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Confirmation Bias in Our Opinions on Social Media: A Qualitative Approach

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ABSTRACT

Personal opinions are shaped by several factors, such as social, political, and economic issues. Subconscious bias is caused by factors such as the socioeconomic environment in which a person was raised, information gleaned from a network of friends, acquaintances, co-workers, as well as information from all other information sources. Confirmation bias is the propensity to look for evidence that supports one's preconceived notions rather than contradicts them. Due to its pressure on influencing personal opinions, confirmation bias has recently come back into focus as a topic of discussion, and social media today seems to have the biggest impact on the creation of confirmation bias in personal opinions on a variety of issues. Owing to social media's immense fame and popularity today, it has turned into a source of confirmation bias. Therefore, what are the factors that contribute to confirmation bias in our opinions on social media? How does confirmation bias shape our opinions on social media? A semi-structured interview was conducted with six (6) informants to seek answers to what and how confirmation bias shapes our opinions on social media. This study produced four themes, which are education level, algorithm, conformity, and self-control. Briefly, social media does shape confirmation bias in internet users' personal opinions. Finally, the current study has a limitation in that it only looks at social media, personal opinions, and confirmation bias.

Keywords: confirmation bias, personal opinion, social media, algorithm factor, conformity, self-control

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Introduction

A short piece of information, rather than full-fledged essays and other longer pieces of information that normally provide more contexts and details on a subject, flourishes because of social media (Rajendran & Thesinghraj, 2014). These short pieces of information have nearly the same value as a full article in the sense that people are inclined to believe and understand the information as if it comes from a traditional and respected news source. If someone sees his or her friends discussing the article on his or her News Feed on Facebook or a tweet on Twitter, he or she may choose to read it on Facebook or Twitter instead of reading the boring text in the traditional media sources. Social media has characteristics that distinguish it from traditional media (Eveland, 2003). It is especially noteworthy that social media can facilitate personal influence through content sharing, endorsement, and discussion.

This personal impact dampens partisan selectivity by acting as a selection heuristic, increasing topic relevance while decreasing political selectivity (Mummolo, 2016).

Besides, people engage in selective exposure for a variety of reasons. Selective exposure helps to reduce cognitive dissonance. A classic study by Festinger (1957) establishes a bias in favour of information from pro-attitude sources that satisfies a need to reach results that are consistent with people's worldviews. It reduces the cognitive resources required to comprehend or rationalise the data collected (Stroud, 2011). Some are concerned that if the opposite views are not given a fair hearing, people will get entrenched in their own beliefs, resulting in political polarisation (Jamieson & Cappella, 2008; Slater, 2007).

Confirmation bias has recently re-emerged as a topic of discussion due to its role in the spread of disinformation, as it provides an ideal environment for misinformation to thrive (Yan Bing, 2018). Recent studies have offered useful insights into the problem of misinformation persistence by using confirmation bias as an explanatory mechanism, which is consistent with the premises. For example, Hameleers and Van der Meer's (2020) experimental study found that people were more likely to avoid fact-checkers, a potential solution to correct misinformation. Thus, if they disagreed with their previous attitude, this indicates that confirmation bias may play a role in the persistence of misinformation. Confirmation bias has been documented in a wide range of contexts, including strategy formulation, software testing, risk assessment, medical diagnoses, criminal investigations, skull sexing, judicial decisions, bullet comparisons, animal behaviour research, psychiatric confinement examinations, literary criticism, and visual perception. According to critics, Hameleers and Van der Meer (2020) emphasised on the dangers of "echo chambers", "filter bubbles" and "information cocoons" in political forums.

Individuals form opinions on a variety of social, political, and economic issues based on a variety of factors (Acemoglu et al., 2010). Socioeconomic conditions where the individual grew up or information received from a group of friends, co-workers, acquaintances and other information sources are known as subconscious bias. Meanwhile, the tendency to seek information that confirms one's prior beliefs rather than disproves them is known as confirmation bias (Salman & Turhan, 2018). Confirmation bias has lately resurfaced as a topic of discussion due to its impact on affecting people's opinions (Yan Bing, 2018). Today, social media appears to have the greatest influence in creating confirmation bias on people's opinions on various issues. Many social media influencers sprout up like mushrooms after the rain. Social media has become a source of confirmation bias due to its tremendous fame and popularity nowadays. Hence, this study aims to question what contributes to confirmation bias in people's opinions on social media. This research also seeks to explore how confirmation bias influences our opinions on social media.

