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**Summary**

In his article *Visual and Statistical Thinking: Displays of Evidence for Making Decisions* by Edward R. Tufte, he explains how the utilization of data makes his two life or death decisions, which are how to stop cholera and decision to launch shuttle Challenger. He provides two main examples to support his claim. First, during 1854, an outbreak of cholera had killed many people, but Dr. John Snow had used a map to identify the source, which was a water pump. Second, during 1968, a space shuttle, the Challenger, was launched and exploded, caused a disaster due to unclear or obscure data. In this article, Tufte’s examples present that having clear visual data representations and visual displays, which Tufte’s examples can be strengthened by explaining how biases are used to affect decision-making.

**Analysis**

Tufte uses examples like John Snow’s cholera map and the Challenger explosion to explain how visual representation and data can lead to different outcomes. His examples are sufficient to be valid, but there are rooms for improvement.

First, Tufte presents his argument of John Snow’s cholera map. He uses John Snow’s dot map example to realize that how easy to portray the connection between the water pump and the cholera outbreak. However, Tufte never mentions about how people’s religion, beliefs, biases, or other factors can influence how people view Snow’s Map. For example, at the time, many people believed that cholera was spread through the air, so they think that Snow’s findings may have been wrong and decided to ignore it. If Tufte has included or talked about biases and other factors, his argument would have been more persuasive by showing that even clear data can be misinterpreted.

Tufte also uses the Challenger disaster to highlight the dangers of obscure or unclear data presentation. During 1986, the engineers at NASA has data, showing that launching the space shuttle in cold weather would be risky, but the data and other representations did not show that the riskiness. They were confusing and made it hard for decision-makers to understand the risks. Tufte argues that if the data had been presented more clearly, the disaster might have been prevented and made a better judgement on the decision. However, he can improve his argument by discussing how external pressures and other factors, like completing by a deadline, might have influenced the decision-makers. Though with such clear data, biases and pressures can still affect decisions, which Tufte can make this argument better by including this point.

Additionally, Tufte can explore how modern professionals deal with similar challenges. Today, occupations like medicine, finance, engineering, and many more rely on complex data visualizations, but people’s biases affect how they interpret data. This will lead to fatal mistakes that will cost people’s lives. Tufte should have included this to make his argument more relevant to readers and audience.

Conclusion

Tufte makes a strong case that clear data visualization is crucial for good decision-making. He uses strong and clear examples like John Snow’s cholera map and the Challenger disaster to show how visual data can either help or harm the decision-making process. However, his argument can be even stronger if he considers how many factors like biases and external pressures can influence how people interpret and understand data. By addressing these factors, Tufte’s argument would have provided a more complete and clear understanding of how data visualization impacts decisions.