

Classroom Exercise

1. In a country far away, the students of a university have organized themselves into a Student Federation to lobby for a better quality education. Decisions regarding their federation are made by simple vote in meetings between the presidents of the student centers of the different careers.

Today, the university authorities have agreed to sit down to negotiate with the students and the issue on the table is the definition of the percentage of the university's income that will go to scholarships and the percentage that will go to fund research (assume that these are the only activities that the university carries out). 35% of the resources currently go to scholarships and the remaining 65% to research. The authorities have asked students: "Do you like it this way or do you want to propose another distribution?". If the students are not able to present a proposal, this issue will be considered closed and the current percentage will be maintained in the next budget. Negotiations will continue tomorrow on other issues such as rooms, infrastructure, curricula, etc.

- a) In what range will the proposal presented by the students be placed if the ideal distribution of each leader is the one included in the following table and the preferences of each one is symmetrical around this ideal distribution (the type of preferences we saw in class as "single peaked preferences"):

| School representative of: | % for scholarships | % for research |
|---------------------------|--------------------|----------------|
| Education | 85 | 15 |
| Sociology | 75 | 25 |
| Nursing | 65 | 35 |
| History | 55 | 45 |
| Psychology | 45 | 55 |
| Journalism | 35 | 65 |
| Law | 25 | 75 |
| Medicine | 15 | 85 |
| Commercial Engineering | 5 | 95 |
| Civil Engineering | 0 | 100 |

- a) Under the Median Voter Theorem, what Will be the Federation's proposal?
- b) When the negotiations started a week ago and due to time pressure and the multiplicity of issues to be addressed, the students had decided to divide the tasks into groups or committees. The task of these committees is to make proposals to the Federation (the 10 schools) which the Federation must vote on whether to support or not (i.e., they must say whether they prefer things as they are -status quo- or whether they support proposing the changes indicated by the committee). If the committee's proposal is accepted, the Federation proposes it to the university authorities. If not, the Federation announces that they have no changes to propose in this matter. Finally, the students established that in case of an internal tie (5 votes for the proposal and 5 for the status quo) the proposal indicated by the committee is selected. What are they going to propose? Assume that the committee is made up of representatives from Education, Sociology, Nursing, History and Psychology. How does this scenario change your answer to question (a)?
- c) What proposal would the committee in question (b) submit if the current distribution of resources for scholarships and research were different? Obtain a prediction for each possible distribution of resources.
- d) Suppose now that the Federation rules include the following clause. "A proposal made by a committee to the Federation may be vetoed if 4/5 of the excluded representatives of the group reject

it. If this occurs, the Federation shall not submit reform proposals to the authorities on those items.
How does your answer in (c) change by incorporating this rule?

From your answers in (c) and (d), what is the power of the committee, and what is the veto power of those excluded from the committee?