and it was not necessary, therefore, to proceed further with the preferential votes shown on the ballot papers. In the remaining eight districts, viz., Beverley, Canning, Claremont, Geraldton, Mt. Leonora, East Perth, North Perth, and Swan, it was necessary to resort to a distribution of the preference votes, in order to arrive at an absolute majority. It is worthy of notice, also, that, in all cases, the candidate who, in the first count, had the highest number of first preference votes, was finally elected. Apparently, the change in the system of voting has not embarrassed the electors, and the argument used against the preferential method, viz., that it is difficult to understand, disappears. The sole regrettable phase of the contests in which the new system operated is that "plumping" was so common; although I doubt whether the electors who "plumped" did so with a due appreciation of the results of such action on their part. The percentage of "plump" votes to the total cast at each election where there were more than two candidates is set out in Appendix No. 16F. For particulars in connection with the preferential count, see Appendix No. 16E."

The tables referred to show the following figures —

Total Votes Cast	Plump Votes	Percentage
25,819	8,858	34.31

The working of the preferential vote is shown by tables of which the following gives the voting in the district where the largest number of candidates stood —

BEVERLEY.

	Hopkins	Lennard	Martin	Ricks	E H Smith.	R B Smith.	Whitely	Exhausted.	Total Number Redistributed.	Grand Total.
First count - - -	501	132	14	297	431	12	166	—	—	1,553
First redistribution - -	1	2	2	—	2	—	1	4	12	—
Second count - - -	502	134	16	297	433	—	167	—	—	—
Second redistribution - -	2	2	—	1	4	—	4	3	16	—
Third count - - -	504	136	—	298	437	—	171	—	—	—
Third redistribution - -	22	—	—	21	66	—	12	15	136	—
Fourth count - - -	526	—	—	319	503	—	183	—	—	—
Fourth redistribution - -	19	—	—	24	70	—	—	70	183	—
Fifth count - - -	545	—	—	343	573	—	—	—	—	—
Fifth redistribution - -	132	—	—	—	86	—	—	125	343	—
Final count - - -	677	—	—	—	659	—	—	217	—	1,553

The following pamphlet of instructions to voters was issued.—

THE PREFERENTIAL VOTE.

1.—The Object of the Preferential Vote.

The object of the Preferential Vote is to ensure that the elected candidate shall represent a majority of the electors who voted.

2.—How to Record a Vote Preferentially.

The method of voting preferentially is prescribed by the Electoral Act as follows, viz —

" . . . The elector shall mark the ballot paper by placing the numeral 1 opposite the name of the candidate for whom he votes as his first preference, and he may give contingent votes for the remaining candidates, or any of

them, by placing numerals 2, 3, 4 (and so on as the case requires) opposite their names, so as to indicate by such numerical sequence the order of his preference."

3—*Meaning of the Expression "First Preference"*

The first preference is the selection, by the elector, out of all the candidates, of the candidate whom he wishes to see returned as Member for the constituency. The elector accordingly places opposite that candidate's name the numeral 1

4—*Meaning of Expression "Contingent Vote" or "Second Preference"*

The elector having placed the numeral 1 opposite the candidate's name he wishes to see returned out of all the candidates who nominated, then asks himself or herself the question—"If the candidate against whose name I have placed the numeral 1 were not standing for election, for whom amongst the other candidates would I vote?" The elector, having made a selection amongst the other candidates, marks the numeral 2 opposite the name of the person selected.

5—*The meaning of the Expression "Third Preference"*

The same explanation applies to this expression as to that of "Second Preference," with the addition that the elector makes his selection on the assumption that neither of the two candidates for whom he cast his first and second preference were standing for election

6—*Illustration of the Preferential Vote*

The intention of an elector who has marked his ballot paper as indicated below is as follows—Selecting from all the nominated candidates he has recorded his 1st preference in favour of "Jones", thereby indicating that "Jones" is, amongst all the five candidates who originally nominated, the one whom he would prefer returned to Parliament. He has, however, also recorded his 2nd preference vote in favour of "Smith," thereby indicating that "Smith" is the candidate he would prefer elected if "Jones" had not been a candidate, and he has further recorded his 3rd preference in favour of "Brown," thereby indicating that "Brown" is the candidate he would prefer elected if "Jones" and "Smith" had not been candidates at the election. He has given no preference vote for either "Robinson" or "Watson," thereby indicating that if these candidates were the only two contesting the election he would not be prepared to make any choice between them and is indifferent as to the result.

BALLOT PAPER	
BROWN	3
JONES	1
ROBINSON	
SMITH	2
WATSON	

7.—*The Effect of Marking a Ballot Paper Preferentially.*

In applying this system of a transferable vote to the ballot paper reproduced above, the following is what takes place during the progress of the count—

If, upon the first count (*i.e.*, the count of the 1st preference votes), the candidate "Jones" is found to have more votes in his favour than the total of the votes cast for all other candidates,

thereby constituting an "absolute majority," he is at once declared duly elected, and the elector has had his vote given due effect to. Should it, on the other hand, be ascertained from the result of the 1st count that no candidate has obtained an "absolute majority," and that "Jones" has the lowest number of 1st preference votes, then the Returning Officer declares him "defeated," and proceeds to transfer the votes recorded in his (Jones') favour. When, in course of the count, he reaches the ballot paper now under review, he ascertains that the elector has expressed his 2nd preference in favour of "Smith," and consequently the ballot paper is transferred to, and on the 2nd count counted in favour of, "Smith." Should, upon the 2nd count, "Smith" be found to have an "absolute majority," he is then declared duly elected, and the elector has had his preferential vote given due effect to. Should, however, "Smith" not have obtained an "absolute majority," the ballot paper transferred to him from "Jones" remains in his favour, until it is found that "Smith" at some count has the lowest number of votes. He ("Smith") is then declared "defeated," and the ballot paper transferred to the 3rd preference shown thereon, *viz.* "Brown," if he is then still undefeated.

Any further transfer of the ballot paper under review cannot, however, take place, as no further preferences have been shown on it, and therefore, upon "Brown" (*i.e.*, the last preference shown) being declared "defeated" the ballot paper will be counted out as "exhausted," and the elector has, by his own act of not marking his preference to the full extent of all the candidates, deprived himself of influencing with his vote the final count.

8—*Points to be Remembered.*

(a) The elector's vote only counts once at a time; that is to say, so long as the candidate opposite whose name he has marked the numeral 1 is in the running, and has a chance of being returned, the vote only counts in his favour.

The fact therefore that the elector has marked his ballot paper with a second and third or further preference does not in the smallest degree injure the chance of the man for whom the elector has cast his first vote.

(b) If, however, the man for whom the elector has cast his first vote is at the first, or any subsequent count, found to be at the bottom of the poll, he is then declared defeated, and his name struck out from the list of candidates.

Then, and then only, the ballot paper marked by such elector is examined to see if he has, by marking the numeral 2 opposite any other candidate's name, expressed his desire, if the man of his first choice is defeated, that any one of the other candidates should be elected.

(c) If the elector has exercised his right of marking 2 opposite the name of the candidate he would wish to see elected if his own first choice is defeated, he has still the full rights of an elector in influencing the result, because his vote is then counted in favour of his second choice, and until this second choice is declared defeated the vote only counts for him.

(d) The same reasoning applies to the case of an elector who has exercised his right of marking the numeral 3 opposite the name of the candidate he would wish to see elected if his first and second choice are both defeated. If he has done so he still enjoys his full right as an elector in influencing the result, whereas if he has not done so his wishes cannot be given effect to in determining the final result.

(e) Plumping cannot assist the prospects of a candidate. Plumping, *i.e.*, giving the vote to one candidate only, and abstaining from recording further preference votes, cannot under any possible combination of circumstances assist or improve the prospects of the candidate in favour of whom the elector has recorded his only vote, but the elector runs a great risk of disfranchising himself, which will occur at the moment the candidate, in favour of whom he

voted, is declared "defeated" by the Returning Officer as having, at any count, the lowest number of votes

(f) Recording 2nd and subsequent preference votes cannot affect the prospects of the elector's 1st preference candidate. The elector neither improves, nor damages, the prospects of success of his first preference, by marking 2nd, 3rd, 4th (and so on) preferences in favour of other candidates, because his

2nd preference vote only becomes operative after his first preference candidate has been declared "defeated," and so on in an arithmetical sequence.

E G STENBERG,
Chief Electoral Officer.

Electoral Department,
Barrack Street, Perth,
the 14th July, 1908

APPENDIX 3

SYSTEMS OF ELECTION IN FORCE IN OTHER COUNTRIES.

RELATIVE MAJORITY METHOD

The "relative majority" single-member method is in force, besides the United Kingdom, in the United States, Denmark (for the Lower House), Bulgaria, and Greece.

THE SECOND BALLOT

The *Second Ballot* exists in Austria-Hungary, France, Germany (both for the Reichstag and in most of the States), Italy, the Netherlands, Norway, Roumania, Russia, Servia (for single-member districts), and Switzerland (for the Federal Council).

In France, Norway, Roumania, Russia, and Switzerland all the candidates at a first ballot may stand again at the second, where a relative majority suffices, in the other countries all candidates are eliminated from the second ballot except the two who received the largest number of votes at the first

In some countries a provision is added that a candidate must receive at the first ballot not only an absolute majority of the votes cast, but also a number of votes equal to a definite proportion (one-quarter in France, one-sixth in Italy) of the registered electors

The intervals between the two elections are frequently fixed by law. Thus, in France the second ballot takes place on the second Sunday after the first—*i.e.*, a fortnight, as elections are always held on Sundays, in Italy, after an interval of not less than four or more than eight days

In Austria-Hungary and in some of the German States provision is made for the use of the second ballot in elections for the return of two members, as follows—

Austria-Hungary—If one candidate receives more than half the votes cast, and another more than a quarter, these two are elected. If one obtains more than a half, but no other more than a quarter, a second ballot is held between the second and third candidates to fill the second seat. If no candidate obtains an absolute majority, a second election is held, if still no candidate obtains an absolute majority, a "second ballot" is held between the three highest candidates at the previous election, and the two receiving the greatest number of votes are elected

German States—Candidates obtaining an absolute majority of the votes cast are declared elected. If any seats then remain to be filled, a second ballot is held between a number of the highest candidates at the first election, double the number of seats remaining unfilled.

THE LIMITED VOTE.

In Portugal and in those constituencies in Spain which return more than one member, the *Limited Vote* is used.

PROPORTIONAL REPRESENTATION.

In the following cases systems of proportional representation are in force—

1. *Belgium*.—(See Appendix 4)
2. *Denmark*.—A system of proportional representation is used for the final elections to the Upper

House (Landsting). This House consists of 60 members, of whom 12 are nominated by the King, and the remainder chosen by an electoral body consisting partly of the most highly assessed taxpayers, who vote direct, and partly of deputy-electors elected by a majority vote of those who enjoy the franchise for elections to the Lower House (Folkething)

The law prescribing the method of election is as follows—

"Section 81. The meeting of the voters is public. It is opened by the chairman of the election committee, whose especial duty it is to call the attention of the voters to the fact that they must plainly indicate on the voting papers the names and positions of the candidates for whom they vote. All voters (deputy and direct) must thereupon, in such order as the chairman may decide, present themselves before him. When the elector has been accepted by the election committee, the chairman gives each one in turn a voting paper, which is duly marked and divided to correspond with as many names as there are members for the Landsting to be elected.

