# 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
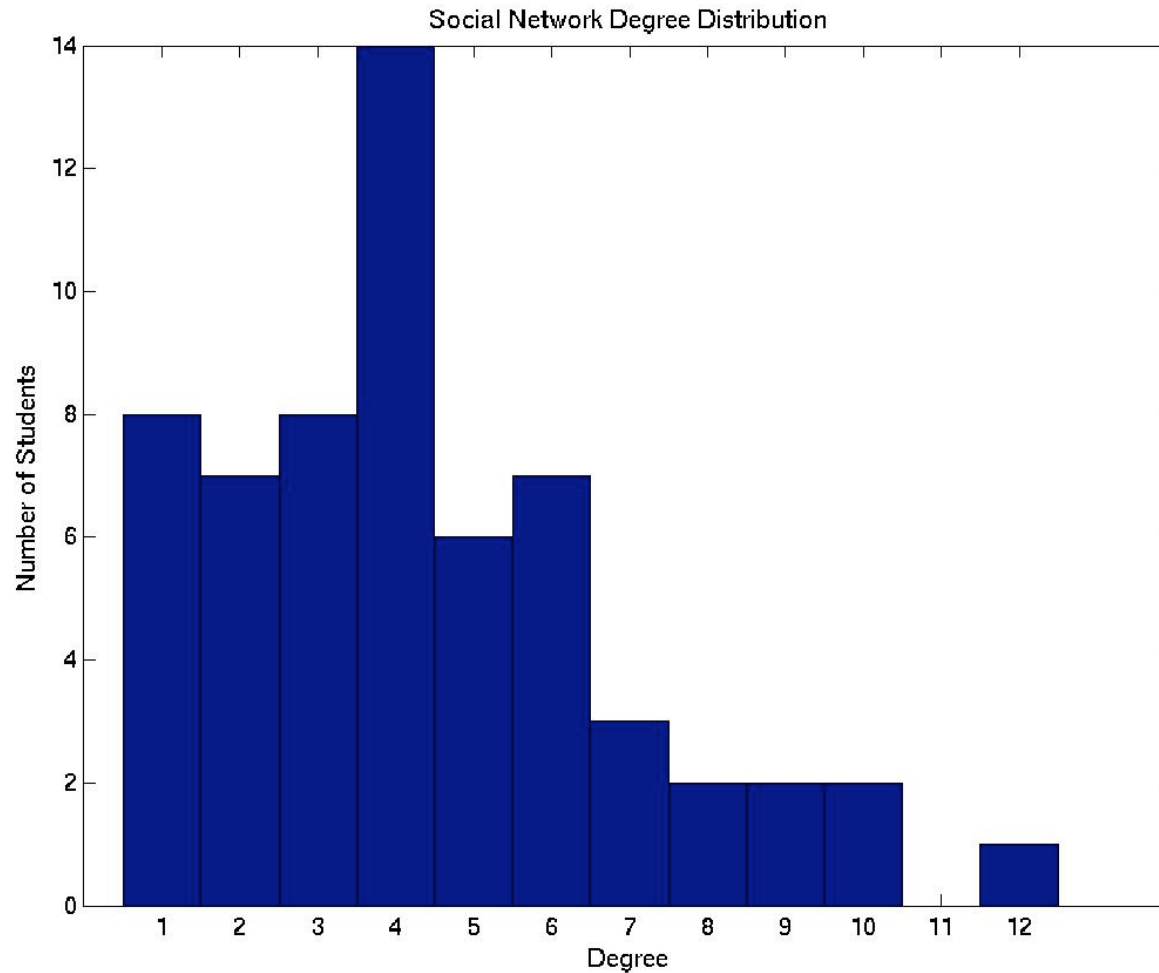 - Maximum of 10
- Converged to blue
  - 6 played red

Experiment 1: Degree Distribution

Geographic Network Degree Distribution
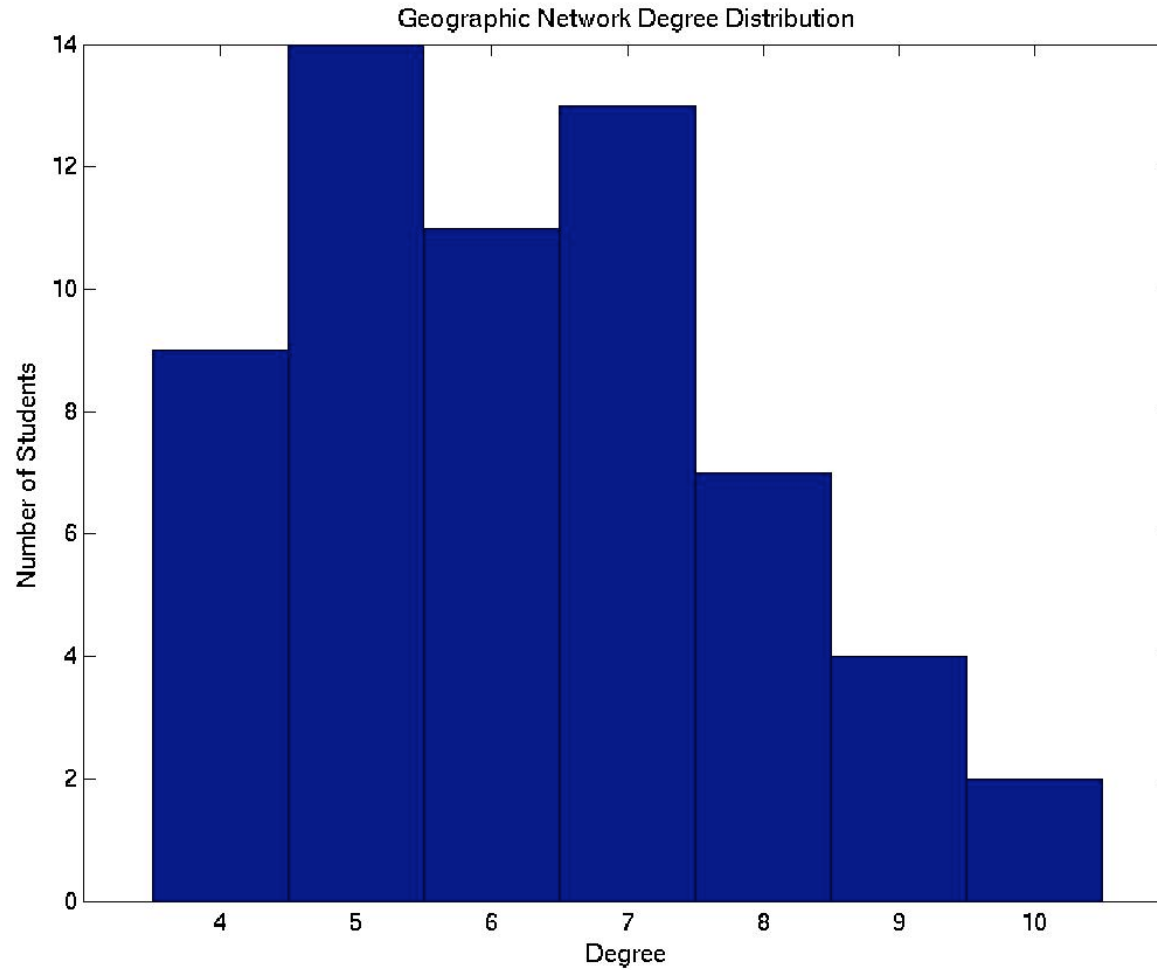
Experiment 2

