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The Negative Impact of Social Media's Algorithms on Society

by Julia Tucker

In the modern world of Covid, it is easy to rely on technology to keep us connected to our loved ones. We are able to keep up with our friends' and families' lives through social media posts and comments rather than calling or even texting. It is easy to see that social media is a tool that keeps us connected. However, in the same ways that these platforms give us community, they take away our scope of exploration. The functions and algorithms social platforms use to better personalize our feed to our own interests keep us from expanding our exposure to information that might contradict our own belief systems or ideologies. In a societal or political sense, they can cause a feedback loop or "echo chamber" of thoughts which are already similar to our own. The resulting confirmation biases keep us from productive discussion on debatable topics, pushing political polarization and preventing constructive confrontation, ultimately affecting real world issues.

As consumers of online media, it is our responsibility to constantly fact check our sources to ensure that the information we are receiving is accurate and un-biased. Echo chambers and feedback loops make it extremely easy for both mis- and dis- information, much of which pushes extreme political beliefs, to spread quickly and without discourse. It is common for individuals within online communities to feel pressure to conform to even the most extreme beliefs of the group in order to fit in and protect themselves from confrontation. Because bubbles of community do not overlap, it is easy to see how polarization of topics online divides our society deeper than ever before.

The way these echo chambers are formed is a relatively easy concept: you engage with content that you like or agree with, and the algorithms suggest and push content that is similar. Before we analyze why these algorithms are harmful, we must consider the way humans interact with social media. In 2020, *The British Journal of Developmental Psychology* published Minas Michikyan's, "Linking Online Self-Presentation to Identity Coherence, Identity Confusion, and Social Anxiety in Emerging Adulthood." In this research study of human behavior and presentation over online interactions, it was found that, "Emerging adults may engage in such socially desirable self-presentation to minimize negative evaluations about the self from others, avoid social rejection, and maintain and increase social acceptance and support" (557). The way we interact online is a direct result of our desire to be accepted by others. For an individual to find themselves within an online community that pushes a certain ideology, that person is likely to conform to that belief in order to fit in. The confirmation bias of these communities, that their opinion is correct, preys on the anxiety of individuals who are seeking validation by the community. It would be easy to claim this is only a result of human interaction, and while this is partially true, the way social platforms filter our content *amplifies* the anxiety to conform.

And so, in addition to conformity and confirmation bias, this anxiety-inducing amplification causes further political polarization and creates an environment which produces conspiracy theories, spreads mis- and dis-information, and subjugates users, resulting in extremism and an unwillingness of individuals to learn. A good example of this is the 2021 attack on the United States Capital, in which individuals belonging to an online community believed that an electoral conspiracy resulted in Donald Trump's loss of the presidency. This extreme and rapid spread of disinformation caused a coordinated attack by civilians on the United States Capital. This caused the death of *five* people. It might be easy to, again, blame the

user and write this off as human error, but as the authors of “Mechanisms and Attributes of Echo Chambers in Social Media,” point out, “[recommender algorithms, human psychology, and homophily] are not mutually independent but highly correlated,” in order to create these feedback loops (2). So, for these phenomena to occur at all is *reliant* on these social platform algorithms and the way they affect the individual’s behavior using them.

Let’s take a better look at what social forces are at play. An excellent article by C Thi Nguyen characterizes the algorithmic systems affecting social media users as “...*echo chambers* and *epistemic bubbles*. Both are social structures that systematically exclude sources of information.” Echo chambers seclude individuals from outside resources, generally through discrediting the accuracy and factual nature of an opposing publication, but in extreme instances, suggesting that opposing sources are actively working to attack the beliefs and ideals of the consumers. Epistemic bubbles, or filter bubbles, reinforce pre-existing beliefs and knowledge through confirmation bias among users with homophilic views or beliefs (Nguyen). In “Understanding Echo Chambers and Filter Bubbles,” Bret Kitchens, Steven L. Johnson, and Peter Gray reinforce this definition by explaining that, “Echo chambers are associated with ‘fragmentation of users into ideologically narrow groups’ (Shore et al. 2018, p. 850) ... with ‘segregation by interest or opinion [that] will ... increase political polarization’ (Dubois and Blank 2018, pp. 1-2) and ‘foster social extremism’ (Barberá 2015, p. 86)” (1622). While filter bubbles contain algorithms that “‘inadvertently amplify ideological segregation’ (Flaxman et al. 2016, p. 299)” (Kitchens, et al. 1622).