Literature Review

Social Media

Social media refers to a "form of electronic communication through which people create online communities to share information, ideas, personal messages" (Britannica, 2022b). Online newspapers, websites, blogs, online radio, smart television, email, and all the latest apps are all considered social media. All play a role in reinforcing pre-existing (biased) attitudes and ideas. For example, the American news media became more biased in the first two decades of the twenty-first century, focusing conservative and liberal segments of the public on specific individuals and subjects and generally reinforcing their audience's pre-existing political attitudes (Phillips, 2020).

Moreover, as communication technology has advanced, social media sites such as Facebook, Instagram, Myspace, Twitter, and YouTube have sprung up. People from all walks of life use these platforms to organise real-world events, conduct business, participate in education, and entertain themselves. Individuals, particularly corporate and institutional employees, can use social media platforms to communicate with one another quickly. Because of social media, the way news and information are distributed has changed. Governments, terrorists, and activists use advances in online communication

to stay in touch with their constituents. The viral nature of information dissemination on such platforms is not limited to formally sanctioned messaging (Abbey, 2021).

The term "media audience" is used in classical communication science; nowadays, audience members are referred to as "users", particularly on social media. The "users" of Internet services function as a consumer (merely receiving content), producers (creating and distributing content), and participants in all types of online media (liking or sharing content) (Zimmer et al., 2018). Computational machinery as computer programmes known as algorithms sets rules for operation sequences and can be implemented in all social media (Zimmer et al., 2018). An intriguing question is how it works to influence the thoughts and actions of social media users. The algorithm-programmed information will be served to social media users. As a result, the user will be served with information related to or revolving around the original information that the user has visited. As a result, if confirmation bias is constantly present in their minds, it will grow. It may have an impact on the answer to the question of how confirmation bias influences the opinions of social media users.

Personal Opinion

In Britannica (2022a), public opinion is defined as "an aggregate of individual ideas, attitudes, and beliefs regarding a given topic expressed by a considerable proportion of a community". On the other hand, personal opinions include individual opinions, attitudes and beliefs about a given topic. Public opinion perception is crucial to understanding individual opinion formation in media effects studies. As a result, the media play an important role in shaping public opinion (Gunther, 2014). At the same time, user comments have been shown to influence readers' perceptions of media bias in studies, as well as their opinions about the impact of media on themselves and others (Chung et al., 2015).

Additionally, users form opinions about the quality of news as well as prejudices about a particular group of people who have recently made the news (Lee et al., 2017). Other research has focused on how news readers' perceptions of public opinion on the subject at hand are influenced by user comments (Chun & Lee, 2017). According to Lee and Jang (2010), participants who viewed user comments opposing the news stance (as opposed to no comments) thought that popular opinion was more divergent from the news position. After seeing user comments that contradicted their perspective, they concluded that public opinion was more hostile to their problem stance.

Confirmation Bias on Social Media

Confirmation bias is a person's inclination to seek data that supports rather than refutes his or her past opinions (Salman & Turhan, 2018). Surprisingly, the widespread usage of mobile communication may contribute to this issue while also making it easier to research how it manifests in society (Ling, 2020). People are more persuaded by others' high-confidence judgments than by their low-confidence ones. According to Mercier and Sperber (2017), if argumentation is a function of reasoning, then we should expect it to be biased and expect it to work systematically to find reasons for our ideas and against ideas that we oppose.

The widespread use of the Internet and social media has resulted in a variety of beneficial developmental consequences in civilisations all over the world (Doong & Ho, 2012). However, several researchers suggest that social media also has negative societal and cultural impacts. In a rare exception, researchers looked at how the rise in hateful information on the internet influenced the actual occurrence of racial hate crimes. They suggested two strategies for achieving this on the Internet. First, having Internet access might make hate group activities easier by enabling more effective recruitment and coordination. Second, by disseminating racist ideas online, Internet access may inspire lone-wolf offenders to commit racist hate crimes. Only the latter mechanism, which involves lone-wolf perpetrators, was shown to be efficient in encouraging more racial hate crimes, according to the findings of the study (Chan et al., 2016). While the studies have improved our understanding of the connection between the Internet and hateful and racist behaviour, they offer the idea of confirmation bias in personal opinions on social media.

