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Week3 writing

The Idea of Science

In the article written by Aschwanden, the idea of broken sciences is being talked about. When an fact is being published and supported by scientifical conclusions, does it mean that the fact should be globally approved and known? Sciences are not as strong as people believed. It is hard to have revolutionary findings or even to have a rigorous result.

The idea of p-hacking is introduced in the article, using the example of deciding whether the U.S. economy is affected by Republicans or Democrats. After collecting data, it has shown that there are far more decisions to make, whether all politicians should be added, whether inflations and recessions should be considered, and what factor are we measuring the economy by. There are over a thousand combinations at the end, and each one gives a different result, or to say a p-value. In the world of statistics, p-value is an important number, used to show statistical significance. People may see that one combination of the above decisions gives a small p-value, then publish a paper saying: “Republicans have a positive effect on the economy”. However, the same result can be proven for Democrats as well. Using a different example of whether darker-skinned football player tends to get more red cards, given the same data, scientists get different results.

The question risen is that does the differences in results disapprove of each other and does this mean that science is unreliable? The fact is that each result has its importance. Science is a strong tool, but not a tool one should completely depend on. “Science is great, but it’s low-yield. Most experiments fail. That does not mean the challenge isn’t worth it” (Aschwanden, 34). People can be mistaking the meaning of p-values, but they are important numbers and should be reported cautiously.

As a conclusion, the world of science is very messy, and there is always more to learn about. However, given what we can discover and see, we should make the best decisions and treat them with cautiousness and an open mind.

References

Aschwanden, C. (2015). *Science Isn't Broken: It's just a hell of a lot harder than we give it credit for*. Retrieved from https://fivethirtyeight.com/features/science-isnt-broken (Links to an external site.)