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ENG 2140-90 Argument Analysis 2

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**Introduction**

“Visual and Statistical Thinking: Displays of Evidence for Making Decisions” is written by Edward R. Tufte. Tufte uses two instances in history to examine and propose the importance of high quality evidence being critical for making decisions: John Snow and the cholera epidemic and launching the space shuttle, Challenger. The purpose of this booklet is to show the importance of properly conveying information. Between the two scenarios, John Snow was much more successful in conveying his concerns and solution than the engineers were for stopping the Challenger launch. It offers the reader insight to how critical information clarity is when the lives of others are at stake.

**Argument Techniques**

Through the article, Tufte is very heavy on hard, factual evidence with statistics, using both graphs and information spoken through his writing. He is also heavy on textual evidence from different reliable sources on the two subjects, and scenarios with cholera and the Challenger being the focus on persuasion.

**Analysis**

Starting off in the booklet, Tufte is quite clear of its intended purpose: “An essential analytic task in making decisions based on evidence is to understand how things work … That is, intervention-thinking and policy-thinking demand casualty-thinking.” He points this out to put the reader into the necessary mindset to consciously look for the evidence supporting his argument. Analysis and display of information is crucial, especially when the lives of others are at stake, and how we use information and display it can have two different outcomes. Tufte uses two different quotes from books to emphasize his points, one of which states “Although we often hear data speak for themselves, their voices can be soft and sly” (*Beginning Statistics with Data Analysis*).

Tufte’s first style of evidence is through facts. Through the analysis of John Snow’s cholera examination, Tufte is able to use the graphs and statistics Snow made to explain how the proper usage of evidence led to it being successful. While Snow could have tried using a graph showing the number of deaths over the course of days, he instead chose to use a map to show the locations of those who died from cholera. He explains, “The notorious well is located amid an intense cluster of deaths, the D in Broad Street. This map reveals a strong association between cholera and proximity to the Broad Street pump.” By showing the reader this map, it gives them perspective how using the same information in a different format assists the intended audience to better understand the severity of the situation. Tufte also explains why using as much relevant information is important. He says, “Sometimes it can be difficult for researchers … to face up to threats to their conclusions, such as alternative explanations and contrary cases.”

The second type of evidence used is textual. While facts are used frequently, the textual evidence is very easy to confirm from the events of the Challenger explosion. The Challenger was a nationwide catastrophe, and the use of the nationwide media makes finding textual evidence easy to use and verify. Tufte uses an example from a commission investigation meeting for the Challenger accident. A physicist, Richard Feynman, demonstrated the O-ring issue using a C-clamp, cold glass of water, and piece of rubber. When the rubber was compressed and became cold, it took time for the rubber to decompress. Tufte goes on to explain this experiment was poorly executed, due to it being uncontrolled.

Tufte’s third style of evidence is his use of real life scenarios. The cholera pandemic, which at the very least cleared up how cholera was spread, and the Challenger explosion are two scenarios that have had long term effects still felt today. If John Snow was unable to effectively impart the information on his study of the epidemic, many more people may have died, and future outbreaks may not have been prevented with the newfound knowledge of how it spread. As for the Challenger incident, the deaths of those may have been avoided if the engineers were able to convey their point of O-ring damage being a bigger issue than initially thought by those pushing for the Challenger launch. They both show the impact of good and bad presentations to their intended audience.

**Conclusion**

Tufte’s style of facts, statistics, textual evidence, and real life scenarios are done extremely well. This booklet is made specifically for his intended audience of “students of quantitative thinking.” These students are being taught the importance of properly conveying a hypothesis or hardcore fact, while being presented two vastly different outcomes that both required effective arguments to avoid the potential outcome. One was successful, while the other was not. Tufte’s ability to explain the pros and cons of both scenarios is extremely well done, even critiquing the styles of Snow and the Challenger team.