

Statistics 1B Interludes

1. Bias

Some sources of bias in surveys

- Wording and 'priming'
- Self-selected responders
- Inaccurate reporting

Left hand side of class

- Do you think the population of the Philippines is greater than 20,000,000?
- What do you estimate the population of the Philippines to be?

Right hand side of class

- Do you think the population of the Philippines is less than 120,000,000?
- What do you estimate the population of the Philippines to be?

Population of Philippines?

- 98,000,000
- 'Primed' by initial number
- Also known as the 'anchoring heuristic' (Kahneman)

FiveThirtyEight

Politics Sports Science & Health Economics Culture

JAN 17, 2017 AT 7:47 PM

Can You Trust Trump's Approval Rating Polls?

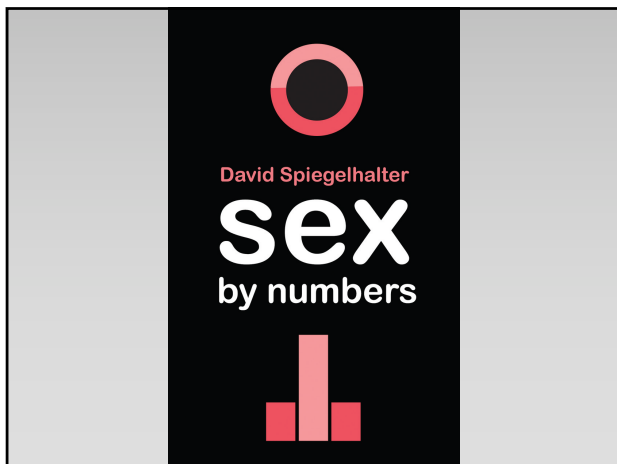
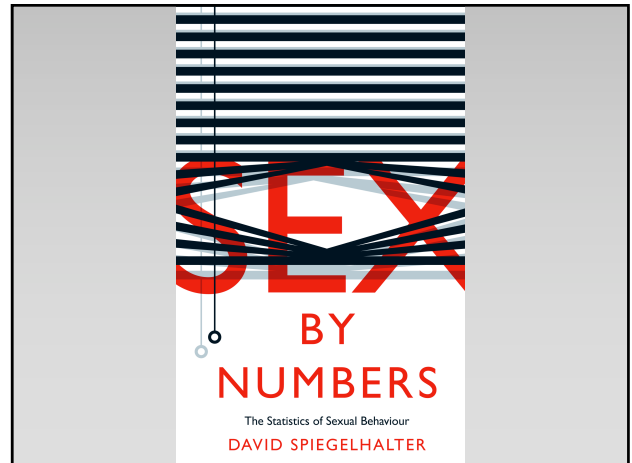
By [Nate Silver](#)

Filed under [Polling](#)

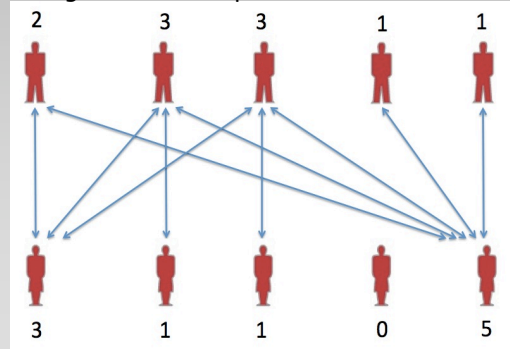


Nate Silver on bias in polls

- "Not only do polls have a **margin of sampling error** — for instance, CNN's poll of 1,000 adults is plus or minus 3 percentage points — but they also have other types of bias, such as **nonresponse bias**. The people who respond to polls — often under 10% of the population contacted — may not be representative of the population as a whole, and that creates a lot of challenges.
- These types of errors are harder to quantify, but as an empirical matter they probably work out to an additional margin of error of 2.5 to 3 percentage points for national polls. Call this figure the **margin of methodological error** (this is my term, not one in common use).

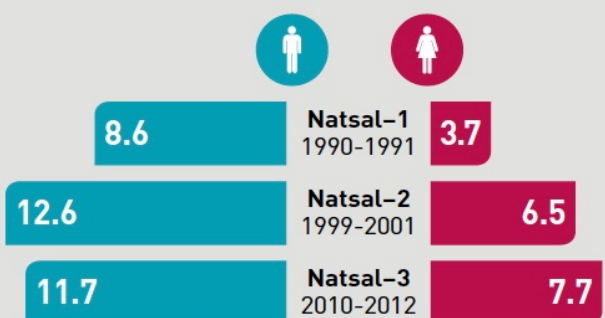


In closed population, equal men and women, average number of partners should match



Total number of partnerships = 10;
So mean = 2 for both men and women

Average (mean) number of opposite-sex partners, lifetime (people aged 16–44)



How many sexual partners have people had?

