Bursting Filter Bubbles: Helping the Conversation on Polarizing Topics such as Climate

Change

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Change Denialism

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The modernization of the digital world has provided social media access to many people of varied interests and ideologies in a relatively short period. This has incentivized software companies to modify their products to match them with the taste of their consumers. For instance, Tufekci (2019) informs that when one watches a video on YouTube, the website tracks the predilection of its user to recommend a dozen other videos of a similar kind. This recommendation process has made the online lives of millions of people easier by making it convenient for them to seek online content that caters to their interests. But this recommendation process has had a major negative impact: it has compartmentalized people into clusters of similar points of view (Tufekci, 2019). This compartmentalization has hindered one of the main purposes of social media, which is to provide people a platform to discuss meaningful solutions to the problems that affect the world (Hofer & Sinatra, 2021). For instance – regarding climate change - scientists have warned humankind that if the current levels of gaseous pollutants are not curbed, then the temperature of the world will rise by 1.1 to 5.4 degrees Celsius by the year 2100 (Herring, 2012). And yet, the world is rife with climate change denialism (Brigham, 2020). This essay argues that even though social media recommendation algorithms have made it convenient for people to seek online content of their interests, the world must urgently combat the resultant creation of intellectual isolation chambers on social media. This is because breaking these chambers (called "filter bubbles") can help humanity unite against problems such as climate change.

Before one can begin to visualize filter bubbles, it is imperative to understand the technology that is common to all social media algorithms: Machine Learning. As the name implies, Machine Learning is the process by which computers "learn" from data by observing patterns and anomalies, to make valid predictions (Golino, 2021). This kind of technology is

unprecedented in human history and is utilized by all social media websites to cater to the interests of their users. But to say that every social media website uses the same algorithm would be an oversimplification of the diversity of algorithms across different websites. Kitchens et al. (2020) reveal that every social media company utilizes a unique algorithm that operates on the prior activity of its users to influence their behavior. In other words, different social media websites influence the behavior of their users differently. For instance, their findings reveal that Facebook influences its users to seek news from more partisan sources, while Reddit influences news consumption from more moderate sources. This fact implies that Facebook users are more likely to hold partisan beliefs that appeal to them, and consequently, get enclosed in filter bubbles – in contrast to Reddit users. What is striking is that this implication is most strongly observed in the case of American conservatives, who read news articles that are a whopping 80% more conservative after visiting Facebook than the news they read after visiting Reddit (Kitchens et al., 2020). These numbers prompt one to ask the question: what are the specific differences between Facebook and Reddit that cause their users to behave so differently?

Well, Kitchens et al. (2020) explain that the vast array of differences between Facebook and Reddit lies in how the two websites approach community engagement on the internet. Firstly, Facebook allows its users to befriend only those people who want to befriend them. By contrast, Reddit has no such restriction. This difference is significant as it implies that Reddit provides its users with a lot more flexibility when it comes to interacting with other users online, including those of opposing viewpoints. Secondly, it can be observed that most of the communities on Reddit (called "subreddits") are topic-based, where algorithms have minimum control over content recommendation - in contrast to Facebook. On these subreddits, people interact with each other over common interests and develop a dynamic of mutual respect. While

Reddit indeed has some toxic communities (Caffier, 2017), this dynamic of mutual respect ensures that people are more likely to listen to different perspectives. Lastly, Reddit prioritizes content that people find to be most informative, while Facebook prioritizes content that garners the highest amount of engagement - via likes, heart, angry, or sad face emoticons. This latter kind of content is usually oversimplified to stir up emotions, which is why it leads people down a rabbit hole of bias. Kugler and Coleman (2020) warn that the oversimplification of any complex topic is not conducive to having productive conversations on that topic. This implies that Facebook users are more likely to not have productive conversations on polarizing topics like climate change - in contrast to Reddit users.

Now that the differences between Facebook and Reddit with respect to the creation of filter bubbles have been discussed, one can ask the question: what can be done to break filter bubbles? To answer such a complex question, one must pay attention to the process that drives the creation of filter bubbles. I believe that because filter bubbles are a result of the interaction between technology and human activity, both aspects - technological and human - need to be addressed.

