The Persuasiveness of Social Media and Belief Reinforcement

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Abstract

In today's digital world, most people consume a large amount of information and news from social media platforms. These platforms heavily rely on algorithms that are designed to personalize each user's content in order to maximize user engagement by showing people content on their feed that they are most likely to interact with. This paper examines how exactly social media algorithms reinforce already existing beliefs of users through the repeated exposure to agreeable content. By looking at previous research, this paper explores how algorithmic personalization of content limits people's exposure to diverse viewpoints and how that contributes to selective exposure and the creation of echo chambers. Studies show that users are more likely to see information on their feed that aligns with their existing beliefs, which is even further reinforced through repeated exposure over time. Seeing this agreeable content over and over can make people feel like ideas are more familiar and credible even though that isn't always the case.

The Elaboration Likelihood Model is used to explain how users process information given to them. People who process information through the peripheral route often rely on cues such as familiarity and social validation. These people may rely on cues such as how often content appears or how widely it is shared in order to process it. Additionally, this paper examines the broad effects of these processes on society like the development of echo chambers and increased polarization. Overall, this research highlights how algorithms and repeated exposure to content shapes beliefs and the importance of understanding persuasion in our digital environments.

Background and Significance

In today's digital world, most people consume a large portion of their information from social media. Platforms like Instagram, TikTok, and Facebook all heavily rely on algorithms that are purposefully and carefully designed to maximize user engagement by showing people the things they are most likely to interact with. These algorithms will analyze people's behaviors and take note of the content they are interacting with in order to personalize each user's feed for them in order to maximize their engagement and keep their attention. While this personalization can make content feel much more relevant and engaging, it also raises big concerns about what information is being presented to people and how their beliefs are shaped because of that.

When looked at from a persuasion perspective, this issue is extremely important. Persuasion is not only changing people's attitudes but it is also about reinforcing the beliefs that they already hold. Social media algorithms can easily become persuasive to users by repeatedly exposing them to content that aligns with their views. After an extended period of time, this exposure can strengthen people's existing attitudes without them even realizing they are being influenced. What feels like a personalized experience actually is slowly and subtly shaping what people believe over time.

This topic is especially important today because misinformation and political polarization are at an all-time high in our country. If users are just consistently exposed to content that confirms and aligns with their beliefs, then they may be less likely to ever have to encounter an opposing viewpoint. This could lead to the development of echo chambers where individuals are fully surrounded by people and viewpoints that align with their own. This is not ideal and has a huge impact on society by creating lots of polarization; therefore, it is very important to understand how algorithms are persuading people and affecting beliefs.

This creates a clear need to better understand how social media algorithms influence persuasion and belief reinforcement in digital environments. Therefore, the main research question of this paper is: how do social media algorithms reinforce existing beliefs of users through repeated exposure to agreeable content?

Research Aims

The main goal of this research is to better understand how social media algorithms reinforce existing beliefs through repeated exposure to agreeable content. In addition to this main question, this research will also explore several related questions. Specifically, this paper will examine how social media algorithms determine what content to show users and how user interactions, such as likes, shares, and comments, influence the type of content that is shown. Additionally, this research will consider the ways that repeated exposure to agreeable content strengthens a user's existing attitudes and beliefs over time. Finally, this paper applies the Elaboration Likelihood Model to better understand how content pushed by the algorithm can be persuasive to users.

Literature Review

Algorithm Personalization and Selective Exposure

Studies have found that social media algorithms significantly influence the type of content users view on their feed. For example, Bakshy et al. (2015) found that Facebook's algorithm tends to prioritize content that aligns with what people have previously interacted with, so it is more likely that individuals will encounter information that is consistent with their own beliefs. This study analyzed user data to better understand how the platform filters content. Additionally, Beam (2014) found that having personalized recommendation systems for receiving news means that the range of information users are exposed to is extremely narrow.

With these systems, users have little to no exposure to diverse viewpoints which can be problematic.

