

# Rough Draft

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*"Statistics conceal as much as they reveal." Discuss this claim with reference to two areas of knowledge."*

Have you ever met or even been someone who thinks that they are "superior" in a specific way because they like something that isn't prevalent in the mainstream? there are many examples of this in the present day -- fans who like music genres such as punk or grunge, or, in my case, using an open-source operating system! An unconscious reason that many fans have for liking "unpopular" culture is that it makes them feel unique -- they are part of a small, tight-knit community that not many people are part of. In fact, this is the primary reason behind the many private forums nestled within the depths of the Internet that cater to niche interests. At the other end, elite clubs like the Ivy Eating Club at Princeton serve much of the same interests, albeit for a much higher price. But what if people knew exactly how many other people liked the same thing as them? Would alternative culture cease to exist?

Statistics are an efficient way to draw conclusions from data efficiently and decide where and how those conclusions can be used -- in an argument, in a research paper, or just a personal conclusion. However, a large part of statistics deals with how viable the actual data is. For example, the "perfect" data in statistics is called the **simple random sample**, or when each individual is chosen by completely random chance. Unfortunately, gathering such random data is very hard, since the data always depends on the environment it is gathered in. For example, polls did not accurately predict the outcome of the 2016 US presidential election because the poll did not take into account the fact that people who voted for Donald Trump were less likely to tell the pollster that they voted for him; or, in other words, the pollsters did not take into account the "social desirability bias"; that is, the fact that some voters would change their responses to what the surveyor would like to hear. (Wall Street Journal). This was an unconscious mistake, but many politicians and political parties use statistics to support their own arguments.

Examples of political groups or people using statistics to support their cause can be seen from the age of Aristotle -- in fact, Aristotle defined one of his three "modes of persuasion", logos, as "the speech itself, insofar as it proves or seems to prove." (Stanford). Or, in other words, the use of facts and figures to sway one's audience towards one's argument. However, these "facts and figures" are usually not spoken with a cool head -- instead, politicians try to emphasize facts that support them and bluster against facts that don't. For example, to support his case that the 2020 election had ballot fraud, Donald Trump tweeted, "71,000,000 votes. The most EVER for a sitting president!" (Twitter). This appeal to logos is not designed to inflict cool-headed sympathy. Instead, it's supposed to make people emotional about the outcome of the election and want to support Trump. However, what this tweet doesn't acknowledge is that Joe Biden got 74,000,000 votes; the most votes for any candidate since the beginning of the history of the United States. In a way, this tweet both reveals and conceals information, all for the purpose of eliciting desired emotions from the audience. A knowledge question can be drawn from this evidence; "How does emotion play a role in the use of statistics in politics to conceal and reveal knowledge at the same time?"

Another example of the use of statistics to simultaneously conceal and reveal is in competitive advertising as a sign of credibility and portraying the competing brand as bad. An example can be seen in the early Samsung marketing campaign against Apple. The title of the ad is, "It doesn't take a genius", with a table of specifications that favor Samsung. However, Apple responded with the same format, except the statistics favored Apple. Both statistics were correct, except they were displayed differently. This is a pure answer to the prescribed title -- it shows that statistics truly does conceal as much as it reveals, to a greater extent.

However, the definition of statistics itself is quite blurry in some cases. When I was young, I used to be skeptical of the stories present in Hinduism, always asking for proof of their authenticity. When my parents told me that proof would come later, I always wondered why so many people believed that Hinduism was real and didn't doubt the authenticity of some of its outlandish stories. Now, I realize the reason people had no doubt was because the environment they were raised up in didn't have any doubt either. As the people raised there were a product of their environment, they automatically assumed that the stories were true. These people indirectly cited statistics in their reasoning for whether or not the stories were real -- since the majority of the population they "surveyed" believed that the stories were true, they concluded that the stories were true. This cycle goes back until the origin of the religion -- in fact, it's how religions grow! Another knowledge question can be drawn from this: To what extent does humanity require statistics, genuine or not, to believe in a part of any knowledge system?

The conclusion I can draw from all this evidence is this: statistics to a greater extent can conceal as much as they reveal, but there is whether this is completely true because statistics' unique relationship with each knowledge system does not offer a reliable way to compare the amount of concealing with the amount of revealing.

## Counterclaims

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There are numerous counterclaims to my central argument that I will seek to argue against here. The counterargument will be a bullet point and the sentences below will be my response.

- *In order to check if "statistics conceals as much as it reveals" is completely true, simply check if the Prescribed Title is true for each knowledge system and average it out.*

This would work if the knowledge systems were all logical and none of them opinionated.

Unfortunately, only three areas of knowledge can be easily checked: history, mathematics, and natural sciences. Even *this* stance that I'm taking is opinionated, and may not be completely true. Therefore, there is no impartial way to evaluate the effect of statistics on every knowledge system, unless you are an alien with no knowledge of human culture. Please let me know if you find one.

- *The prescribed title itself is too binary; it implies that statistics only has two roles -- to conceal and to reveal. This statement doesn't acknowledge the multitude of other uses for statistics.*

Of course, statistics is the best way to inform yourself and other people about a certain situation, since it utilizes the least emotion and the most logic in its methods. However, consider where people are getting statistics from. The pollsters have to make some money, and they get that money from politicians. Therefore, the pollsters try to keep the data as accurate as possible, but try to favor the said politician.

**In conclusion, statistics to a greater extent can conceal as much as they reveal, but there is whether this is completely true because statistics' unique relationship with each knowledge system does not offer a reliable way to compare the amount of concealing with the amount of revealing.**