It is worrying because the influence of social media is so strong. It is well documented that several racially motivated crimes around the world have been associated with the use of the Internet and social

media (Hassan et al., 2023). When social media promotes racism, it is feared that it becomes one of the most important ingredients in the confirmation bias found in social media servers. Consequently, hate speech, hatred, prejudice, and discrimination may occur. As a result of the widespread adoption of these tools, researchers who are both practitioners and academics have expressed concern about an increase in hate crimes and racist conduct (Chan et al., 2016).

However, a growing amount of anecdotal evidence, based on the principle of confirmation bias, shows that social media may promote racist and hateful acts by encouraging prejudice. As a result of these bias-driven behaviours, social media may eventually lead to an increase in racist and hateful conduct. However, since there has not yet been a comprehensive empirical study on the connection between racism and social media, a qualitative study was carried out to ascertain the views of social media users.

Theoretical Foundation

The underpinning theories used for this study are Ash Conformity Theory and Third-person Effect Theory. Solomon Ash's conformity experiments show the strength or power of social influence and continue to inspire social psychology researchers today. Social conformity is a type of social influence that involves changing one's beliefs or behaviour to fit in with a group (Cheng & Yu, 2022). Humans have a strong tendency to adopt the majority's viewpoints and behaviours. In today's social media world, social media users face group pressure or have the desire to be a part of a large social media community with the same mindset and behaviour. They do not want to appear unusual or nonconformist. This is the most heartbreaking reality that social media users face.

According to the Third-person Effect Theory, people believe that media messages have an impact on other people more than they do on themselves. A behavioural hypothesis states that support for restrictions on media messages will result from third-person perception (i.e., perceiving others as more influenced) (Gunther, 2014). Likewise, social media is about the people using it or the keyboard warrior as it is commonly known. They favour promoting other people's narratives. Social media users can easily be swayed by sensational, trustworthy, or persuasive stories.

Methods

A qualitative study was conducted to explore the factors that shape our confirmation bias and how confirmation bias influences our opinions on social media. Semi-structured interviews were conducted with six (6) informants. Only one interview session was conducted with each participant. The interview consisted of two (2) questions and took about 30 to 45 minutes long. Data were continually scrutinised to understand and construct the meaning of participants' perceptions. Informants include students, workers, or the unemployed as long as they have a communication-related educational background. The interview was conducted using a video conferencing platform such as Zoom or Google Meet. The recording was completed through the recording software called "OBS studio", and the transcription was done with the help of a service called "Descript". An academic expert validated and recommended the interview questions.

The researcher asked for the informants' consent to record the interview session. The interview was conducted as closely as the written questions, but the researcher conducted the semi-structured interview to have a deeper meaning and richer understanding of the participants' experiences while avoiding the unnatural tone of an interview. The main questions asked were "Could you tell me what are the factors that influence confirmation bias among social media users?" and "How do you see confirmation bias in shaping the way you perceive information on social media?"

Findings and Discussion

Six (6) informants from different ages, genders, ethnicities, and religions participated in the interview. The informants also included workers, students, and a housewife with a communication degree, as shown in Table 1.

Table 1

Demographic Characteristics of the Informants

Participants	Age	Gender	Ethnicity	Religion	Education	Occupation
#1	33	Female	Malay	Islam	Communication/PhD	Consultant
#2	47	Female	Malay	Islam	Housewife/Degree in Communication	Unemployed (Housewife)
#3	45	Female	Indian	Hinduism	Communication/PhD	Lecturer
#4	21	Male	Chinese	None	Degree in Applied Communication	Student
#5	22	Female	Malay	Islam	Degree in Applied Communication	Student
#6	22	Male	Malay	Islam	Degree in Applied Communication	Student

Four (4) themes were derived from the data extraction of the interview, i.e., level of education, algorithm, conformity, and self-control.

