How Biased Data Leads to Inaccuracy (& Bias)

In 1948, the *Chicago Tribune* ran a front-page headline in their newspaper: Dewey Defeats Truman. The problem? This was the day after a presidential election, and I don't know about you, but I don't exactly recall learning about a "President Dewey" in grade school…. Apparently, the editors were trying to get out in front of the official results and therefore relied on a telephone survey to poll voters. However, because telephones were not yet widespread in the U.S., this resulted in only the most prosperous Americans being polled, creating the perception that Gov Thomas Dewey was primed to win the election in a landslide. Oops!

This kind of methodological research error is called ***biased sampling***. It happens when we try to answer a general question—without obtaining a truly representative sample—and then extend the results to a broader (and therefore inappropriate) audience. For example, I wouldn't make the claim that the #1 alcoholic beverage preferred by young adults is Uncle Slappy's Moonshine, just because it's the favorite brand of my immediate coworkers. Nor would I say that all Airmen love using words like "yeet" and "fleek" just because I polled some folks fresh out of BMT. And it'd be irresponsible to make assumptions about widespread opinions on complex societal issues such as economic disparity, the treatment of minorities, or "class warfare" by just asking the demographic majority. Oh…see where this is going?

We're presented with exaggerated and false claims—or are subtely manipulatd into making illogical assumptions—all the time, as a result of sampling bias. This happens most frequently on news stations; the status quo isn't exactly exciting ("99.99998% of the world's population continued living today"), so when bad stuff happens, it's newsworthy—especially because it stimulates our amygdala to produce fear, sadness, or anxiety, which then gets our attention. But, after the 3rd leprechaun attack in as many months, we tacitly begin to assume this is a much more widespread/common occurrence, than it actually is. Statistically, you're more likely to date a supermodel, be accepted to Harvard, *AND* live to 100 years old, than to die via shark attack. So what can we do to overcome the constant influx of biased data?

- **Remain open-minded.** In many ways, we're presented biased samples from birth. Our childhood can't possibly expose us to all the many experiences which can shape our understanding of others and the world around us. If you grew up around people who look, talk, and act like you, then you may have a biased perception (or stereotype) of people who *don't* look like you—simply through lack of exposure. Similarly, if you grew up poor/rich, you probably have a biased perspective on the opposite group. Try to keep an open mind; rather than make assumptions, empathize with others to create understanding.

- **Be aware of information from biased samples.** Social media apps have algorithms such that when you "like" a post, you will be fed more of that general sentiment. This "insulation" can lead us to feel that everyone has similar beliefs as us, just by the sheer absence (omission) of dissenting opinions.

- **Avoid the urge to generalize.** Everyone is unique—really. Take the time to learn about other people different from you, and work to identify and challenge any products of biased sampling you may have.