Election and Reflection

On November 8th, the world was shocked when Trump was elected as President of the United States, even though nearly every poll had predicted Clinton to win. Adding insult to injury, Clinton received over 2.8 million more votes than Trump, yet still lost decisively in the Electoral College votes - the ones that ultimately matter. To those unfamiliar with the American electoral system, this result may seem paradoxical and arguably antithetical to the very principles of "one-person-one-vote" democracy.
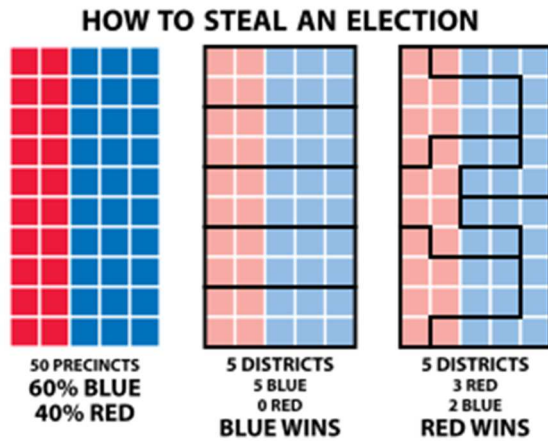
This is not the first time this has happened, and there are understandable calls to change the electoral system to be "fair". There is only one problem: it's impossible. I'm not talking about illegal rigging, where outright fraud is involved; rather, I am referring to the fact that it is mathematically impossible to come up with a fair voting system when there are 3 or more candidates, in the current way we vote (ranking a certain candidate over the others). This surprising and counterintuitive result is called "Arrow's Impossibility Theorem", named after the Nobel Laureate economist Kenneth Arrow.

Don't believe me? Let's look at a slightly different but related example. Imagine that you and two other friends, Alice and Bob, are deciding where to go for dinner, and someone suggests a familiar restaurant. You put it to a vote, based on two criteria: the restaurant must be both tasty and affordable. You think that it is both tasty and affordable, and vote yes. Alice thinks it is tasty but not affordable, and votes no. Bob thinks it is not tasty but affordable, and votes no.

Alice and Bob voted no, you voted yes, so it's 2-1 against going. However, you suddenly remember that the vote was based on two criteria – tastiness and affordability. Both you and Alice think it is tasty, so it's 2-1 for tastiness. Both you and Bob think it is affordable, so it's 2-1 for affordability. The restaurant is deemed both tasty and affordable, so you should be going after all. Based on how you look at it, you can seemingly come to perfectly rational, yet contradictory conclusions. Well, which is right? Beats me. I said I had an example, not a solution.

Another way to legally rig an election is through strategic redistricting, also known as gerrymandering. The word originated when Governor Gerry signed a bill that redistricted Massachusetts to help his own party, and the new district resembled a salamander. Naturally, Gerry + mander = gerrymander, and the word stuck.

Strategic districting is very powerful, and there are many tactics that can be used to skew the balance in one's favor. One of the basic strategies is similar to that used by General Tian Ji (田忌) in 340 BCE. In a horse race where he was outclassed in all 3 divisions, he won by [strategically racing](#) his top division horse against his opponent's second division horse, his second division horse against his opponent's third division horse, and his third division horse against his opponent's top horse, eventually winning two out of three matches. In an election, one can similarly gerrymander the districts in a way that favors one party, typically by using "divide-and-conquer" and "pack-and-forfeit" tactics. With the increased use of modern computers and more sophisticated data analysis software, gerrymandering has become an invaluable and precise tool in places that still allow it.

There are another means of legal manipulation, although generally considered less effective than gerrymandering. One is systematic disenfranchisement by enacting certain voter eligibility requirements such as ID or residency. Another is by using obtuse language, misleading, or [confusing ballots](#).

Social media has been one of the most effective and disrupting tools in recent elections. It is polarizing by nature; the people we befriend and follow tend to have similar viewpoints to our own, creating a giant echo chamber and reinforcing our "us-against-them" tribal instincts. To make things worse, social media prepares stories and newsfeed [based on your interests](#), exacerbating the situation.

Tweets and stories are disseminated in real time, and most of us have neither the time nor the discipline to vet the information. In the age of instant information summed up in 140 characters, the tradeoff for speed is more than just nuance; it is reality itself. The recent "[Pizzagate](#)" incident is a perfect example of how virtual hoaxes can have real life consequences.

Fittingly, and perhaps as a sad commentary on society, the Oxford Dictionary has chosen the [word of the year](#) to be "post-truth" – defined as "relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief". One might think that this primarily applies to those who have grown up in the age of dead trees, but a [recent study](#) at Stanford University found that current students, who are digital natives, not only fail dismally at distinguishing actual reporting from advertising, but also basic evaluation and critical reasoning.

Whether you took Trump [literally but not seriously](#), or seriously but not literally, the fact is that he won fair and square under the current rules, and will be the new President of the US. Legally speaking, there is no evidence of a rigged election. Protesting about the results of an election is counterproductive and antithetical to the very notion of democracy, not to mention petulant.

With 2016 coming to an end and 2017 bringing about big changes, perhaps it is time for us all to reflect. Skepticism is about thinking carefully and critically, and accepting or rejecting arguments based on their merits alone. That cannot be done if we refuse to hear the arguments on the other side, or even worse, by shouting them down. The way to combat bad ideas is not by policing or censoring speech; it is by

having more rational dialogue and civil discourse, not less. Until we stop unfriending those we disagree with, disregarding inconvenient facts, casually dismissing arguments, letting our sense of identity override our decency, and letting our emotions guide our reasoning, we will only become more polarized, and time and again be surprised that others – indeed, many others, may think very differently.

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