"When in response to the call no more voters present themselves to receive a voting paper, the voting is immediately proceeded with, while no discussion may take place in regard to which candidate it is desired to elect

"Section 82. The elections are held in accordance with the rules for proportional representation in the following manner—

"The voting is effected by the voter writing down the names on the voting paper which he has received, *vide* the foregoing section. A voting paper is valid even if only one name has been written on it. The voters have to hand the voting papers to the president of the election committee, in the order prescribed by the election committee. He (the president) receives all the voting papers and counts them over. The number is then divided by the number of the members of the Upper House who are to be elected for the circle. The proportional figure, without considering the fraction, is then taken as the basis for the election

"The voting papers are next placed in an urn made for the purpose and mixed. They are then taken out one by one by the president, who provides them with a consecutive number, and reads aloud the first name on each, while at the same time two other members of the election committee take down the names in writing. The voting papers on which the same name figures at the top are then laid aside together, and as soon as a name has occurred such a number of times that the votes for it have reached the proportional figure mentioned above the reading is stopped. When on counting the voting papers it is found that the number of votes written down is correct, the person in question is declared elected. The voting papers which have been counted over in this way shall not be further considered for the time being

"The reading of the remaining voting papers is then continued, but where the name of the person already elected is found at the top it is struck out and the next name is considered as figuring first. As soon as the above-mentioned number of votes is again reached the same proceeding is repeated, and when this election has been thus completed, the reading is again continued in the same way as already described; the names of those

who are already elected being erased when they are found at the head of the list till all the voting papers have been examined

"Section 83. Should nobody be elected in this manner, or in any case not the total number required for the circle, a scrutiny is made as to who has obtained the highest number of the votes read out, and the remaining elections are decided according to the majority found in this way, provided, however, that nobody shall be considered elected who has not obtained more votes than half of the above-mentioned proportional number. In the event of an equal number of votes being cast, the choice is decided by drawing lots

"Section 84. Should it happen that all the necessary representatives have still not been obtained in this manner, the reading of all the voting papers handed in is repeated until a sufficient number of names, figuring at the top of the papers, of men who have not yet been elected, has been selected to fill the vacant seats. The election is then decided by an ordinary majority of the votes obtained in this manner. In the event of the number of votes being equal, the choice is decided in this case also by drawing lots"

3. *Finland*.—The 200 members of the Landtag are elected by constituencies returning on an average about 10 members. Any group of not less than 50 electors may send in a list of not more than three candidates headed with the name of the place from which it comes and, if desired, a title—"Moderate Liberal," for example, or "Freedom and Order." The same name may appear on more than one list. Groups may indicate that for the purposes of the allocation of seats they wish to be regarded as one "combined list." A voting paper is then constructed containing all the lists sent in, the combined lists being bracketed together and headed in each case "Combined List." A vacant space is left where a voter who does not agree with any list sent in may construct his own. The elector votes by putting 1, 2, 3 against the candidates of the list he votes for in the order of his preference. A first vote counts as 1, a second vote as $\frac{1}{2}$, a third vote as $\frac{1}{3}$. When the votes are counted the candidate who comes out top on each list is credited, for purposes of comparison with other lists, with a number of votes equal to the total votes cast for his list, the second man with half that number, the third man with one-third. The following is an example —

List 1.

(Supported by 1,200 voters)

"Comparison" Number	Candidate	Number	Votes received
1,200	A B	-	1,085
600	" C D	-	705
400	" E F	-	410
<u>2,200</u>			<u>2,200</u>

List 2

(Supported by 1,800 voters)

"Comparison" Number	Candidate	Number	Votes received.
1,800	G H	-	1,750
900	" C D	-	1,035
600	" I K	-	515

If these lists have been handed in as combined lists, a further similar process takes place, thus —

Combined List.

(Supported by 1,800 + 1,200 = 3,000 voters)

"Comparison" Number	Candidate	Number	Votes received
3,000	G H	-	1,750
1,500	" C D	-	1,740
1,000	" A B	-	1,085
750	" I K	-	515
600	" E F	-	410

The "comparison numbers" of all the candidates on all the lists are then put together, and the highest declared elected. For this purpose the comparison numbers of candidates not on the printed lists but

voted for by electors discontented with those lists are the actual number of votes received

4. *Servia*.—The 17 rural electoral districts and three of the 24 boroughs return their representatives (averaging seven or eight) by a proportional method of a simple kind. Any body of voters above a certain minimum may present a list. Each list has an urn to itself and is voted for as it stands. Voting is by papier-maché balls dropped into the urns. Seats are distributed on the basis of a quota obtained by dividing the votes cast by the seats to be filled. The allocation of the votes recorded for a list is effected by attributing in the first place to the candidate at the head of the list a quota of votes and proceeding in this way with the other candidates until the votes in the urn are exhausted. If this process leaves a seat (or seats) unallotted, it is given to the candidate who most nearly approaches the quota.

For bye-elections the whole constituency polls with the second ballot.

5. *Sweden*.—The law introducing proportional representation was finally passed in 1909.

Each voter constructs his own list, unbound by any nomination, arranging his candidates in the order of his preference. He may either head his list with the name of a party or not, as he chooses. The ballot papers with no party name at the top are treated as one "party"—the free groups for the purpose of the distribution of seats. Seats are allotted to the various parties by d'Hondt's method in proportion to the number of votes obtained by each, and the actual candidates to be returned are then determined by a somewhat elaborate method.

6. *Switzerland*.—Proportional representation is in force for the election of the Grand Councils of the Cantons of Geneva, Schwyz, Zug, Soleure, Bâle-Ville, Ticino and Neuchâtel and for the General Council of Berne.

There are minor differences between the systems, but the main features are as follows —

Groups of not less than 20 electors may present lists of candidates. A candidate may only appear on one list. The elector has as many votes as there are deputies to be elected, and may (except in Ticino) distribute them over the lists as he pleases, but may not give more than one vote to any candidate. A vote given to a candidate counts as a vote for the list on which he stands, but if the elector wishes to avoid this he may vote freely without mentioning a list, in which case the votes only count to the candidate as against other candidates on the same list. A quota is obtained by dividing the total number of votes polled by the number of deputies to be elected, or that number *plus* one. The sum of the votes obtained by each list constitutes its electoral number, and it receives as many seats as the times that electoral number contains the quota. This method often leaves a seat or seats unfilled. The odd seat is then given to the list which has already the largest number of seats, or to the list with the largest fraction of a quota. Example—a constituency of 20,000 electors returning four members. Voting is as follows —

List 1		List 2	
Candidate A	- 3,000	Candidate D	- 4,000
" B	- 2,500	" E	- 2,300
" C	- 2,200	" F	- 2,200
	<u>7,700</u>		<u>8,500</u>

List 3

Candidate G	- 2,500
" H	- 800
" I	- 500
	<u>3,800</u>

The quota is $20,000 \div 4 + 1 = 4,001$. List 2 therefore receives two seats, List 1 one seat, leaving one seat unallotted. This goes in some cantons to List 2 as the strongest party, in others to List 3, because it has the largest unused fraction of a quota.

7 *Tasmania*—(See Appendix 5)

8 *Wurttemberg* — In 1906 the “privileged” members of the Lower House (representatives of the baronial nobility, &c), who sat as of right, were removed to the Upper House, and it was decided that the seats so set free should be filled by proportional representation. In all 23 seats out of a House of 91 are thus filled. They form three constituencies, viz., Stuttgart (51,000 electors returning 6 members),

Neckar and Jagst Kreis (260,000 electors returning 9 members), and Donau and Schwarzwald Kreis (226,000 electors returning 8 members).

The system is substantially that of the French Bill (see Appendix 4) with the additional provision that lists may combine for the distribution of seats. Only one election has been held under the system since its introduction in 1906. The results of this election were interesting —

	Socialists		Deutsche Partei		Volkspartei.		Conservatives.		Centre.	
	Votes	Seats	Votes	Seats	Votes	Seats	Votes.	Seats	Votes.	Seats.
Stuttgart - - - -	117,136	3	59,315	1	36,081	1	16,527	1	14,551	0
Neckar and Jagst - - -	508,420	} 4	200,275	} 2	455,180	} 4	370,021	} 3	270,687	} 4
Donau and Schwarzwald - -	230,331		155,325		314,762		160,200		599,401	
Total - - - -	855,887	7	414,915	3	806,023	5	546,748	4	884,639	4

To obtain (roughly) the number of voters in each constituency the numbers given must, of course, be divided by 6, 9, and 8 respectively. It will be observed that owing to the disparity in the number of voters per seat between Stuttgart and the other two constituencies, the Social Democrats obtained 7 seats with less votes than the Centre used to obtain 4. In Stuttgart the Conservative and Centre lists joined forces and so obtained one seat between them which otherwise neither would have got.

APPENDIX 4.

THE BELGIAN AND FRENCH SYSTEMS.

A. Belgium—The following is the text of the Belgian Law of 1899 —

Art 5 Les dispositions suivantes formeront les articles 255 à 267 du Code électoral, où elles figureront sous le titre XI “Représentation proportionnelle”

A (Art 253) L'élection législative se fait en un seul tour de scrutin

Lorsqu'il n'y a qu'un seul membre à élire, le candidat qui a obtenu le plus grand nombre de voix est élu

Lorsqu'il y a plus d'un membre à élire pour l'une des deux Chambres, l'élection se fait conformément aux dispositions du présent code, sauf les modifications résultant des articles 254 à 267 ci-après.

B (Art 254) Lors de la présentation de candidats aux mandats de représentant ou de sénateur, réglée par l'article 164, il peut être présenté en même temps que ceux-ci et dans les mêmes formes des candidats suppléants. Leur présentation doit, à peine de nullité, être faite dans l'acte même de présentation des candidats aux mandats effectifs, et l'acte doit classer séparément les candidats des deux catégories, présentés ensemble, en spécifiant celles-ci

Le nombre des candidats à la suppléance ne peut excéder celui des candidats aux mandats effectifs présentés dans le même acte, ni excéder le maximum de quatre. Toutefois, ce maximum est porté à cinq si la liste comprend sept, huit ou neuf candidats aux mandats effectifs, à six, si elle en comprend davantage

L'acte de présentation des candidats titulaires et suppléants indique l'ordre dans lequel ces candidats sont présentés dans chacune des deux catégories

Un électeur ne peut signer plus d'un acte de présentation de candidats pour la même élection. L'électeur qui contrevient à cette interdiction est passible des peines édictées à l'article 215 du présent code

B² (Art 256) Un candidat ne peut figurer sur plus d'une liste dans la même élection, mais il peut être présenté à la fois comme titulaire et comme suppléant dans la même liste

Nul ne peut être candidat en même temps dans plus d'un collège électoral. Toutefois, on peut être à la fois candidat titulaire pour l'une des deux Chambres et candidat suppléant pour l'autre.

