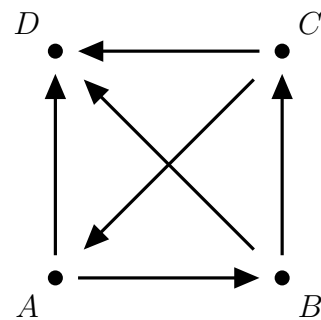


Homework 7: Chapters 4 and 5

Reading: Chapter 5**Exercises:**

- 4.3, 4.5 (Solutions), 4.6 (Solution).
- 5.3 - prove that Smith fair methods are Condorcet fair directly by definition, not by the sneaky thing from class. (Solution). (on a quiz, either a nicely written version of the proof from class or the direct proof would be acceptable.)
- 5.2 (Solution)
- Finish our computation for the example from class:

| | | | | | |
|----------|----------|----------|----------|----------|----------|
| 1 | 2 | 1 | 1 | 2 | 2 |
| <i>D</i> | <i>D</i> | <i>D</i> | <i>A</i> | <i>B</i> | <i>C</i> |
| <i>A</i> | <i>B</i> | <i>C</i> | <i>B</i> | <i>C</i> | <i>A</i> |
| <i>B</i> | <i>C</i> | <i>A</i> | <i>C</i> | <i>A</i> | <i>B</i> |
| <i>C</i> | <i>A</i> | <i>B</i> | <i>D</i> | <i>D</i> | <i>D</i> |



First compute S to verify that D is the only one with the power to be a weak spoiler. Make sure you understand what that means. Then check if D is a weak spoiler for:

- Plurality
- Runoff
- Instant Runoff/Elimination
- Pairwise Comparison
- Borda Count

Next Quiz: There will be a proof or counterexample type question on the next quiz! It will be one of the questions from this homework or the [Chapter 4 homework](#).