Once again it is important to note that it is not the sole fault of the platform which users are using to consume media, but they do facilitate these interactions because of their structure and influence. Users surround themselves with friends and media which they agree with, and

social media begins suggesting similar content to that which they are interacting with, confirming to the users that their values are the correct ones. If these platforms suggested content that may contradict a user's beliefs, breaking the filter bubble, it is likely that the individual would not accept it. "In this way, the increasing ability to interact online is viewed not as unifying force but, rather, one that may tear apart the fabric of society as individuals adopt more extreme views" (Kitchens, et al. 1622).

But surely these are extreme and isolated instances of individuals on a site and not indicative of the average attitude in society, right? Well, in the modern world of Covid-19, the way we consume news and information has changed a lot. Because anyone can post information on social platforms without much fact checking, the spread of mis- and dis- information on important health facts was and is rapid, especially thanks to these media structures which facilitated the engagement of users with clickbait-y covers and fear-inducing, shock-value statistics. Because of the nature of these algorithms to prime individuals to already be more susceptible to increasingly extreme information, the results were immediate, and information diffused quickly. And, echo chambers as explained previously, made it easy for news to circulate, which discredited other outlets of information. Like the conspiracy which resulted in deaths at the capitol of the United States, the spread of mis- and dis- information and the formation of conspiracy theories had real world consequences during the pandemic. This time, the false information regarding Covid-19, which was already a devastating virus, resulted in the death of hundreds *directly* from what the World Health Organization has named "the Infodemic" (Coleman).

With these sources and information, it is clear that the effects that social media and the algorithms can have on individuals end up with real world effects in our society- even if that was

not their intended purpose. While it is true that many users find a lot of their news and political/health information on social platforms (either intentionally or by accident), it is also true that these platforms give a unique scope of connection between loved ones that cannot be ignored. In the same world where the internet divided consumers on Covid-19, the internet brought many people together who wouldn't have been able to be as close due to travel bans or isolation. The platforms both kept the world connected while simultaneously ripping us apart.

So, do all of the videos of social-distanced reunions and heart-felt messages of unity make up for the negative side effects of this new horizon? I'd say no, because as far as online connections go, how intimately close can you feel to someone over a screen? As Michikyan explains, the real person behind the screen might present themselves in a different, false way: "The false self-presentation motivated by deception may involve presenting parts of the self that are inauthentic and less truthful" (545). There are many examples of this, like catfishing, which is an extreme form of online deception in which someone uses another person's pictures to create a false persona in order to trick another person into doing something they want or leading them into a false romantic relationship. A tamer example would be the simple fact that many people use screens to hide in order to not interact with people in person. Michikyan concludes that "social media use may undermine psychosocial adjustment in terms of inducing and reinforcing social anxiety..." (548). Ultimately, social media can be a tool for with those with anxiety to better communicate, but it can also lead to increased social awkwardness.

All this is to say that I haven't found that the ways we connect online to counterbalance the ways we are divided, especially since connections are found on a much more individual basis, and the divisions these structures create can span across all types of social spheres in the real world. In conclusion, I believe that while human interaction across media has developed in

such a way that we are less open to free, respectful discussion, we are also at the mercy of the algorithms that segregate us and facilitate our discord. The online social structures that are created prevent individuals from being introduced to new things and ultimately make our views more extreme through confirmation bias. The echo chambers and filter bubbles limit our knowledge and promote political and social polarization in online spheres that directly impact the real world. It will be hard to find ways around this phenomenon because of the world we live in, our reliance on social media, and the increasing flow of news information to consumers. But we should always be aware of the types of media we are consuming, where it comes from, and what its goal is. By being aware of our own behavior, we can regulate our online social spheres to reflect honest, unbiased information that will increase our productive discussions and decrease the polarization of our society.

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