Si le nombre des candidats effectifs et suppléants est supérieur à celui des mandats effectifs à conférer, il y a lieu aux opérations électorales déterminées dans les articles suivants.

D (Art 258) Toutes les listes sont classées dans le bulletin de vote conformément à un ordre déterminé par le tirage au sort, les dernières colonnes sont réservées aux candidats présentés isolément, avec ou sans suppléants.

Les noms des candidats aux places de suppléants sont portés selon l'ordre des présentations dans la colonne réservée à la liste à laquelle ils appartiennent, à la suite des noms des candidats aux places de titulaires, également inscrits dans l'ordre des présentations, et sont précédés de la mention “suppléants”. Une case pour le vote est placée en regard du nom de chacun des candidats titulaires et suppléants

E (Art. 259) L'électeur ne peut émettre qu'un seul vote pour l'attribution des mandats effectifs et un seul vote pour la suppléance.

S'il adhère à l'ordre de présentation des candidats, titulaires et suppléants, de la liste qui a son appui, il marque son vote dans la case placée en tête de cette liste

S'il adhère seulement à l'ordre de présentation des candidats titulaires et veut modifier l'ordre de présentation des suppléants, il donne un vote nominatif à un suppléant de la liste

S'il adhère seulement à l'ordre de présentation des candidats suppléants et veut modifier l'ordre de présentation des titulaires, il donne un vote nominatif au titulaire de son choix.

S'il n'adhère enfin à l'ordre de présentation ni pour les titulaires ni pour les suppléants, et veut modifier cet ordre, il marque un vote nominatif pour un titulaire et un vote nominatif pour un suppléant appartenant à la même liste.

Le vote nominatif se marque dans la case placée à la suite du nom du candidat, titulaire ou suppléant, à qui l'électeur entend donner sa voix.

E¹ (Art 260) Le tableau visé à l'article 186 mentionné pour chacune des listes, classées dans l'ordre de leurs numéros, le nombre des votes de liste et le nombre des suffrages nominatifs obtenus par chaque candidat.

Les votes de liste comprennent les votes marqués en tête des listes (alinéa 2 de l'article 259) et les votes donnés uniquement à des suppléants (alinéa 3 de l'article 259), lesquels sont comptés à la fois comme votes de liste et comme votes individuels pour les suppléants.

F (Art 261) Sont nuls les bulletins qui contiennent plus d'un vote de liste ou qui contiennent, soit pour les mandats effectifs, soit pour la suppléance, plus d'un suffrage nominatif. Sont également nuls les bulletins dans lesquels l'électeur a marqué à la fois un vote en tête d'une liste et à côté du nom d'un candidat, titulaire ou suppléant, ou dans lesquels il a voté à la fois pour un titulaire d'une liste et un suppléant d'une autre liste.

G (Art 262) Le total des bulletins valables favorables à une liste, soit qu'ils contiennent un vote de liste, soit qu'ils contiennent un vote nominatif, constitue le chiffre électoral de la liste.

Ce total est déterminé par l'addition des votes de liste (alinéas 2 et 3 de l'article 259) et des votes nominatifs obtenus par les candidats titulaires.

Les candidatures isolées sont considérées comme constituant chacune une liste distincte.

H (Art 263) Le bureau principal divise successivement par 1, 2, 3, 4, 5, etc., le chiffre électoral de chacune des listes et range les quotients dans l'ordre de leur importance jusqu'à concurrence d'un nombre total de quotients égal à celui des membres à élire. Le dernier quotient sert de diviseur électoral.

La répartition entre les listes s'opère en attribuant à chacune d'elles autant de sièges que son chiffre électoral comprend de fois ce diviseur, sauf application de l'article 264.

Si une liste obtient plus de sièges qu'elle ne porte de candidats, titulaires et suppléants, les sièges non attribués sont ajoutés à ceux revenant aux autres listes, la répartition entre celles-ci se fait en poursuivant l'opération indiquée au premier alinéa, chaque quotient nouveau déterminant, en faveur de la liste à laquelle il appartient, l'attribution d'un siège.

I (Art 264) Lorsqu'un siège revient à titre égal à plusieurs listes, il est attribué à celle qui a obtenu le chiffre électoral le plus élevé et, en cas de parité des chiffres électoraux, à la liste où figure le candidat dont l'élection est en cause qui a obtenu le plus de voix ou, subsidiairement, qui est le plus âgé.

J (Art 265) Lorsque le nombre des candidats titulaires d'une liste est égal à celui des sièges revenant à la liste, ces candidats sont tous élus.

Lorsque ce nombre est supérieur, les sièges sont conférés aux candidats titulaires qui ont obtenu le plus grand nombre de voix. En cas de parité, l'ordre de la présentation prévaut. Préalablement à la désignation des élus, le bureau principal procède à l'attribution individuelle aux candidats titulaires des votes de liste favorables à l'ordre de présentation. Cette attribution se fait d'après un mode dévolutif. Les votes de liste sont ajoutés aux suffrages nominatifs obtenus par le premier candidat de la liste, à concurrence de ce qui est nécessaire pour parfaire le diviseur électoral, l'excédent, s'il y en a, est attribué dans une mesure semblable au deuxième candidat, et ainsi de suite jusqu'à ce que tous les votes de liste aient été attribués.

Lorsque le nombre des candidats titulaires d'une liste est inférieur à celui des sièges qui lui reviennent, ces candidats sont élus et les sièges en surplus sont conférés aux candidats suppléants qui arrivent les premiers dans l'ordre indiqué à l'article 266. À défaut de suppléants en nombre suffisant, la répartition de l'excédent est réglée conformément au dernier alinéa de l'article 263.

K (Art 266) Dans chaque liste dont un ou plusieurs candidats sont élus, les candidats à la suppléance qui ont obtenu le plus grand nombre de voix ou, en cas de parité de voix, dans l'ordre d'inscription au bulletin de vote, sont déclarés 1^{er}, 2^e, 3^e suppléant et ainsi de suite, sans que leur nombre puisse dépasser celui des titulaires élus.

Préalablement à leur désignation, le bureau principal procède à l'attribution individuelle des votes favorables à l'ordre de présentation des suppléants. Le nombre de ces votes s'établit en soustrayant du chiffre électoral

de la liste le nombre des votes nominatifs donnés à ses candidats à la suppléance.

L'attribution des votes à répartir se fait suivant un mode dévolutif. Il sont ajoutés aux votes nominatifs obtenus par le premier candidat suppléant jusqu'à concurrence de ce qui est nécessaire pour parfaire le diviseur électoral. L'excédent, s'il y en a, est attribué dans une mesure semblable au deuxième candidat suppléant et ainsi de suite dans l'ordre de présentation.

Aucune attribution ne se fait au profit des candidats qui sont présentés à la fois comme titulaires et comme suppléants et qui sont déjà désignés comme élus parmi les titulaires.

L (Art 267) En cas de vacance par option, décès, démission ou autrement, si des candidats appartenant à la même liste que le membre à remplacer ont été, lors de l'élection de celui-ci, déclarés suppléants, le suppléant arrivant le premier en ordre utile entre en fonctions. Toutefois, préalablement à son installation comme représentant ou sénateur, la Chambre compétente procède à une vérification complémentaire de ses pouvoirs au point de vue exclusif de la conservation des conditions d'éligibilité.

B. France—Under the influence of the Limited Vote experiment in England of 1867 three or four proposals for proportional representation in municipal or Parliamentary elections were submitted to the French Chamber between 1871 and 1885, but came to nothing. In 1896, under the influence of Belgium, which introduced proportional representation for municipal elections in 1823, the movement revived, but only began to assume importance when the Commission du Suffrage Universel, in a full and valuable document drawn up in 1906 by M. Benoist, recommended the introduction of a system substantially the same as that described in the body of the Report. The recommendation was repeated in 1907 and 1908, with a few alterations in the actual scheme proposed. On October 21, 1909, the various Bills for proportional representation which formed the subject of the Committee's Report came up for discussion in the Chamber of Deputies. In the course of the seven days' debate M. Briand, the head of the Government, delivered two speeches in which, while defending the existing single-member system by an appeal to its results in legislation, he declared himself in favour of a measure of electoral reform. He pointed out, however, that a Bill embodying such drastic changes as those before the House could not and should not be passed within six months of a General Election, when Parliament had its hands full. Moreover, the country was insufficiently prepared for so great a change and had not been properly consulted upon it. M. Briand left the first votes to the decision of the House, and the results were as follows:—By a majority of 382 to 143 the Chamber passed to the discussion of the clauses of the Bill. The first clause ran "Members of the Chamber of Deputies shall be elected by *scrutin de liste*, according to the rules of proportional representation, as follows:—" The words, "Members of the Chamber of Deputies shall be elected by *scrutin de liste*" were passed by 379 to 142, the words "according to the rules of proportional representation" were passed by 281 votes to 235, while the words "as follows (*exposées ci-après*)" were rejected by 580 to 4. Before, however, the whole clause as amended was put, M. Briand stated that as the adoption of the clause would constitute a practical step committing the House to the immediate introduction of some system or other of proportional representation, a step to which at the moment at least the Government was opposed, he would regard such a vote as a vote of want of confidence. The clause was thereupon rejected by 291 to 225.

To understand the voting given above it must be remembered that the term *scrutin de liste* covers any list system, with or without provisions for proportional representation. The French electoral system has alternated frequently since the introduction of universal suffrage in 1848 between the single-member system with the *arrondissement* as the unit and the list system (with the block vote) on the basis of larger

constituencies The first half of the clause, establishing the *scrutin de liste*, united the supporters of proportional representation and of the block vote, the second part showed the strength of the support of proportional representation (281 to 235) The final words "as follows" were submitted for withdrawal by the Suffrage Committee itself, as it was feared that the general success of the clause would be jeopardised if members felt that by voting these words (which could easily be omitted) they were pledging themselves to the Bill as proposed in all its details

The text of the Bill is as follows.—

Proposition de Loi.

Article premier

Les membres de la Chambre des Députés sont élus au scrutin de liste suivant les règles de la représentation proportionnelle exposées ci-après.

L'élection se fait en un seul tour de scrutin

Art. 2.

Chaque département élit autant de députés qu'il compte de fois 75,000 habitants. Toute fraction supérieure à 25,090 habitants est comptée pour le chiffre entier

Toutefois chaque département élit au moins trois députés, sauf le département du Haut-Rhin (territoire de Belfort) qui continuera à élire un député

Art. 3.

Le département forme une seule circonscription Toutefois, lorsque le nombre des députés à élire y est supérieur à 10, le département est divisé en circonscriptions déterminées par une loi

Art 4.

