The Role of Selective Exposure in 'A New Era of Minimal Effects'

The Mediating Effect of Selective Exposure on the Relationship between Personal Characteristics and Conspiracy Theory Beliefs

Eunbin Ha

ABSTRACT

In an era of information overload and diversified news and social media channels, this research shed new light on the role of selective exposure based on discussions of the 'New Era of Minimal Effects' (Bennett & Iyengar, 2008). Instead of research into algorithm-driven platforms that are based on a rampant technology-led approach, this study adopted a user-centric approach. The concept of conspiracy theories was employed as the framework for investigating whether individual online selectivity (selective exposure) mediates the relationship between a range of individual-specific characteristics and conspiracy theory beliefs. A large-scale survey with South Korean YouTube users aged 18 and over was conducted (N = 487). To examine the mediating effect of selective exposure, a two-pronged mediation analysis was conducted: the first was based on Baron and Kenny's (1986) mediation model; the second used the bootstrapping test (Preacher & Hayes, 2008). The findings showed that selective exposure functions as a mediator in the relationship between media literacy and conspiracy theory beliefs, but not in the relationship between political extremity or socio-demographic characteristics (gender, age, and education) and conspiracy theory beliefs. The results of this study indicate that human cognitive filters rather than technological filters serve as the cause and effect mechanism in an algorithmic-mediated world. This research demonstrates that a user-centric approach should take centre stage in media and technology studies that examine the interaction between individuals and technology on an algorithm-driven platform.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

INTRODUCTION

With the emergence of algorithm-driven news and social media platforms, the focus of media and technology studies has rapidly shifted toward technology-led outcomes. The rapid growth of algorithm-driven recommendation systems has further heightened research attention on the effects of personalisation algorithms on users. Some scholars have raised concerns that recent technological environments can provide users with more convenient functionalities for readily approaching or avoiding information. This view is similar to the idea of technological determinism: that technology primarily drives a dominant change in the development of society (Smith, 1994). This approach focuses on providing technological explanations for issues relating to the use of personalisation algorithms and often cites the concept of 'filter bubbles' as being an important factor in this (Pariser, 2011).

However, the problem with such research is that individuals tend to be regarded as simply passive users. Benkler *et al.* (2017) have criticised technological determinism perspectives, asserting that opinion polarisation and fragmentation of public discourse is not simply a matter of seeing the Internet as a form of technology. These authors showed that in the media ecosystem, different patterns of information acceptance and usage are demonstrated by the left and right-wing media and they emphasised that if technology 'causes' a move towards a post-truth society, symmetric patterns would appear. Similarly, Bakshy, *et al.*'s (2015) research into Facebook users showed that decreased diversity in information acceptance and use arises not from technology but from personal choice based on political identity. Thus, as evidence suggests, we cannot simply say that the consequences of the mediated online environment are directly led by technology.

In this respect, Fletcher's (2020) classification is useful for understanding two complicated concepts: pre-selected personalisation and self-selected personalisation. The former denotes

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

personalisation that is 'done' to individuals, usually by algorithmic filtering on their behalf, while the latter refers to personalisation that individuals voluntarily 'do' to themselves. While pre-selected personalisation is connected to the idea of 'filter bubbles', self-selected personalisation is known as 'selective exposure'. Algorithm-driven platforms such as YouTube combine self-selected personalisation with pre-selected personalisation. Although algorithms can hide certain information and lead to people accessing certain other information, people can still choose to selectively consume or not consume that information. The choice of content they access is ultimately up to the individuals themselves.

In an era of social technology with high options and multiple channels, individuals are no longer just passive message receptors. Individuals travel through multiple platforms and channels, deciding to self-select based on their pre-existing beliefs or preferences. With their own selectivity, each user can derive different messages from the same content (Jerit & Barabas, 2012). It was led to the discussion of a 'New Era of Minimal Effects' (Bennett & Iyengar, 2008). They state that we may return to the earlier era of 'minimal effects' derived from the idea of 'the two-step flow of communication' proposed by Katz and Lazarsfeld (1955) (see Bennett & Manheim, 2006). However, the idea of 'filter bubbles' still overlooks individually-led outcomes created by users' personal cognitive filters.

This view has been reflected in research into algorithmic-mediated platforms. Most previous studies have focused on exploring whether personalisation algorithms offer individuals a volume of information in a biased way (Haim *et al.*, 2018; Nechushtai & Lewis, 2019) or have used a system-centric approach to examine how personalisation algorithms perform (Cremonesi *et al.*, 2013). However, a user-centric approach that focuses on how users' internal selectivity mechanisms work when they use algorithm-driven platforms has received little attention.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

Motivated by the lack of empirical user-centric research into the use of algorithm-driven platforms, this research focused on the individual rather than on the technology. It explored whether individuals' biased online selectivity (their selective exposure tendencies) serve as a mediating mechanism between their individual-specific characteristics and their conspiracy theory beliefs. Given the argument that conspiracy theory beliefs stem from the monological tendency of conspiracy theories to originate from a 'closed mindset' (Goertzel, 1994), this context offered a framework for understanding how the selective exposure mechanism works. This study serves as early-stage research that explored the interaction between individuals and technology in an algorithmic-mediated world. Through mediation analysis into selective exposure, this research contributes to shifting the focus of media and technology studies beyond its current technology-led focus towards an individual-focused one.

