



DSFA
Spring 2019

Lecture 14

Simulation

Announcements

Simulation Structure

(Demo)

Mendel's Pea Plants



Mendel's Pea Plants

Gregor Mendel (1822-1884)

- Founder of the modern field of genetics
- Theorized that pea plants will bear purple or white flowers at random, in the ratio 3:1
- Planted 929 plants and observed their colors
- Let's simulate that...

(Demo)

Mendel's Observations

- Mendel observed 705 of the 929 plants had purple flowers
- Is that consistent with our simulation?

(Demo)

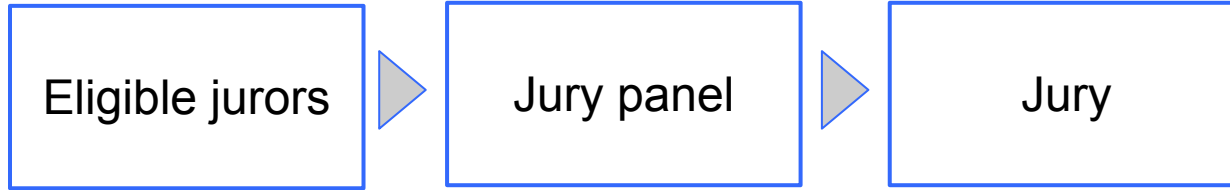
Different Statistics

The statistic was "proportion of plants with purple flowers". We could have chosen a different statistic, and predicted the values of that statistic.

(Demo)

Swain v. Alabama

Juries



United States Jury Act of 1968: [A]ll litigants in Federal courts entitled to trial by jury shall have the right to...juries selected at random from a fair cross section of the community in the district or division wherein the court convenes.

Robert Swain v. Alabama

1965 Supreme Court case about jury selection

- In Talladega, Alabama, 26% of residents were black
- In Swain's jury panel, 8 of 100 panelists were black
- All 8 were struck from the jury by the prosecution (using peremptory challenges)

Ruling: "The overall percentage disparity has been small and reflects no studied attempt to include or exclude a specified number of [black men]."

(Demo)