Une liste est constituée par le groupement des candidats qui, ayant fait la déclaration de candidature exigée par l'article 2 de la loi du 17 juillet 1889, se présentent conjointement aux suffrages des électeurs

Elle ne peut comprendre plus de noms qu'il n'y a de députés à élire dans la circonscription, mais elle peut comprendre un nombre moindre de noms Les candidatures isolées sont considérées comme constituant chacune une liste distincte

Art 5

Le dépôt de la liste est fait à la préfecture à partir de l'ouverture de la période électorale et au plus tard cinq jours francs avant celui du scrutin. La préfecture l'enregistre, la numérote et en délivre récépissé à chacun des candidats

Ne peuvent être enregistrés que les noms des candidats dont la signature a été apposée sur la liste. L'enregistrement est refusé à toute liste portant plus de noms qu'il n'y a de députés à élire

Aucun des candidats déjà inscrit sur une liste ne peut être inscrit sur une autre, à moins d'avoir notifié à la préfecture, par exploit d'huissier, sa volonté de se retirer de la première, d'où son nom est aussitôt rayé

Vingt-quatre heures avant l'ouverture du scrutin, les listes enregistrées doivent être affichées, avec leur numéro, à la porte des bureaux de vote par les soins de l'administration préfectorale

Art 6

Chaque électeur dispose d'autant de suffrages qu'il y a de députés à élire dans sa circonscription.

L'électeur peut accumuler la totalité ou plusieurs de ses suffrages sur le même nom.

Les procès-verbaux des bureaux de vote constatent le nombre de suffrages recueillis par chaque candidat.

Art 7.

La Commission de recensement centralise les procès-verbaux des bureaux de vote, établit la masse électorale de chaque liste et répartit les sièges entre les listes au prorata de leur masse électorale.

La masse électorale de chaque liste est la somme des nombres de suffrages respectivement obtenus par les candidats appartenant à cette liste.

Art 8.

Pour répartir les sièges entre les listes, chaque masse électorale est successivement divisée par 1, 2, 3, 4, jusqu'à concurrence du nombre des sièges à pourvoir, et les quotients obtenus sont inscrits par ordre d'importance, jusqu'à ce qu'on ait déterminé dans cet ordre autant de quotients qu'il y a de députés à élire dans la circonscription Le plus petit de ces quotients, correspondant au dernier siège à pourvoir, sert de diviseur commun Il est attribué à chaque liste autant de députés que sa masse électorale contient de fois le diviseur commun

Art. 9.

Dans chaque liste les sièges sont dévolus aux candidats ayant obtenu le plus de suffrages, et, en cas d'égalité de suffrages, aux plus âgés.

Art 10.

S'il arrive qu'un siège revienne à titre égal à plusieurs listes, il est attribué, parmi les candidats en ligne, à celui qui a recueilli le plus de suffrages individuels, et, en cas d'égalité de suffrages, au plus âgé

Art. 11.

Les candidats non élus de chaque liste qui ont recueilli le plus grand nombre de voix sont classés premier, deuxième, troisième suppléant et ainsi de suite

En cas de vacance par décès, démission ou toute autre cause, les suppléants seront appelés, suivant le rang de leur inscription, à remplacer les titulaires de la même liste, pourvu qu'ils jouissent, à ce moment, de leurs droits politiques.

Art. 12.

Si, plus de six mois avant la fin d'une législature, la représentation d'une circonscription est réduite d'un quart et qu'il ne se trouve pas de suppléant susceptible d'être proclamé député, il est procédé dans cette circonscription à des élections complémentaires.

Art 13

La présente loi est applicable à l'Algérie Il n'est rien innové en ce qui concerne la représentation des colonies.

APPENDIX 5.

THE TRANSFERABLE VOTE

A. Tasmania.—Principal provisions of the Tasmanian Electoral Act of 1907.—

119 At every election votes shall be recorded in manner following—

I No name shall be struck out from any Ballot-paper,

II In every case in which only One Member is to be elected for any District the voter shall mark his Ballot-paper in the manner following—

(a) He shall place the number 1 within, or substantially within, the square opposite

the name of the candidate for whom he votes as his first preference,

(b) He shall also (where there are more than Two candidates) give contingent votes for at least Two of the remaining candidates, by placing within, or substantially within, the squares respectively opposite their names the numbers 2 and 3, so as to indicate the order of his preference;

(c) He may, in addition, indicate the order of his preference for as many more

- of the other candidates (if any) as he pleases, by placing within, or substantially within, the squares respectively opposite their names other numbers next in numerical order after those already used by him
- III. In every case in which more than One candidate is to be elected for any District the voter shall mark his vote upon the voting paper in the manner following.—
- (a) He shall place within, or substantially within, the squares respectively opposite the names of Three candidates the numbers 1, 2, and 3, so as to indicate the order of his preference,
- (b) He may, in addition, indicate the order of his preference for as many more candidates as he pleases, by placing within, or substantially within, the squares respectively opposite their names other numbers next in numerical order after those already used by him.

127—(1) A Ballot-paper shall be informal if—

- I It is not initialed by the presiding officer or
- II It has no vote indicated on it or
- III It has upon it any mark or writing not authorised by this Act to be put upon it which in the opinion of the Returning Officer would enable any person to identify the voter or
- IV It contains the same number opposite the names of more than One candidate
- V In any case where more than One Member is to be elected, the number of candidates marked in the order of the voter's preference is less than Three of the number of Members to be elected
- VI In any case where only One Member is to be elected, and there are more than Two candidates, the voter has not indicated the order of his preference for at least Three of the candidates

(2) A Ballot-paper shall not be informal for any reason other than the reasons in this section enumerated, but shall be given effect to according to the voter's intention so far as his intention is clear

129 In the case of every election for a District in which there is more than one Polling-place, the presiding officer of each Polling-place, except the chief Polling-place, shall, as soon as practicable after the close of the Poll, open the Ballot-box, and shall—

- I Count the number of first choices recorded for the respective candidates, and place them in separate parcels, according to the names of the candidates for whom such first choices are recorded, rejecting all informal voting-papers
- II Count the number of, and place in another parcel, all the voting-papers which have been rejected as informal
- III Transmit the following information by telegram, or in some other expeditious manner, to the Returning Officer for the District—
 - (a) The number of first choices recorded for each candidate, and
 - (b) The total number of voting-papers rejected as informal—
 and shall immediately thereafter make out and sign an abstract containing the above information

130—(1) In the case of every election for a District the Returning Officer shall, as soon as practicable after the close of the Poll, proceed with the scrutiny as follows—

- I He shall open the Ballot-box used at the principal Polling-place, and all the sealed parcels of Ballot-papers received by him from the several presiding officers, and verify the contents of such parcels
- II He shall then count the votes in the manner prescribed in the Schedule (4) to this Act
- III He shall make out and sign an abstract of the result of the Poll

- IV. Except as provided in the Schedule (4), he shall not vote at any election at which he is a Returning Officer
- V As soon as may be practicable after he has counted all the votes, openly, at the chief Polling-place, declare the names of the persons duly elected at such election.

SCHEDULE 4,

In this Schedule, unless the contrary intention appears—

- “Returning Officer” means the Returning Officer for the District
- “Quota” means the number of votes sufficient to elect a candidate
- “Surplus” means the number of votes which a candidate has obtained, at any stage of the scrutiny, over and above the quota
- “First choice recorded for a candidate” means a voting-paper on which the number 1 is placed in the square opposite the name
- “Second choice recorded for a candidate” means a voting-paper on which the number 2 is placed in the square opposite his name
- “Transfer value” means that portion of a vote which is unused by—
- (a) an elected candidate who has obtained a surplus,
 - (b) a candidate excluded on account of his being lowest on the Poll, and which is therefore transferred to the candidate next in the order of the voter's preference The transfer value of all votes is either 1 or some fraction of 1

Method of Counting Votes where One Member only has to be returned for a District

1 The number of first choices recorded for each candidate shall be counted, and all informal ballot-papers shall be rejected

2 The candidate obtaining an absolute majority of votes shall be elected

An absolute majority of votes means a number greater than One-half of the whole number of ballot-papers other than exhausted and informal ballot-papers

The casting vote of the Returning Officer shall be included in reckoning an absolute majority of votes

3 If no candidate has an absolute majority of votes, the candidate who has the fewest votes shall be excluded, and each ballot-paper counted to him shall (unless exhausted) be counted to the unexcluded candidate next in the order of the voter's preference

4 If no candidate then has an absolute majority of votes, the process of excluding the candidate who has the fewest votes and counting each of his ballot-papers (unless exhausted) to the unexcluded candidates next in order of the voter's preference, shall be repeated until one candidate has an absolute majority of votes

5 Every ballot-paper, not rejected as informal, shall be counted in every count until it becomes exhausted, when it shall be rejected in all further counts When a candidate is excluded, any ballot-paper counted to him shall be deemed to be exhausted if there is not indicated upon it a consecutive preference for one unexcluded candidate

6 If on any count two or more candidates have an equal number of votes and one of them has to be excluded, the Returning Officer shall decide which is to be excluded, and if in the final count two candidates have an equal number of votes, the Returning Officer shall decide by his casting vote which shall be elected, but otherwise no Returning Officer shall vote at any election

Method of Counting Votes where more than One Member has to be returned for a District

1. The number of first choices recorded for each candidate shall be counted, and all informal voting-papers shall be rejected.

2. The aggregate number of such first choices shall be divided by one more than the number of candidates required to be elected, and the quotient increased by one, disregarding any remainder, shall be the quota,

and (except as hereinafter provided in Rule 10) no candidate shall be elected until he obtains a number of votes equal to or greater than the quota.

3. Any candidate who has, upon the first choices being counted, a number of such votes equal to or greater than the quota shall be declared elected.

4. Where the number of such votes obtained by any candidate is equal to the quota, the whole of the voting-papers on which a first choice is recorded for such elected candidate shall be set aside as finally dealt with.

5. Where the number of such votes obtained by any candidate is in excess of the quota, the proportion of votes in excess of the quota shall be transferred to the other candidates not yet declared elected, next in the order of the voter's respective preferences, in the following manner —

- i. All the voting papers on which a first choice is recorded for the elected candidate shall be re-examined, and the number of second choices, or (in the case provided for in Rule 12) third or next consecutive choices, recorded for each unelected candidate thereon shall be counted.
- ii. The surplus of the elected candidate shall be divided by the total number of votes obtained by him on the counting of the first choices, and the resulting fraction shall be the transfer value.
- iii. The number of second or other choices, ascertained in paragraph 1 to be recorded for each unelected candidate shall be multiplied by the transfer value.
- iv. The resulting number, disregarding any fractional remainder, shall be credited to each unelected candidate, and added to the number of votes obtained by him on the counting of the first choices.

6.—(a) Where, on the counting of the first choices or on any transfer, more than one candidate has a surplus, the largest surplus shall be first dealt with. If then more than one candidate has a surplus, the then largest surplus shall be dealt with, and so on. Provided that, if one candidate has obtained a surplus at a count or transfer previous to that at which another candidate obtains a surplus, the surplus of the former shall be first dealt with.

(b) Where two or more surpluses are equal, the surplus of the candidate who was the highest on the poll at the count or transfer at which they last had an unequal number of votes shall be first dealt with; and if they have had an equal number of votes at all preceding counts or transfers, the Returning Officer shall decide which candidate's surplus shall be first dealt with.

7.—(a) Where the number of votes obtained by a candidate is raised up to or above the quota by a transfer as aforesaid, he shall thereupon be declared elected. And in such case, notwithstanding the fact that he may have reached the quota, such transfer shall be completed, and all the votes to which he is entitled therefrom shall be transferred to him, but no votes of any other candidate shall be transferred to him.

