

ONE PERSON, ONE VOTE. WHAT'S THE INTERPRETATION?

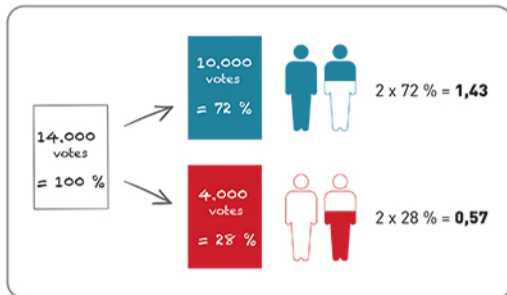
PROPORTIONALITY AND INDIVISIBILITY MIGHT BE DIFFICULT TO COMBINE.

TWO APPROACHES

1. Obtain the proportion of seats for each party and distribute the seats in two stages.

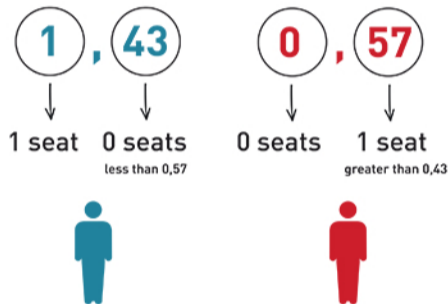
2. Allocate seats counting the number of votes that each seat represents.

2 SEATS TO BE DISTRIBUTED



But a seat is indivisible!

First stage Distribute the "whole" seats.
Second stage Distribute the rest of seats according to the largest decimal part.

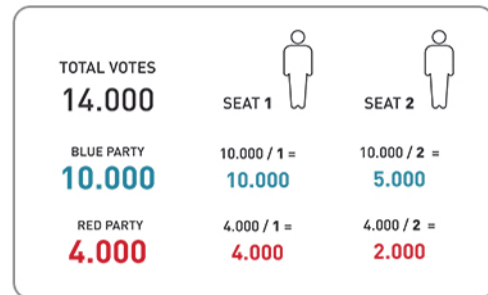


This method is called the rule of Hamilton-Hare.

CRITICISM: There might appear problems of proper representation. Observe that the seat of the Blue Party represents 10,000 votes, whereas the seat of the Red Party only represents 4,000 votes.

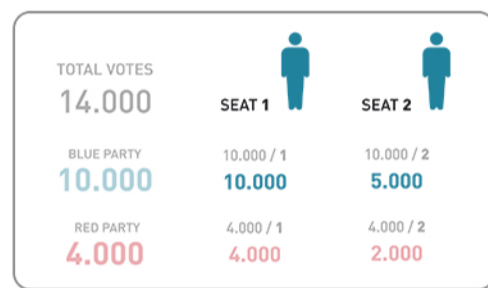
Is there a way to get a more egalitarian representation?
See the next approach.

2 SEATS TO BE DISTRIBUTED



Seats are distributed according to the highest results.

The Blue Party gets 2 seats, each representing 5,000 votes. The Red Party doesn't get any seat, given that it only has 4,000 votes.



This method is called the rule of Jefferson - d'Hondt.

TERRITORIALITY AND PROPORTIONALITY MIGHT BE DIFFICULT TO COMBINE.

In an electoral system, the electors should be represented by people "close to them". For that reason, every territory should have some representative.

Electoral systems allocate the seats to constituencies first, according to the number of citizens and ensuring a minimum number of seats. After that, the seats are allocated to the parties in function of the number of votes received.

The design of the constituencies can surprisingly modify the outcome of the elections!

Consider the following example:

Imagine a very small state, with only 50 voters:

- 20 of them vote for the Red Party, and the other 30, for the Blue Party.
- The House of Representatives is made up of 5 seats, to be allocated to the parties.

We also know that the "geographical" distribution of the voters obeys a perfect grid like the following one:



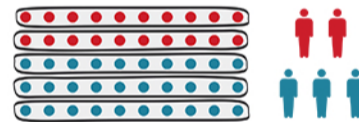
Based on these data:

- We have designed an electoral system with as many constituencies as available seats, each of them with the same population of 10 voters. (This practice of designing as many constituencies as available seats is commonplace, among other places, in the United States and the United Kingdom.)
- Next, we assign the seat in each constituency to the most voted party. The methods of Hamilton and Jefferson coincide with this assignment; in fact, any other alternative (assigning the seat to the least voted party) seems ludicrous.

To continue, we present three different designs for the constituencies, and we compare the outcome of the elections. How can the interpretation of "proximity" or "territoriality" alter the final composition of the chamber?

CASE 1. Proximity is interpreted horizontally:

In this case, the chamber consists of 2 red representatives and 3 blue ones.



CASE 2. Proximity is interpreted vertically:

In this case, the chamber consists of 0 red representatives and 5 blue ones.



Is there any design of constituencies giving the majority of the chamber to the Red Party?

CASE 3. A creative design:

In this case, the chamber consists of 3 red representatives and 2 blue ones.



To learn more...



«One person, one vote» entails that suffrage must be universal (everybody can vote), but also that all votes should have the same "value". So, the proportionality principle plays a central role.



But,



What does proportionality mean in the setting of indivisible goods (seats in the chamber)?

What about territoriality?

How can they be brought together?

Does "more seats" always imply "more power"?

«That which cannot be done in a perfect manner must be done in a manner as close as possible to perfection.»

(Daniel Webster)