On the technological front, Bozdag and van den Hoven (2015) have discussed several software solutions to the filter bubble problem. However, every software solution has certain pitfalls that reduce its efficacy. One of the solutions they have discussed is ConsiderIt, a web tool that allows its users to make pros and cons lists on important topics to share their perspectives with other people online. While the objective of this tool is to increase the diversity of perspectives on a particular topic, the pros and cons template tends to lock people up in a good versus bad binary, inhibiting them from formulating nuanced opinions on that topic.

The key takeaway from the research of Bozdag and van den Hoven (2015) is that a technological solution against filter bubbles is an ongoing work in progress. Software developers are learning about all the negatives of filter bubbles to propose solutions that counter each negative without being counterproductive in another area. In recent years, independent developers have contemplated restructuring social media algorithms and have even come up with theoretical solutions, but a software solution deployable in the social media industry has not been pursued actively (Dormehl, 2021).

Because flawless software tools to counter filter bubbles are yet to come, separately addressing the technological and human aspects of filter bubbles to solve the problem is an unsuccessful strategy. This fosters the need to explore alternate ways of battling filter bubbles. An important thing to note is that while the human and technological aspects of filter bubbles are distinct, they are not separate; in fact, they are sequential. After all, filter bubbles are the result of the collective disgruntlement of people that are brutally shunned for their beliefs in real life, who subsequently look for ways of affirming their pre-existing notions online –irrespective of their validity or lack thereof. Therefore, I speculate that while technological solutions against filter bubbles are being worked on, creating a healthy environment in real life for people to have nuanced conversations on polarizing topics in the quest for objective truth can help nip the problem in the bud.

But how can this healthy environment be created? Only when people are honest about their beliefs and are willing to listen to the perspectives of others. But a major impediment to overcome is that in contrast to machines, humans may not obey logical theorizations regarding their behavior. Take the case of climate change denialism. As an example, Washington and Cook (2011) have theorized that some people may present themselves as climate change "skeptics" out

of fear of being shunned while being closeted right-wing ideologues against climate action. Therefore, one cannot accurately identify open-minded people at first glance. Instead, our goal should be to maximize the real-world reach of the message that action against climate change is urgent by using a flexible approach that works with everyone. But how do we do so?

As it was established in the prior comparison between Facebook and Reddit, people with different ideologies are more likely to respect each other if they have something in common. Because Reddit allows its users to bond over common hobbies and interests, its users are more likely to moderate their views and have productive conversations over polarizing topics. I believe that Reddit's approach can also be applied in real-life conversations on topics such as climate change.

The first step towards interacting with a new person in real life involves looking for commonalities instead of differences- to build a connection (Hofer & Sinatra, 2021). This requires deferring the display of anything that may expose one's position on an issue until a connection has been made. Not doing so may cause the other party to get fixated on one's position on the issue as opposed to one's ideas, preventing it from engaging in a fruitful conversation on that issue. Hofer and Sinatra (2021) narrate a conversation that one of them had with a climate change denier, who was a grandparent concerned about the future of his grandchildren. Even though they knew that the person was a denier of climate change, they did not bring up that part of his identity in the initial stages of the conversation - to keep any possible disagreements at bay and move the conversation forward. The initial focus on building a connection is fruitful as it is common knowledge that when people get comfortable with each other, they gradually open up to reveal aspects of their character.

For instance, on climate change, if someone genuinely does not know about the seriousness of the issue, it remains to be seen if that person is willing to evolve their opinion or not. This step is significant because, at this juncture, one must strive to educate the open-minded and avoid the stubborn. The climate change denier in Hofer's and Sinatra's (2021) example was motivated by economic concerns that could be addressed. This approach can be applied in conversations with a wide variety of people as it does not depend on their *prima facie* open-mindedness. Even if one opponent of climate action is convinced of its validity, that person can go and apply this approach with another person. In this way, a domino effect can be created, efficiently rallying many people in the fight against climate change. As people become more nuanced in their comprehension of climate change in real-life, their nuance will automatically get picked up by social media algorithms, preventing them from getting enclosed in filter bubbles.

I should clarify that this approach is not guaranteed to succeed. One must not get into conversations over climate change expecting to change the thought process of every climate change denier. But I believe that this approach gives one the best possible chance of freeing someone else from the shackles of narrow-mindedness and putting them on the path towards truth. As more people become convinced regarding the validity of climate action, a solution against climate change will be an inevitable reality.

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