Level of Education

The first theme is the degree to which social media users are educated which may influence their propensity for confirmation bias. In other words, it implies that a person becomes more rational and objective when expressing an opinion as his or her level of education increases. This is depicted in the interview with informants #2 and #6 who said:

“I think it depends on the educational background of the individual because if they are better educated, I think they tend to find logic and find the complete information about something or some issue rather than making just decision depending on their belief. They tend to find more information and find the truth about something or some issue.” - Informant #2

“If the person is very highly educated or someone just keeps up to date with the latest news instead of just believing on the stuff that you can look at social media that everything can share.” - Informant #6

No studies firmly support the outcome of this study. However, a study tracking social media usage by Perrin (2015) on American adults showed nearly two-thirds of American adults (65%) used social networking sites, with higher education levels and household income leading the way. Over the past ten years, those with at least some college experience have consistently been more likely to use social media than those with only a high school diploma or less. However, this data does not indicate any conformity to the outcome of the current study. The opinions might be based on the personal experience of the informants with such issues. Thus, it warrants further investigation in future research.

Algorithm

The second factor that contributes to confirmation bias on social media is algorithm. Algorithms are sets of rules that define operation sequences and can be implemented in computational machinery as computer programmes (Zimmer et al., 2018). The informants had general knowledge of the algorithm that was not unnoticed.

Informants #1, #3, #4, and #5 stated:

“...the tendency that social media will give what we like.” - Informant #1

“A reinforcement of information you know so that is possibly a factor that encourages those individuals who believe in false information.”- Informant #3

“Every setup of the social media, which is the algorithm, is one of the major causes of confirmation bias.” - Informant #3

“It's possible that the user is a very important part of the social media platform. Actually, what you're wanting to search, you search a lot, then the preference would be to commence you to push you a lot of information similar like what you wanted to see.” - Informant #4

“Social media algorithm. That is designed to fit our likings, our beliefs and values, and attitudes.”- Informant #5

Informant # 5 further explained:

“I mean, look at Tiktok. The name meant “For you page”. So the content that is there is basically according to what we like seeing and people want to see what they want to see the only ones to see, right? So, the more we see things and contents that are similar to our beliefs, the more we are influenced in our confirmation bias.” - Informant #5

Informant # 6 also thought that social media plays an important role in providing algorithms that keep reinforcing similar information which pops up on social media and influences people's opinions. He stated:

“...the role of social media in confirmation bias is through manipulating the information that it consumed every day from social media. - Informant #6

This is very interesting because the informants had a good understanding of the algorithm. Apparently, algorithms were not foreign to the informants. They knew that the algorithm had also influenced them, and it also contributed to the information they wanted on social media.

Conformity

The third factor that leads to confirmation bias on social media is conformity. Social media users face group pressure to be a part of a large social media community with the same mindset and behaviour. They want to be part of the community, have a similar view, and feel that they belong to the community. This is the most heartbreaking reality that social media users face. Conformity experiments show the power of social influence which involves changing one's beliefs or behaviour to fit in with a group (Cheng & Yu, 2022). Some of the statements related to conformity factor are provided below:

“Confirmation bias happens when you as a person give this weight to evidence and confirm that yeah okay your belief is true. Your values about the information are true and whatever that is not true or disproves your own, what do you call this information then? You would just disregard that I think because it's conflicting with your belief. I would say when it comes to confirmation bias it can appear to you if you want to believe it that way. But let's say if you do not want to believe it that way you can also say “oh okay I have this information but then the social media or my friends or other users giving me the information.” So you can wait which one you want to prefer or you favour.” - Informant #1

"Maybe yeah. It plays a role but there's not what we say that it is not really a hundred per cent true depends on the individual self I think it does not depend on social media itself. I think it depends on the individual. some people are more inclined to be what we say confirmation bias but some people tend to find the truth about something rather than just believing in what social media says or what the netizen says.” - Informant #2

“So, the more we see things and contents that are similar to our beliefs, the more we are influenced by our confirmation bias. We tend to follow or I mean on Instagram, on Facebook, we tend to follow. We tend to like these posts from like-minded people like us that are from our that has the same background as us that has the same maybe educational background as us, has the same thinking as us.” - Informant #5

Similarly, being exposed to uncivil (vs. civil) remarks contributes to the idea that public opinion is more polarised (Hwang et al., 2014). It is not surprising that individuals favour messages that confirm rather than question their preconceived notions; as a result, they selectively expose themselves to information that is aligned with their perspectives.