(b) Where the number of votes obtained by a candidate is raised up to, but not above, the quota by a transfer as aforesaid, the whole of the voting-papers on which such votes are recorded shall be set aside as finally dealt with.

(c) Where the number of votes obtained by a candidate is raised above the quota by a transfer as aforesaid, his surplus shall be transferred to the candidates next in the order of the voter's respective preferences, in the following manner —

- i. The voting-papers on which are recorded the votes obtained by the elected candidate in the last transfer shall be re-examined, and the number of third, or (in the case provided for in Rule 12) next consecutive choices recorded for each unelected candidate thereon counted.
- ii. The surplus of the elected candidate shall be divided by the total number of voting-papers mentioned in paragraph 1, and the resulting fraction shall be the transfer value.

iii. The number of third (or other) choices, ascertained in paragraph 1 to be recorded for each unelected candidate, shall be multiplied by the last-mentioned transfer value.

iv. The resulting number, disregarding any fractional remainder, shall be credited to each unelected candidate, and added to the number of votes previously obtained by him.

8.—(a) Where, after the first choices have been counted and all surpluses (if any) have been transferred as herebefore directed, no candidate, or less than the number of candidates required to be elected, has or have obtained the quota, the candidate who is lowest on the poll shall be excluded, and all the votes obtained by him shall be transferred to the candidates next in the order of the voter's respective preferences, in the same manner as is directed in Rule 5.

(b) The votes obtained by such excluded candidate as first choices shall first be transferred, the transfer value of each vote in this case being 1.

(c) The other votes of such excluded candidate shall then be dealt with in the order of the transfers in which, and at the transfer value at which, he obtained them.

(d) Each of the transfers which takes place under the two previous clauses of this rule shall be deemed for all purposes to be a separate transfer.

9.—(a) Where the number of votes obtained by a candidate is raised up to or above the quota by any such transfer as aforesaid, he shall thereupon be declared elected. And in such case, notwithstanding the fact that he may have reached the quota, such transfer shall be completed, and all the votes to which he is entitled therefrom shall be transferred to him, but no other votes shall be transferred to him.

(b) Where the number of votes obtained by a candidate is raised up to, but not above, the quota by any such transfer as aforesaid, the whole of the voting-papers on which such votes are recorded shall be set aside as finally dealt with.

(c) Where the number of votes obtained by a candidate is raised above the quota by any such transfer as aforesaid, his surplus shall be transferred to the candidates next in the order of the voters' respective preferences in the same manner as is directed by Rule 7 clause (c). Provided that such surplus shall not be dealt with until all the votes of the excluded candidate have been transferred.

(d) Where any surplus exists it shall be dealt with before any other candidate is excluded.

10. The same process of excluding the candidate lowest on the poll and transferring to other candidates his votes shall be repeated until all the candidates, except the number required to be elected have been excluded, and the unexcluded candidates, who have not already been so declared, shall then be declared elected.

11. Where at any time it becomes necessary to exclude a candidate, and two or more candidates have the same number of votes and are lowest on the poll, then whichever of such candidates was lowest on the poll at the last count or transfer at which they had an unequal number of votes shall be first excluded, and if such candidates have had an equal number of votes at all preceding counts or transfers the Returning Officer shall decide which candidate shall be first excluded.

12. In determining what candidate is next in the order of the voter's preference, any candidates who have been declared elected or who have been excluded shall not be considered, and the order of the voter's preference shall be determined as if the names of such candidates had not been on the voting-paper.

13. Where on any transfer it is found that on any voting-paper there is no candidate opposite whose name a number is placed, other than those who have been already either declared elected or excluded, such voting-paper shall be set aside as exhausted.

B. The rules proposed by the English Proportional Representation Society, and embodied in the Municipal Representation Bill of 1908, are as follows —

RULES FOR THE TRANSFER OF VOTES AND FOR ASCERTAINING THE RESULT OF THE POLL

Arrangement of Ballot-papers

1 After the ballot-papers have been mixed, in accordance with the rules contained in the First Schedule to "The Ballot Act, 1872," the returning officer shall draw out all ballot-papers which he does not reject as invalid and file in a separate parcel those on which the figure 1 is set opposite the name of the same candidate. The returning officer shall then count the number of papers in each parcel

Ascertainment of Quota

2. The returning officer shall then add together the numbers of the papers in all the parcels and divide the total by a number exceeding by one the number of vacancies to be filled, and the result increased by one, disregarding any fractional remainder, shall be the number of votes sufficient to secure the return of a candidate, herein called the "quota."

Candidates with Quota elected.

3 Any candidate whose parcel contains a number of papers equal to or greater than the quota shall be declared elected

Transfer of Surplus Votes.

4—(1) If the number of candidates elected under the last rule shall not equal the number of vacancies the returning officer shall as far as possible transfer from each elected candidate the votes (if any) in excess of the quota (herein called surplus votes) to the candidates indicated on the ballot-papers as next in order of the voters' preference, excluding candidates already declared elected. The votes of the candidate having the largest number of votes shall first be dealt with, and the particular votes to be transferred shall be determined in accordance with the following regulations —

- (a) The returning officer shall arrange all the ballot-papers in the parcel of the elected candidate on which votes capable of transfer are given by filing in a separate sub-parcel those on which a next preference is indicated for some one continuing candidate
- (b) The returning officer shall also make a separate sub-parcel of the ballot-papers in the parcel on which the votes given are not capable of transfer
- (c) The returning officer shall count the ballot-papers in each sub-parcel, and also the total of all the ballot-papers containing votes capable of transfer
- (d) If the total number of votes capable of transfer is equal to or less than the surplus votes the returning officer shall transfer all the votes capable of transfer
- (e) If the total number of votes capable of transfer is greater than the surplus votes, the returning officer shall transfer from each sub-parcel of votes capable of transfer the number of votes which bears the same proportion to the total of the sub-parcel as the number of surplus votes bears to the total of all the votes capable of transfer.
- (f) The number of votes to be transferred from each sub-parcel under the preceding regulation shall be ascertained by multiplying the total of the sub-parcel by the number of surplus votes and dividing the result by the total number of votes capable of transfer. Fractional remainders shall be disregarded
- (g) The particular votes transferred from each sub-parcel shall be those last filed in the sub-parcel.

(2) The transfer of surplus votes shall be effected by making new sub-parcels of the ballot-papers on which those votes are given, and adding those sub-parcels to the parcels (if any) of the candidates to

whom the transfers are made, or, where any such candidate has as yet no parcel, a new parcel shall be formed for him from the papers transferred.

(3) All ballot-papers in a parcel of an elected candidate not transferred under this rule shall be set aside as finally dealt with, and the votes given thereon shall henceforth not be taken into account.

(4) If two or more parcels of elected candidates are equal in size, the returning officer shall decide which parcel he will first deal with under this rule

(5) A transfer of votes under this rule shall not be made unless the surplus votes of the elected candidate, together with any other surplus votes not transferred exceed the difference between the totals of the votes of the two continuing candidates lowest on the poll

(6) This rule shall take effect subject to the provisions for filling the last vacancy hereinafter contained, and if at any time it shall be possible to fill the last vacancy under those provisions no further transfer under this rule shall be made

Result of Transfer.

5. After the transfer of the surplus votes of an elected candidate any candidate who shall as a result of the transfer obtain the quota of votes shall be declared elected.

Further Transfer of Surplus Votes.

6—(1) Unless and until the last vacancy shall have been filled under the provisions hereinafter contained, if, after the transfers directed by Rule 4, there shall still remain a vacancy, and the votes of any elected candidate to whom a transfer has been made are in excess of the quota, the returning officer shall, as far as possible, take from the sub-parcel last transferred to that candidate a number of votes equal to the surplus

(2) The particular votes to be taken shall be determined in accordance with the regulations given in Rule 4 hereof, in the same manner as if the votes included in the sub-parcel last transferred had been the only votes given to the candidate, the ballot-papers so taken shall be added in separate sub-parcels to the parcels of the continuing candidates (if any) indicated thereon as next in order of the voters' preference, and the votes given thereon shall be transferred to those candidates accordingly. Where any such candidate has as yet no parcel, a new parcel shall be formed for him from the papers transferred

(3) The remaining ballot-papers in the parcel of the elected candidate (including the ballot-papers taken from the parcel under Sub-Rule (1), on which the votes are not capable of transfer) shall be set aside as finally dealt with, and the votes given thereon shall henceforth not be taken into account

(4) After any transfer of votes under this rule any candidate who shall as a result of the transfer obtain the quota of votes shall be declared elected

(5) The process directed by this rule shall be repeated until the last vacancy is filled, or until no candidate has any surplus votes, whichever shall first happen

(6) If two or more parcels shall be equal in size, regard shall be had to the number of votes counted to each candidate under Rule 1, and the parcel of the candidate highest on that count shall first be dealt with, but if the numbers of votes on that count were equal the returning officer shall decide which parcel he will first deal with under this rule

(7) A transfer of votes under this rule shall not be made unless the surplus votes of the elected candidate, together with any other surplus votes not transferred, exceed the difference between the totals of the votes of the two continuing candidates lowest on the poll

Distribution of Votes of Lowest Candidate.

7—(1) Unless and until the last vacancy shall have been filled under the provisions hereinafter contained, if after the transfers under the preceding rules there shall still remain one or more vacancies, or if no candidate shall have been declared elected under Rule 3, the returning officer shall exclude from the poll the candidate having the lowest number of votes, and shall distribute the votes capable of transfer on the ballot-papers in his parcel among the continuing

candidates next in order of the voters' preference Any ballot-papers in the parcel on which votes not capable of transfer are given shall be set aside as finally dealt with, and the votes given thereon shall henceforth not to be taken into account

(2) If in any case the total of the votes of the two or more candidates lowest on the poll, together with any surplus votes not transferred, is less than the votes of the next highest candidate, the returning officer may in one operation exclude those candidates from the poll and distribute their votes in accordance with the foregoing provisions.

(3) After the distribution under this rule of votes capable of transfer any candidate who has received the quota shall be declared elected.

(4) The surplus votes of any candidate elected under this rule who has received more than the quota shall be distributed in the manner directed by, and subject to the conditions of, the last preceding rule.

Further Distributions

8 The process directed by the last rule shall be repeated on the successive exclusions one after another of the candidates with the lowest number of votes until the last vacancy is filled, either by the election of a candidate with the quota, or under the next following rule

Filling the Last Vacancy

9—(1) When the number of continuing candidates is reduced to the number of vacancies remaining unfilled, the continuing candidates shall be declared elected

(2) When only one vacancy remains unfilled and the votes of some one continuing candidate exceed the total of all the votes of the other continuing candidates, together with any surplus votes not transferred, that candidate shall be declared elected.

(3) When more than one vacancy remains unfilled and the votes of the candidate, who, if all the vacancies were filled by the successive elections of the continuing candidates with the largest numbers of votes, would be the last to be elected, exceed the total of all the votes of the continuing candidates with fewer votes than himself, together with any surplus votes not transferred, that candidate and all the other continuing candidates who have not less votes than himself shall be declared elected

(4) When only one vacancy remains unfilled and there are only two continuing candidates, and those two candidates have each the same number of votes, and no surplus votes remain capable of transfer, one candidate shall be declared excluded under the next following rule and the other declared elected

Provisions for Exclusion of Candidates in Special Cases.