These both demonstrate the idea of selective exposure where individuals prefer to consume information that confirms and aligns with their existing beliefs instead of taking in information that challenges them. This is important to understand from a persuasion perspective because it means users are not just passively receiving information on their feeds, but they are actually just being shown content that reinforces what they already think. Therefore, algorithms are not simply reflecting each user's personal preferences, they're actively shaping and strengthening their beliefs.

Repeated Exposure and Belief Reinforcement

Research also shows that repeated exposure to information plays a key role in strengthening people's beliefs. Flaxman et al. (2016) found that online platforms and social media contribute to the formation of "filter bubbles," where users mostly encounter content that aligns with their own views. Garrett (2009) also found that even when opposing perspectives are available to them, individuals typically prefer to consume information that agrees with their beliefs.

This repeated exposure creates a false sense of credibility in people that makes them believe information is more credible just because they encounter it frequently. From a persuasion standpoint, this is especially important because it suggests that users may accept ideas that are not accurate, but are repeatedly reinforced to them. Over time, this process strengthens attitudes and makes people more resistant to changing their attitudes. Overall, this research shows that repeated exposure plays a large role in reinforcing beliefs over time.

Elaboration Likelihood Model

To even further understand why repeated exposure to the same information is so effective, it is helpful to look at the Elaboration Likelihood Model. This model explains how individuals process information through either the central route or the peripheral route. The central route involves deep and thoughtful evaluation of the information presented. On the other hand, the peripheral route relies on simple cues like repetition or familiarity to evaluate information.

On social media, algorithms tend to encourage users to take the peripheral route when processing information. The algorithm repeatedly exposes users to similar content on their feed so that they may begin to personally accept ideas since they are familiar instead of truly critically thinking. People are not really evaluating the quality of the information they are receiving, they instead rely on cues like how often it comes up on their page or how many likes a post has gotten. Because of this, a person's beliefs can become stronger without any type of deep cognitive thinking. This shows how powerful and persuasive the algorithm driven content can be.

Echo Chambers and Polarization

These patterns can contribute to much larger social effects on society, for example the development of echo chambers. Cinelli et al. (2021) found that users tend to choose to interact with communities that already share their beliefs so that the same information circulates within groups instead of making it across to diverse audiences. Similarly, Bessi et al. (2016) found that people often will form communities that are centered around their shared beliefs, which just reinforces those beliefs through the interactions between members of the community.

In addition, Del Vicario et al. (2016) found that misinformation spreads much more easily inside of these groups because users are more likely to engage with content that confirms their views. This creates an environment where beliefs are continuously reinforced instead of ever challenged and opposing beliefs are very rarely encountered. This combination of repeated exposure and constant validation makes the belief reinforcement extremely powerful. Overall, these studies highlight how content pushed by algorithms and user's behavior work together in order to create environments where beliefs are constantly reinforced.

Discussion

The research reviewed in this paper thoroughly examines the powerful role that social media algorithms play in shaping and reinforcing user's beliefs. With algorithms prioritizing content that aligns with people's past behaviors, the repeated exposure to agreeable information is very common. This constant exposure strengthens user's beliefs and makes individuals more resistant and intolerant to opposing viewpoints because they rarely encounter them, instead they spend their time reinforcing their own views.

The Elaboration Likelihood Model helps explain why these effects are occurring. Social media platforms encourage users to rely on peripheral cues like repetition and social validation rather than actually engaging deep evaluation of the information. As a result, users may accept information as credible with no other reason besides the fact that it is familiar and widely shared.

These findings have very important implications to consider on our society. The formation of echo chambers and the large spread of misinformation have heavily contributed to the increase in political polarization because of the lack of exposure people have to diverse beliefs. It is also important to consider the role that the user's behavior plays in reinforcing these

patterns because they are actively choosing to engage with content that only aligns with their beliefs, which even further strengthens the effects of the algorithm.

In the future research it is important to explore new ways to lessen the negative effects that come from the algorithm like adjusting it to promote more diverse viewpoints or even encourage users to think more critically about the information they come across on social media. Understanding how to balance a personalized social media experience with a healthy level of exposure to different perspectives will be important for creating a more informed and less polarized society.

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