Self-control

The fourth factor that contributes to confirmation bias on social media is the lack of self-control. Self-control refers to a human's ability to control thoughts and feelings, as well as to avoid unwanted behavioural patterns that might contradict the primary purpose (Mao et al., 2018). Self-control is a basic psychological variable since it involves an individual's ability to modify behaviour, an individual's ability to understand undesirable information, and an individual's ability to choose (Degol & Bachman, 2023). Individuals with a lower level of self-control do not consider the long-term implications of their behaviour, while others with a greater level do (Hua et al., 2023). Some of the statements related to self-control are stated below:

“Maybe yeah. Social media do play a role but there's not what we say that it's not really a hundred percent true depends on the individual self I think it does not depend on the social media itself. I think it depends on the individual. Some people are more inclined to be what we say confirmation biased but some people tend to find the truth about something rather than just believing in what social media says or what the netizen says. It is more about the ability of the individual to control themselves and not fall into social media” - Informant #2

“Usually, this confirmation bias you know goes around controversial information. Yeah...and people like to share that, especially on social media, because anything controversial attracts attention, and the spirit of social media is you want to attract attention to your posts, or you want to maintain certain interest.” - Informant #3

“But then it all depends on the individual whether they want to believe it or not. Or the person wants to be skeptical. Maybe they think it is true, but maybe this is not. The person can make more research or information from Google or any books they can get.” - Informant #6

All the informants agreed that social media does contribute to confirmation bias. However, we can still have self-control over our thoughts and feelings to avoid unwanted behavioural patterns that might contradict our views. Education or experience in life could boost the ability of self-control. According to Mercier and Sperber (2017), “We should be heavily biased towards our point of view when we produce reasons. We are not going to appear more rational by explaining why we did something stupid; we are not going to persuade someone by giving them arguments for or against our point of view. This explains an otherwise puzzling feature of reason: the myside bias” (p. 73). Being biased makes one look for more evidence to support his or her viewpoint and makes it easier to refute it. This has clear benefits when trying to convince others that one is right (Mercier & Sperber, 2017).

On a related note, this result raises the question of whether self-control is related to personality or vice versa. Hoyle and Davison (2016) covered “research on traits that are conceptually similar to (and sometimes confused with) self-control, capturing individual differences in specific features or consequences of it, as well as traits that, like self-control, reflect components of and approaches to self-regulation” (p.2). “Personality is the dynamic organisation within the individual of those psychophysical systems that determine his characteristics, behaviour and thought” (Allport, 1961, p. 28). Hence, understanding personality enables psychologists to predict how people will react to different situations and what they prefer and value (Rahmat et al., 2022). There is a difference between personality and self-control, but more obviously, there is a relationship between personality and self-

control (Hoyle & Davisson, 2016). Future research could also look at personality factors to answer the question of how social media shapes our opinions on it.

Conclusion

The four (4) themes, which are level of education, algorithm, conformity, and self-control, have answered the question of what and how confirmation bias shapes our opinions on social media. Not all human beliefs and values are affected by confirmation bias in the same way. Confirmation bias may be greater for emotionally charged issues and deeply held beliefs, such as religious convictions (Chan et al., 2016). We share a home and depend on the approval of others. Frequently, we are reluctant to live alone. Knowing how information and presentation on social media affect our opinions should increase our awareness and improve our self-control so we can avoid succumbing to confirmation bias when making decisions or accepting and evaluating any news on social media. Even though the education level was not supported by previous research, it provides opportunities for future exploration. It is recommended that future research should expand on interviewing informants from different walks of life or educational backgrounds, not limited to only communication degree holders or students.

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Conflict of Interest

The authors have declared that no competing interests exist.

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