10 If at any time when a candidate has to be excluded under these rules two or more candidates have each the same number of votes, regard shall be had to the number of votes counted to each candidate under Rule 1, and the candidate lowest on that count shall be excluded; but if the number of votes on that count were equal the returning officer shall decide which candidate shall be excluded

Public Notice of Transfers

11. The returning officer shall record and give public notice of any transfer of votes made under these rules, and of the total number of votes counted to each candidate after any such transfer, in addition to the particulars described by Rule 45 to the First Schedule to "The Ballot Act, 1872." Such public notice may be in accordance with the form given in the appendix to these rules.

Recounts.

12.—(1) Any candidate or his agent may at any time during the counting of the votes, either before the commencement or after the completion of the transfer of the votes (whether surplus or otherwise) of any candidate, request the returning officer to recount the papers then comprised in the parcels of all or any candidates (not being papers set aside as finally dealt with), and the returning officer shall

forthwith recount the same accordingly. The returning officer may also, at his discretion, recount votes either once or more often in any case in which he is not satisfied as to the accuracy of any previous count Provided that nothing herein shall make it obligatory on the returning officer to re-count the same votes more than once

(2) If upon an election petition—

(i) any ballot-papers counted by the returning officer are rejected as invalid, or

(ii) any ballot-papers rejected by the returning officer are declared valid.

the court may direct the whole or any part of the ballot-papers to be recounted, and the result of the election ascertained, in accordance with these rules.

(3) Except as in this rule expressly provided, no recount shall be had whether on an election petition or otherwise

Determination of Questions as to Transfers.

13—(1) If any question shall arise in relation to any transfer the decision of the returning officer, whether expressed or implied by his acts, shall be final, unless an objection is made by any candidate or his agent before the declaration of the poll, and in that event the decision of the returning officer may be reversed upon an election petition

(2) If any decision of the returning officer is so reversed, the transfer in question, and all operations subsequent thereto, shall be void, and the court shall direct what transfer is to be made in place thereof, and shall cause the subsequent operations to be carried out, and the result of the election to be ascertained in accordance with these rules.

Definitions.

14. In these rules—

(1) The expression "votes capable of transfer" means votes given on ballot-papers on which a further preference is indicated for a continuing candidate

Provided that a vote shall be deemed not capable of transfer in any case in which—

(a) The names of two or more candidates (whether already excluded from the poll or declared elected or not) are marked with the same figure and are next in order of preference, or

(b) The name of the candidate to whom the transfer is to be made or of some candidate (whether continuing or not) higher in the order of the voters' preference is marked—

(i) by a figure not following consecutively after some other figure on the ballot-paper, or

(ii) by two or more figures

(2) The expression "continuing candidates" means candidates not already declared elected or excluded from the poll

C. A Committee was appointed after the General Election in Tasmania in 1909, and reported as follows on the working of the system and the comparative merits of the Tasmanian and Municipal Representation Bill Rules —

SCOPE OF THE REPORT.

1. This report is confined to a description of the conduct of the General Election, 1909, and to a consideration of certain alterations which have been suggested for improving the single transferable vote system of proportional representation. Accordingly, we have not dealt with the general political questions connected with proportional representation, nor have we considered how far other systems, such as the list systems in use in most of the countries of Europe, and the mark system would be suitable for use in Tasmania. At the same time, we have included in the tables of the Appendix much information which, though not necessary for the main purpose of our report, will be of value in the discussion of other systems.

The Rules of "The Electoral Act, 1907."

2 The rules in Schedule (4) of "The Electoral Act, 1907," are adapted from a Bill introduced in the Parliament of South Australia in July, 1906, and from a Bill laid before the Commonwealth Parliament in August, 1906, neither of which became law.

3 Their distinguishing features, as compared with the rules of "The Electoral Act, 1896" (commonly called in Tasmania the "Hare-Clark system"), are the use of the Gregory fractional method of transfer of surpluses, and the use of the Droop quota in place of the higher Hare quota.

4 The Gregory fractional method of transfer is discussed in para 20.

5 The use of the Droop quota has been criticised. This quota is now advocated almost universally in place of the Hare quota, but it seems desirable to state shortly the reasons for using it in place of the Hare quota.

The Hare quota (so called from its use by Thomas Hare, the originator in England of proportional representation by single transferable vote) is the number obtained by dividing the number of valid votes by the number of members to be elected. This quota was used in "The Electoral Act, 1896."

The Droop quota (so called after Mr H R Droop, a Cambridge mathematician, who advocated it in 1868 and 1869) is obtained by dividing the number of valid votes by one more than the number of members to be elected, and adding 1.

Thus, in the case of a constituency of 4,200 voters, electing six members, the Hare quota is one-sixth of 4,200 (or 700), and the Droop quota is one more than one-seventh of 4,200 (or 601).

6 Considering an election as a contest between candidates, it is clear that a candidate who obtains, in the instance given in paragraph 5, the Droop quota (601 votes) has more votes than it is possible for each of six other candidates to obtain, and therefore the first-mentioned candidate has sufficient votes to entitle him to election. Even if the Hare quota is used, any candidate who obtains a number of votes equal to the Droop quota is elected, for the reason stated in the last sentence; and a candidate who obtains the Hare quota receives an excess of votes which are not really required by him, and which are therefore wasted. Hence it is clear that, considering an election as a contest between candidates, the Droop quota is to be preferred to the Hare quota.

We take the following extract from a pamphlet, entitled "Proportional Representation in Large Constituencies," by Walter Baily (London, Ridgway, 1872) —

"We have still to consider what is the sufficient number of votes to be retained for each candidate. The rule in use in Denmark (and adopted by Mr Hare, for finding this number, which is called the quota) is to divide the number of votes by the number of members to be elected. This is simple, but still it is wrong. For example, if we apply Mr. Hare's plan to an election of two members, in which 100 votes are given—70 for *A* first, and then *B*, and 30 for *C*—we should obtain the quota by dividing 100 by 2; and then retaining this quota of 50 votes for *A*, we should hand over 20 votes to *B*, and the votes would then stand, *A* 50, *C* 30, *B* 20, and therefore we should have *A* and *C* elected. And yet it is clear that, as 70 is more than twice 30, *A* and *B* should have been the candidates elected.

"The number of votes to be retained for a candidate must be enough to make his election certain, whatever combination may be made of the other votes given in the election. The smallest number which will suffice for this is the true quota, all votes retained beyond this number are wasted. There is no difficulty in finding this number. Suppose that two members have to be elected, we must retain for a candidate votes enough to insure his being one of the first two, and this we shall do if we retain for him just over a third of the whole number of votes given. It is impossible for three persons each to have more than one-third of the votes, so that any candidate who has more than one-third by ever so little is certain to be one of the first two, in whatever way the rest of the votes may

be distributed. In the same way, we see that if five members have to be elected, a candidate who has more than one-sixth of the votes will certainly be one of the first five, and therefore elected, and so for any other number of members. The rule, then, for finding the true quota is this—Divide the number of votes by the number just above that of the members to be elected, and take as a quota the number just above the quotient.

"In the example given above, the true quota just exceeds one-third of 100. It is therefore 34. The 70 votes given to *A*, *B*, will then be divided into 34 for *A*, 34 for *B*, and 2 over. *C* has only 30 votes, and the result is that *A* and *B* are elected, and it is clear they should be.

"It will be observed that some votes are wasted. This must needs be, whatever mode of election is adopted. If a constituency has only one member, a candidate who gets a bare majority will be elected, and it will be of no moment whether the remaining votes are for him or against him. All except the bare majority can have no effect upon the election, and may be considered as wasted. But as the number of members is increased, the unavoidable waste is diminished. With five members the effective votes for each will just exceed one-sixth, and therefore the waste votes will just fall short of the remaining sixth, in fact, the unavoidable waste will always just fall short of the true quota."

7 But these arguments do not decide the superiority of one quota over the other if an election is considered, not as a contest between candidates, but as a contest between parties. For here we have to consider the possibility of one or more candidates of a party securing election on less than a quota, and so obtaining for their party an amount of representation in excess of its proportional share. With the Hare quota it is very easy for a party to secure excessive representation by returning several candidates with less than the quota. With the Droop quota this is impossible in a two-party contest (except when papers become exhausted through the neglect of voters to give a preference to each candidate of their party), and in a contest between more than two parties disproportional representation would probably occur much less frequently with the Droop quota than with the Hare quota.

Take the case of an election of six members by 210 voters, 63 of whom belong to party *A*, and 147 to party *B*, and assume the Hare quota is used. Party *A*, having roughly one-third of the voters, is entitled to two members, and party *B* to 4. When all candidates but seven have been excluded, the state of the poll might be that the five remaining candidates of party *B* had respectively 30, 30, 29, 29, 29 votes each (total 147), and the two remaining candidates of party *A* 35 and 28 each (total 63). The candidate lowest on the poll has now to be excluded, that is, the *A* candidate with 28 votes is excluded, and there are left six candidates—five of party *B*, and one of *A*, who are declared elected. That is, party *A* instead of getting two members, has got only one, and party *B*, instead of four members, has got five.

Now this has happened solely because the use of the Hare quota (35) has wasted the four votes which the *A* candidate, with 35 votes, had in excess of the Droop quota (31). If the Droop quota had been used, this surplus of four would have been distributed before the exclusion of the lowest candidate. It would naturally have gone to the other candidate of the party, whose votes would thus have been raised from 28 to 32; and the candidate excluded as lowest on the poll would then have been one of the *B* candidates. Thus, the result would have been the correct result—party *A*, two members; party *B*, four members.

It is interesting to note in passing that if, in the election for Franklin, the Hare quota had been used, and if there had been no cross-voting between the candidates of the Labour Party and other candidates by voters who gave their first preferences to non-labour candidates, and no exhaustion of the papers of such voters, the Labour Party would have secured only one member in place of the two to whom it was entitled in proportion to the number of its supporters.

There are a large number of cases in which the Hare quota produces disproportional representation. On the other hand, there are some cases in which the Droop quota, for another reason, does the same. The comparison of the merits of the two quotas, therefore, involves an examination of the range of values in which these cases occur. This has been made by one of the writers (E. L. Piesse) and L. F. Giblin, who, by an argument unsuitable for this report, have shown that in a two-party contest for a six-member electorate, in which votes do not become exhausted through a voter failing to vote for all the candidates of his party, the Hare quota may be in error to the extent of one member for a range about three times as great as that in which the Droop quota can be in error. It, therefore, follows that in a two-party contest, as in a contest between two members, the Droop quota is superior to the Hare quota.

A similar comparison in a three-party contest has been made for particular cases only.

The Scrutiny at the General Election

8 As the rules contained in Schedule (4) of "The Electoral Act, 1907," had not been used previously at a parliamentary election, several mock elections were held prior to the general election to gain experience of the working of the rules and of the most efficient arrangements for conducting the scrutiny. It was at first intended to adopt the arrangement of staff and method of recording preferences used at the election of 1897 (see R. M. Johnston, "Observations on the Working Results of the Hare System of Election in Tasmania," Proc Roy Soc Tas 1897, p. 75, at pp. 82, 83, and pamphlet pp. 18, 19), but these arrangements were, after a test, abandoned in favour of the much more efficient method used at the Proportional Representation Society's model election, held in December 1908 (see Journal of the Proportional Representation Society, December 1908, p. 107).