- 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

Interlude

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
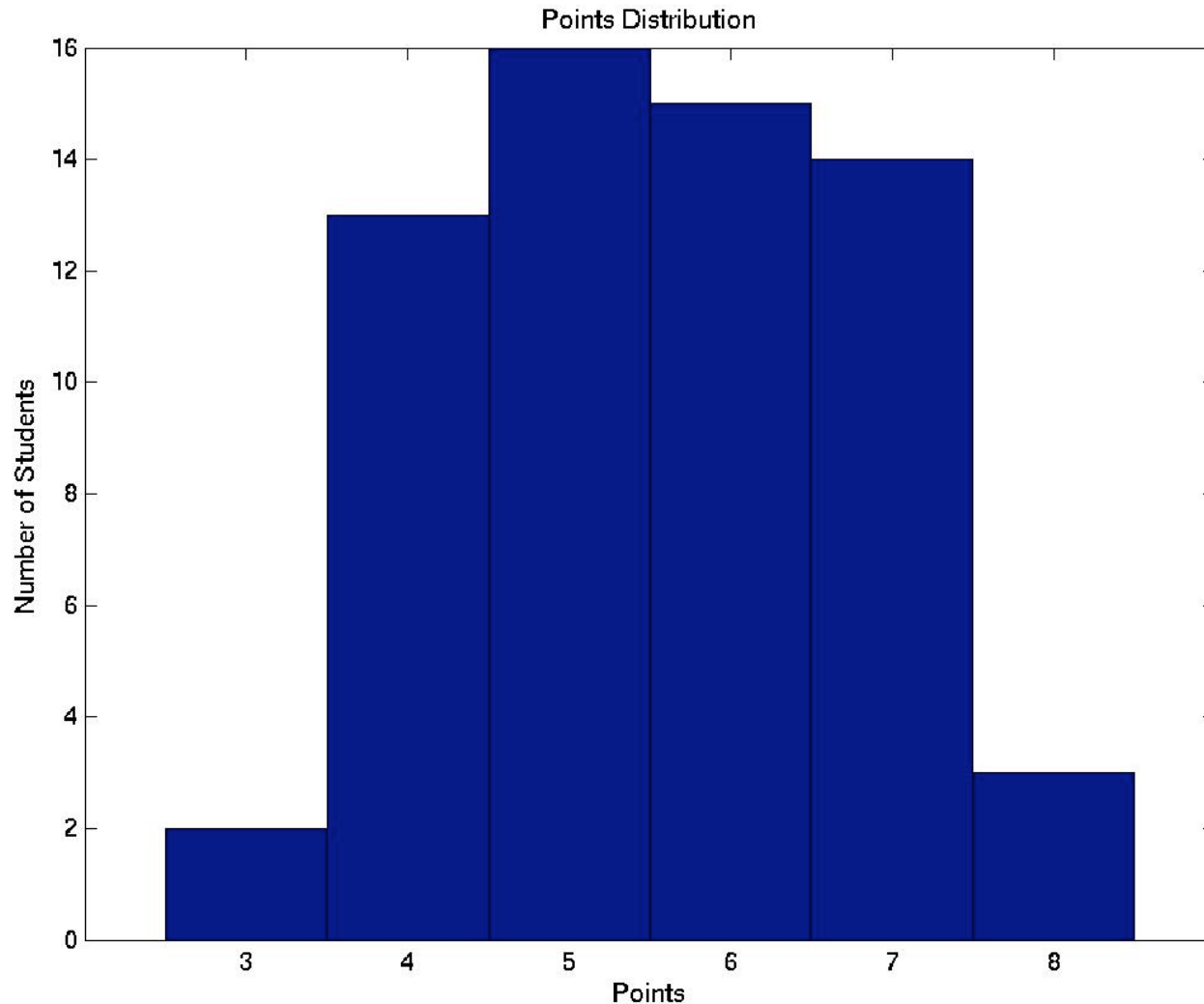
Highest scorers:

Amitoj Singh
Bomin Kim
Doug Cotler