Biased Voting

In-class Experiment Recap
Experiment 1

● Preference rule
  ○ Born on even day of month -> red
  ○ Born on odd day of month -> blue
  ○ 28 preferred red
  ○ 35 preferred blue
    ■ So there was a notable blue majority

● Network definition
  ○ Connected to geographic neighbors
  ○ Maximum of 10

● Converged to blue
  ○ 6 played red
Experiment 1: Degree Distribution

[Bar chart showing geographic network degree distribution with degree on the x-axis and number of students on the y-axis. The bars are for degrees 4 to 10 with the highest number of students at degree 5 and the lowest at degree 10.]
Experiment 2

- **Preference rule**
  - Same as Experiment 1

- **Network definition**
  - Connected to people whose first name you know

- **Converged to** blue
  - 11 played red
Experiment 2: Degree Distribution

Social Network Degree Distribution

Number of Students

Degree

1 2 3 4 5 6 7 8 9 10 11 12
At this point we noticed that a bias towards blue had emerged in the class -- the red players knew that their only option was to play blue and receive one point.

As a result, for the remaining experiments, we created new preference rules.
Experiment 3

- **Preference rule**
  - Ones digit of birthday is 0 - 4 -> orange
  - Ones digit of birthday is 5 - 9 -> green
  - 31 preferred orange
  - 32 preferred green

- **Network definition**
  - Connected to your own gender
  - 5 “green shirts” are connected to everyone

- **Converged to orange**
  - 11 played green
  - 4 of the 5 connectors preferred orange
Experiment 4

- Preference rule
  - Born on day of the month 1 - 15 -> pink
  - Born on day of the month 16 - 31 -> black
  - 31 preferred pink
  - 32 preferred black

- Network definition
  - Connected to your own gender
  - 11 “blue eyes” are connected to everyone except other blue eyes

- Converged to black
  - 3 played pink
  - Interestingly, 8 of the 11 connectors preferred pink
  - Anecdotal evidence suggests class first preferred pink, but there was a late shift to black
Experiment 5

- **Preference rule**
  - Born in odd month -> **yellow**
  - Born in even month -> **purple**
  - 31 preferred **yellow**
  - 32 preferred **purple**

- **Network definition**
  - Connected to adjacent birthday months (not your own)
  - Thus, your neighbors’ preferences by definition disagreed with your own

- **Did not converge**
  - 27 played **yellow**
  - 36 played **purple**
  - Almost everyone just played their preference
Points Distribution

Highest scorers:

Amitoj Singh
Bomin Kim
Doug Cotler