9 The furniture of the room in which the scrutiny was carried out was arranged as follows—The Returning Officer's table at the head of the room, a long sorting-table in the centre of the room, and counting-tables (one for each candidate) on either side of the sorting-table.

On the Returning Officer's table was placed a set of pigeon-holes (one for each candidate), with pigeon-holes for informal and exhausted papers, all suitably labelled, and also a similar set of open boxes, with the like labels.

On the sorting-table were placed sets of open sorting-trays (one for each sorter), with the same labels as the pigeon-holes, and each counting-table had a similar set of trays, and was labelled with the name of the candidate whose papers were being counted at it. At each counting-table was one counting-clerk.

10 The parcels of ballot-papers received from the polling-places for each district were opened by the Returning Officer at the head table, and were distributed by messengers among the sorters at the sorting-table. The sorters sorted them according to the first preference, at the same time examining them for informalities and placing in the compartment for informals for reference to the Returning Officer any which seemed to be irregular. The sorters did not count the papers. Messengers collected from all the sorting-trays the papers on which a particular candidate had the first preference, and took them to the table at which his papers were being counted. The counter counted them into bundles of 50 each, at the same time checking the sorting, and also examining the papers for informalities. Each bundle of 50 was checked, and the totals for each candidate added up. Any papers found to have been mis-sorted were sent to the correct tables.

The papers were then done up in bundles (one for each candidate), and were brought up to and placed in the open boxes at the head table, where an assistant returning officer labelled them, and called out the numbers to another assistant returning officer, who recorded them on the scrutiny abstract. The papers were then placed in the appropriate pigeon-holes at the head table.

The second and subsequent counts were made in the same way, the assistant returning officer in charge

of the scrutiny abstract taking the parcel of papers required for the count from the pigeon-holes, and checking the totals returned by the counters, when the count was completed, with the number given out.

Whenever a candidate became elected or excluded his label was removed from the counting and sorting-trays, so that no further choices should be counted to him.

At the head table, in addition to the Returning Officer and assistant returning officers, were two counting-clerks, who made the calculations required in transferring votes, and assisted in labelling the packets. The calculations were also checked by an arithmometer in the case of the Franklin, Denison, and Wilmot scrutines.

11. The staff employed was as follows,—

Bass	25
Darwin	14
Denison	40
Franklin	27
Wilmot	26

In the Denison and Franklin scrutines the staff was reduced after the distribution of surpluses obtained at the first count.

As a sorter was able to go through papers more quickly than a counter, two counters were employed for each sorter.

It was not found possible to employ the whole staff continuously, as many of the counts were small. With the experience now gained we think that in future a smaller staff will be sufficient.

12 The scrutiny could not be commenced until the ballot-papers from all the polling-places of the district had reached the Returning Officer. This necessarily involved a delay of some days in four of the districts, but the rough result of the counting of the first preferences, conducted at each polling-place and sent in by telegraph, was announced on the night of the election. The counting of the first preferences at the polling-places was not relied on for the scrutiny, and all papers were re-examined and counted again at the chief polling-place for the district.

The time occupied in the scrutiny at the chief polling places for the districts was as follows—

	Hours
Bass	15
Darwin	11
Denison	11
Franklin	9
Wilmot	10

The poll closed in each district at 6 p.m. on 30th April.

All the ballot-papers for Denison reached the Returning officer at 9.30 p.m. on the night of the poll. The scrutiny was commenced at 10 p.m., and was continued through the night to 9 a.m. next morning when it was concluded, and the result announced.

The scrutiny for Bass was concluded on 4th May, for Darwin on 4th May, for Franklin on 5th May, and for Wilmot on 3rd May.

13 An advantage of the scrutiny, not possessed by a scrutiny under the ordinary method of voting, is that the counting of most of the parcels at the first count, and of many of the parcels at other counts, is checked again by the recounting of the parcels at subsequent counts. The number of miscounted or mis-sorted papers discovered at subsequent counts was very small. In Denison, where there were over 19,000 examinations of papers, only three miscounted papers and three mis-sorted papers were found. It was possible to rectify most of these errors immediately they were discovered, and none of them, even if not rectified, could have affected the result of the election. The number of miscounted and mis-sorted papers in the other districts was equally small, and in no district could the result of the election have been affected in any way by these errors.

General Observations on the Election

14 The working of the system, from the point of view of Returning Officers, was an unqualified success. No serious difficulty of any kind was found

APPENDIX

in conducting the scrutiny. The scrutines for two of the districts were carried out in country towns, where the number of persons available for choice of a staff was small, but here, as elsewhere, no serious difficulty was found.

15 From the point of view of the electors, it is of interest to examine the number of informal ballot-papers. These amounted in each district, except Wilmot, to less than 3 per cent, and in the case of Wilmot, to 3.44 per cent, of all the ballot-papers, and the average for the whole of Tasmania was 2.86 per cent.

The percentages of informal ballot-papers in previous elections are shown in Table II. In comparing one election with another, it is to be remembered that changes in the method of voting, whether by striking out the names of the candidates objected to, by placing crosses opposite the names of the candidates voted for, or by numbering in order of preference the candidates voted for, and the varying strictness of Electoral Acts, are responsible for some of the variations in the percentages of informal papers shown by this table.

The percentage of informal ballot-papers was higher than at the General Election for the House of Assembly in 1906, but lower than at the Federal Election of December, 1906.

16 The principal discussions in regard to the Hare system are concerned with the extent to which it will or will not provide representation for what are called "sectional interests," and as to the advantages or disadvantages which attend such representation. This matter we regard as outside the scope of an official report. The facts on which to base an opinion as to how far "sectional interests" did or did not secure representation are difficult to ascertain, and are not known to us officially. It may, however, be permissible to state that there were several "lists" of candidates published for the guidance of electors and supported by various organisations. Some comment has been made because persons supporting these lists did not secure the amount of representation which, as it was supposed, they might have obtained under the former system of single electorates, but it has not been shown that this is due to any other cause than the insufficient numbers of the supporters of the various lists. An examination of the scrutiny abstracts shows that there was so much cross-voting between the supporters of the various lists that (except in regard to candidates supported by the Labour Party) it is impossible to discuss the amount of representation obtained by each.

The voters who gave their first preference to candidates of the Labour Party, however, appear to have voted for all the candidates of their party, and rarely for any other candidates, and it is accordingly permissible, for the purposes of the following calculation, to assume the number of voters who supported the Labour Party to be equal to the number who gave their first preferences to candidates of the party. Hence we obtain the following table—

District	Number of Voters who supported the Labour Party (i.e., voters who gave first preferences to candidates of the Labour Party)	Total Number of other Voters	Number of Members to which Labour Party entitled in proportion to number of its supporters	Number of Members returned by the Labour Party
Bass	3275	5795	2 17	2
Darwin	5493	3912	3 51	4
Denison	3218	8119	1 70	2
Franklin	3448	6837	2 01	2
Wilmot	3633	5230	2 46	2
ALL	19,067	29,893	11 69	12

The Labour Party therefore obtained exactly the number of members in each electorate to which it was entitled, in the case of Darwin and Wilmot the

number of members nearest to representation for each

Examination of Amendments for Improving the Schedule (4)

17 In the year 1908 a Bill for the Proportional Representation Society in capital boroughs in England to adopt a system of proportional representation and approved by a Select Committee of the House of Lords, and was passed by that House, but, however, pass through the House of Commons.

This Bill contains a system of proportional representation very similar to that of "The Electoral Act, 1907," of Tasmania, but the rules for the scrutiny (which, it is stated in the journal of the Proportional Representation Society, December, 1908, p. 111, are based on the Tasmanian Act of 1896) differ in several details from the Tasmanian rules to the Act of 1907. We proceed first to examine these differences.

18 We have classified the rules contained in the first schedule to the Municipal Representation Bill, 1908, which differ materially from the Tasmanian rules, for convenience of reference, according as, (a) their adoption in place of or in addition to the corresponding Tasmanian rules could not alter the result of an election, or (b) their adoption might occasionally alter the result.

(a) Rules which could not alter the result of an election—

- (i) The provision—Rule 4, sub-rule (5)—for the postponement of the transfer of a surplus, if the surplus, together with any other surpluses not transferred, does not exceed the difference between the totals of the two continuing candidates lowest on the poll,
- (ii) The provision—Rule 7, sub-rule (2)—for the simultaneous exclusion of two or more candidates if the total of their votes, together with any surpluses not transferred, is less than the votes of the next highest candidate,
- (iii) The provision—Rule 9, sub-rule (2)—for the filling of the last vacancy if the votes of one unelected candidate exceed the votes of all other continuing candidates, together with any surpluses not transferred, and
- (iv) The similar provision—Rule 9, sub-rule (3)—for filling two or more vacancies.

(b) Rules which might occasionally alter the result of an election—

- (i) The provision, in the transfer of surpluses, for selecting for transfer a number of papers equal to the number of surplus votes in place of transferring all papers containing the votes which produced the surplus,
- (ii) The provision for raising the transfer-value in cases where some of the papers containing the votes which produced the surplus have no further available preference marked on them.

19 The rules (a) are ingenious provisions which, by decreasing the number of counts and transfers, would shorten the work of the returning officer. The addition of any one or more of them to the Tasmanian rules could in no wise alter the result of an election, subject only to the unimportant qualification (in respect of which they are superior to the Tasmanian rules) that the number of votes lost by omitting fractional remainders might be less than with the present Tasmanian rules.

We recommend that, when opportunity offers, the rules (a) should be added to the Tasmanian rules.

20 The rule (b) (i) is a return to the Electoral Act of 1896. In the system advocated by Hare, a surplus was distributed by selecting at random from the papers of the elected candidate a number of papers equal to the surplus, and by transferring one vote to each candidate for each of these selected papers on which he had the next choice. The votes obtained by other candidates from the surplus of an elected candidate would thus depend on the particular selection made by the returning officer.

The alteration in the rule is Methodsh and aga. Bill. Electing of the St. electoral it could b surplus to number of mended value and approved by a Select Committee of the House of Lords, and was passed by that House, but, however, pass through the House of Commons.

The result of the selection of papers by the returning officer was pointed out as a defect by critics. On the 1868 Mr H R Droop, in his pamphlet "On Droop of Electing Representatives" (Macmillan), comparison in 1881, in a paper "On the Methods of Involving a Representative," published in the Journal of the Statistical Society for June, 1881, showed that writers (he avoided by the expedient of distributing a surplus of unelected candidates in proportion to the number of papers in the whole parcel producing the surplus) in a selection only from the parcel on which a candidate was given the next preference. Mr Droop did not, however, recommend this plan, as he thought it impracticable and unnecessary.

The distinguishing feature of "The Electoral Act, 1896," of Tasmania (now repealed) was the adoption, for the first time in practice, of rules for distributing a surplus in the way proposed by Mr Droop. And the result of the elections held under that Act showed that there was no difficulty in applying these rules, at least in an election in which only a few thousand papers were to be counted.

