IOWA

School of Journalism and Mass Communication

Statistics in SJMC

While many may not think of journalism and strategic communications as math-heavy coursework – Statistics is now what sets students apart. An understanding of statistics can be the difference between landing the job and not making it past the interview. This spring, SJMC has focused on emphasizing rudimentary skills in data and statistics in core classes. Topics such as mean, median, margin of error, etc., are important for students as they enter a field focused on engagement growth and social numbers.

Topics

- Mean/Median/Mode: Ways to find the "average person" in a dataset, usually for a large group of people
- Margin of Error: The percentage point(s) of which the sample could vary
- Sample size/Representative Samples: : How many people were sampled and if they were sampled correctly
- Correlation vs. Causation: Things may correlate, but you need to prove through statistics for it to be causation
- Percentage decline/incline: The amount of which a percentage goes up or down

Common problems

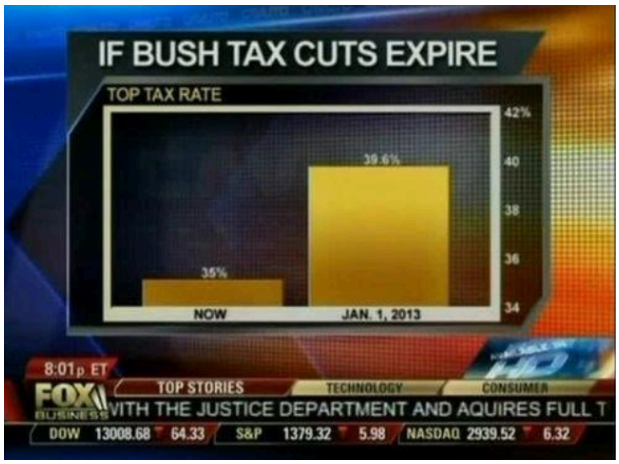
- Mean: One outlier can skew data up or down (e.g., salaries, net wealth)
- Median: The number in the middle of an ordered dataset
- Margin of Error: May be overlooked, important when the dataset is smaller
- Sample size/representative samples: People may take convenience samples, making them not truly random therefore no representative of the population at large
- Correlation vs. Causation: Without statistical knowledge, it can be hard to distinguish, and it may lead to misinformation being spread.

- Percentage increase/decrease: Can be confusing; people may only look at the difference and not the percentage of increase/decrease

Where it's used best

- **Audience Analytics**: In this New York Times page, it displays how analytics influence what they write and who they write for. It also attracts advertisers for a specific audience of people. They illustrate their growth statistics well and in a digestible way. This page uses a large **sample size** of readership while also showing what stories they saw an **incline/decline** with page views.
- **Data journalism:** This Wall Street Journal article breaks down the content of Elon Musk's Tweets and his turn in politics. This kind of journalism and understanding of breaking down numbers has been highly sought after by employers. Data journalism commonly looks at the **percentage in increase/decrease** along with the mean/median/mode of a population. In this example, they mapped out Elon Musks **average (mean)** tweet per day and the content.

Where they dropped the ball:



- This chart by Fox News shows how data can be misleading for media consumers. Although there is only a 4% difference between the two issues, it looks like a humongous jump.
- When data is scaled in such a small manner (by 2's), it leads the audience to think there is a larger difference, which may impact voting decisions.
- This shows how **sampling and representation of a sample** impact the credibility of a chart.