According to the rules of "The Electoral Act, 1896," all the papers in the parcel which produces a surplus are re-examined, and the number of next choices for each continuing candidate counted. Each continuing candidate then gets a share of the surplus proportionate to the number of next choices recorded for him on all the papers of the parcel. Thus far the rules are the same as those of "The Electoral Act, 1907," of Tasmania, and of the Municipal Representation Bill, and there is as yet no possibility of chance in the operation of the returning officer affecting the distribution of votes.

The rules of "The Electoral Act, 1896," and of the Municipal Representation Bill then provide that from the papers on which each continuing candidate has the next choice shall be taken at random a number of papers equal to the number of votes obtained by the candidate from the surplus. These selected papers are thereafter treated as worth one vote each, and if it becomes necessary to examine them again (for instance, if the candidate to whom they are transferred is subsequently excluded), each of them is worth one vote each to the candidate having the next available choice.

It is clear that these rules allow of chance influencing the result of the election, not in respect of the votes obtained by the candidates who share in the surplus (since these votes are not determined by a random selection), but in respect of the votes obtained from them by other candidates, if and when it becomes necessary to transfer the votes of the candidates who share in the surplus. One selection of papers may contain a large proportion of papers on which a candidate, A, has the next choice after the candidate sharing in the surplus, another selection may contain a small proportion of such papers. Consequently, from the former A would get more votes, if the papers were again transferred, than from the latter.

This remaining element of chance is got rid of by what is called Gregory's fractional method of transfer, and this is embodied in the rules of Schedule (4) to "The Electoral Act, 1907," of Tasmania.

By this method, ascribed by Professor E. J. Nanson in his pamphlet "The Real Value of a Vote and How to Get It" (pp 16, 22) to Mr J. B. Gregory, of Melbourne, all papers in the parcel producing the surplus are transferred each to the candidate having the next choice thereon, and each with a fractional value. If, for instance, 80 papers produce a surplus of 19 votes, each paper is transferred to the next candidate thereon as worth nineteen-eightieths of a vote. There is here no random selection of papers, and no possibility of chance affecting the result. Each paper receives its correct value, and this value it retains through the remainder of the election. If the papers are again dealt with, each candidate having the next available choice after the candidate sharing in the surplus obtains nineteen-eightieths of a vote from each paper when the papers are again examined. No operation of the returning officer affects the number of votes any candidate gets, and each paper has a total value of one vote, and none a value of more than one vote, in determining who shall be elected.

The rules of "The Electoral Act, 1907," therefore get rid completely of any possibility that a chance selection of papers by the returning officer may affect the result.

But the additional rules necessary to do this increase the work of the returning officer. It is therefore a matter of some interest to determine whether the additional rules are really required.

Calculations of eminent mathematicians have been published in the Journal of the Proportional Representation Society and elsewhere which show that the element of chance in Hare's system, which was removed by the rules of the Tasmanian Act of 1896, would not (with constituencies of 25,000) affect an election more than about once in 10,000 years. These calculations are doubtless based on some simple assumptions as to the shuffling of ballot-papers, and as to the frequency of close contests, but our experience in the recounts which we have made, as mentioned below, leads us to doubt whether any simple assumptions as to shuffling can be made. The ballot-papers as they come in from the polling-places are found to be in sets—in one set there will be a large number of consecutive papers on which A is 1 and B is 2, in another set a large number of consecutive papers on which A is 1 and C is 2, and so for subsequent preferences—and no amount of sorting, mixing, and shuffling which is practicable with a large number of pieces of paper can be relied on to produce the same average distribution in all parts of a large packet. If a random selection is made of a part only of the packet, the proportion of papers on which B has the next choice may be much greater, or much less, than in the whole packet. We think, then, that there can be no question that the improvements contained in "The Electoral Act, 1896" are indispensable. The further question, whether the removal of the much less important element of chance got rid of under "The Electoral Act, 1907," by Gregory's fractional method of transfer is worth the additional labour it entails, is also, we think, incapable of satisfactory treatment by calculations based on probabilities, and we accordingly report in full detail the results of the recounts we have made.

We refer to Table XII (suggested to us by an interesting calculation made by Mr R. M. Johnston in "Observations on the Working Results of the Hare System of Election in Tasmania," Proc Roy Soc Tas., 1897, p 75), which shows the number of votes of which the distribution might have been altered if Rule (b) (i) of the Municipal Representation Bill, 1908, for the transfer of surpluses had been used at the late election in place of the corresponding rules of "The Electoral Act, 1907." From this table it appears that the percentage of votes of which the distribution might have been altered, varied from 4.14 per cent in Franklin to 0.51 per cent in Denison, and that the average for all the districts was a little more than 2 per cent. These figures show that the percentage of votes which might be affected is small, yet the number of votes which might be affected in a large constituency would be important in a close contest.

It can also be shown from the scrutiny abstracts for Darwin and Wilmot that no possible alteration in the distribution of votes which could be produced by using the Rule (b) (i) could affect the result of the elections for these districts, the reason being that the contests in these districts were not close. Similar results could not be predicted from the abstracts for the other districts.

Having obtained this information, we proceeded to perform the scrutiny for each district in accordance with the rules of the Municipal Representation Bill. At the beginning of each re-scrutiny the papers were put back into the packets they were in at the end of the first count at the General Election; that is, the papers were in the packets into which they had been sorted according to number 1 choices, and some packets contained sub-packets sorted according to the number 2 choices. This was done so that the labour of the recount might be shortened as much as possible, by using the sorting done at the General Election. But great care was taken to shuffle thoroughly any packets whose previous sorting might vitiate the comparison to be made between the results according

to the two sets of rules, and we believe that the papers were shuffled as thoroughly as they could ever be at an election.

The re-scrutiny for each district was then carried out according to the rules of the Municipal Representation Bill. The result was, that in each district the same candidates were excluded in the same order, and the same candidates were returned, as at the General Election.

The same results would therefore have been obtained, and much labour saved, if the rules of the Municipal Representation Bill had been used.

But a comparison of the scrutiny abstracts will show that there are serious alterations in the distributions of the votes. These alterations would affect close contests, and if close contests were frequent we should think it undesirable that such alterations should be possible. We have no information from which we can judge how frequent close contests are.

Tables X, XI, and XIII contain further comparisons between the results of using the two sets of rules.

The principal disadvantage of the Gregory fractional method of transfer is that it involves a large number of small transfers. Whilst these transfers are being carried out the greater part of the staff must remain idle. The examinations of the papers for these transfers do not take a long time, but the arranging and labelling of the papers is tedious, and requires great care. With the rules of the Municipal Representation Bill the number of transfers is much decreased, small transfers are rare, the whole staff is kept employed more continuously, and the results can be obtained in a shorter time. Thus we estimate that the Denison scrutiny, which occupied 11 hours with the Tasmanian rules, could have been completed under the rules of the Municipal Representation Bill in five or six hours, the Franklin scrutiny, in place of nine hours, could probably have been finished in about five hours.

This saving of a few hours is not of great importance, but the difference in the times occupied would become much greater if there were more candidates and a larger number of papers. The larger the number of papers the greater is the number of transfers required with the Gregory fractional method of transfer, and consequently the greater the amount of time spent in arranging in packets and labelling. We consider that if the number of candidates exceeded by more than 12 the number of members to be elected, the labour required by the Gregory fractional method of transfer would become intolerable, and we should hesitate to recommend it for constituencies of over 20,000 voters returning more than, say, eight members. But we think there would be no great difficulty in working the system for constituencies returning not more than six members if the number of candidates was not more than double the number of members to be elected, however large the number of voters. The additional labour required by the Gregory method increases much more with an increase in the number of candidates than with an increase in the number of voters.

The case, however, is different for the small constituencies which we have in Tasmania, and we are of opinion that, for these constituencies, it is unnecessary to abandon the Gregory fractional method of transfer in favour of Rule (b) (1) of the Municipal Representation Bill.

21 The Rule (b) (1) seems to us to be unnecessary, and we think it operates unjustly. A striking instance of the way in which it may alter the distribution of a surplus appears from the scrutiny abstracts for Bass, according to the rules of the Municipal Representation Bill. At the last count (transfer of Mr Sadler's surplus) Mr Mackenzie obtained, with the use of this rule, 145 votes, in place of 75 which he would have obtained if the Tasmanian transfer-value had been used. It happened that this did not affect the result,

but cases would often occur when such a large alteration in the distribution of a surplus would result in the return of another candidate. The effect of the rule is magnified, too, by the larger surpluses which occur with the rules of the Municipal Representation Bill.

Recommendations for Amendment of "The Electoral Act, 1907"

22 The adoption of rules (a) has been recommended in par 19.

We think that the rules fixing the transfer-value should be amended so as to compel the use of the decimal form of the fraction in place of the vulgar fraction. The amendment should provide that the first four figures following the decimal point obtained by dividing the number of surplus votes by the number of papers producing it shall be taken as the transfer-value, no approximation being made for the value of the fourth figure.

Section 127 (iv) of the Act should be amended so that a paper which has the same number (not being the number 1, 2, or 3) opposite the names of more than one candidate shall not be informal, but shall be treated as if there were no preference marked on it subsequent to the number next below the number which is repeated.

Provision should also be made for the case in which there is a gap in the sequence of numbers (e.g., a paper which has the preferences 1, 2, 3, 5, 6, but not the preference 4).

P C DOUGLAS
E L PRESSE
W A BIRCHALL

The Honourable the Chief Secretary

D. South Africa—At the first meeting of the South African National Convention, in February 1909, the adoption of a system of proportional representation for all elections under the proposed new Constitution was agreed to by the delegates. At the subsequent meeting at Bloemfontein, however, the proposal was abandoned as far as the Union House of Assembly and the Provincial Councils were concerned. Proportional representation was, therefore, only retained for the Executive Committees of the Provincial Councils and for the Union Senate. The Government, however, subsequently applied it to municipal elections in Johannesburg and Pretoria. The Union Senate elections have not yet been held, but the two municipal elections took place in November last. In both cases the Transferable Vote was used and proved a complete success from a practical point of view. At Johannesburg 22 candidates stood for 10 seats. About 12,000 votes were cast, of which some 300 (2½ per cent) were spoiled for reasons peculiar to the system—a small proportion when the mixed character of the population is considered, and also the fact that votes marked "No 1," "No 2," instead of "1," "2," only, were discarded as informal.

The verification of votes and counting, with a staff of 60 all told, took about eight hours. Preferences as late even as a thirteenth and a fourteenth actually came into use. The results appear to have been generally regarded as fair. In Pretoria six seats were filled from 13 candidates on a poll of about 3,000 votes.

A report upon the elections by Mr J H Humphreys, Hon Sec of the Proportional Representation Society, London, and Supervisor of the elections on behalf of the Transvaal Government, has been published by the Transvaal Government (Transvaal Proportional Representation, T = G 5—10). His final conclusion is as follows—

"68 The introduction of the new method of voting has, in my opinion, been a complete success, and the municipal elections have furnished abundant evidence of the advantages arising from the use of the single transferable vote."