LITERATURE REVIEW

Conspiracy Theories and Conspiracy Theory Beliefs

First, it is essential to define and clarify two of the key terms used in this dissertation: *conspiracy* and *conspiracy theories*. While a conspiracy is generally rooted in a true sequence of events, conspiracy theories are propositions that include conspiracies that might or might not be true (Douglas *et al*., 2019). Sunstein and Vermeule (2009: 202) define conspiracy theories as "an effort to explain some event or practice by reference to the machinations of powerful people, who attempt to conceal their role". Douglas *et al*. (2019: 4) provide a similar theoretical explanation, defining conspiracy theories as "attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors". As definitions by scholars indicate, conspiracy theories offer alternative narratives that go against the mainstream view of crucial events or circumstances

3

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

and are based on the thought that covert and sinister actors are orchestrating events. However, it should be cautious when defining *conspiracy theories*. Conspiracy theories are not definitively untrue; they still have room to be true. In this respect, Byford (2011) criticises the inherent inclination of the term conspiracy theory, arguing that the term itself seems to imply faulty reasoning, irrationality, or bias. Given that narratives embedded in conspiracy theories, such as plots, collusions, and cover-ups, are virtually rampant in society, Byford argues that the prevailing perspective on conspiracy theories (that they are untrue) can be entirely reasonable. His critique contradicts intuitive thinking of conspiracy theories as being ideas that are definitely not true and imparts a different way of looking at this complicated concept. However, it is still possible for conspiracy theories to turn out to be true. This undetermined truth is potentially the reason why individuals are prone to believing conspiracy theories rather than simply ignoring them.

The term *conspiracy theory beliefs* refers to the endorsement of conspiracy theories. It can refer to a belief in one specific conspiracy theory or a series of them (Douglas *et al*., 2019). This is due to the nature of conspiracy theories being situated within a monological belief system (Goertzel, 1994) – that conspiracy theory beliefs are all intertwined based on mistrust of official narratives. Within a network of mutually supportive conspirational ideas, each conspiratorial idea acts as proof of another one being true. Within a monological conspiracy theories belief system, it is proposed that one conspiracy theory belief is correlated with other ones. Some empirical literature is still inconsistent with the idea that conspiracy theories form a monological belief system. For example, Wood *et al*.'s (2012) research showed that the positive correlation between mutually incompatible conspiracy theory beliefs was not significant. If not all conspiracy theories are rooted in a monological belief system, Douglas *et al*.'s (2019: 7) argument that "conspiracy beliefs are only related to each other to the extent that they cohere with a higher-order belief system" seems plausible. However, a larger volume of empirical

evidence supports monologicality (Stieger *et al.*, 2013; Swami *et al.*, 2010; Swami & Furnham, 2012).

Nevertheless, the idea of conspiracy theory beliefs sitting within a monological belief system is meaningful as it offers a logical explanation that drives conspiracy theory beliefs. Based on this monologicality, Franks *et al.* (2017) argue that conspiracy theory beliefs are more motivated by a general conspiratorial mindset or worldview rather than by the details of each conspiracy theory. Unlike dialogical belief systems that are based on an open mindset, monological belief systems engage with conspiracy theory contexts and information with a closed-off worldview. Goertzel (1994: 740) argues that "dialogical belief systems engage in a dialogue with their context, while monological systems speak only to themselves, ignoring their context in all but the shallowest respects". Franks *et al.* (2017: 2) support Goertzel's ideas and assert that "CT [conspiracy theory] belief does not arise from inferences drawn from a set of observations, but rather from applying a conspiratorial worldview to those observations". Goertzel's (1994) and Franks *et al.*'s (2017) arguments provide a crucial premise for understanding the psychological information-processing mechanism of people with closed mindsets.

From Offline (Personal Characteristics) to Offline (Conspiracy Theory Beliefs)

Research has shown that the endorsement of conspiracy theory beliefs correlates with demographic factors, media literacy, and political extremity. There is some evidence of a causal relationship between conspiracy theory beliefs and socio-demographic variables such as gender, age, and education. Many studies have shown that males are more likely to believe in conspiracy theories than females (Bogart & Thorburn, 2006; Cassese *et al.*, 2020; Freeman & Bentall, 2017). However, recent studies on COVID-19 conspiracy theories have contradicted this (Alper *et al.*, 2020). Regarding age, most previous research has found that the younger someone is more likely to believe in general conspiracy theories (Green & Douglas, 2018) and

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

COVID-19 conspiracy theories (Allington *et al*, 2020; Constantinou, Kagialis & Karekla, 2021; Earnshaw *et al*., 2020). The association between education and conspiracy theory beliefs is more straightforward; numerous empirical findings show that low-level education correlates with the endorsement of conspiracy theory beliefs (Bogart & Bird, 2003; Douglas *et al*., 2016; Freeman & Bentall, 2017; Oliver & Wood, 2014).

The most highly-used definition of media literacy is "the ability of a citizen to access, analyze, and produce information for specific outcomes" (Aufderheide, 1993: 6). Having media literacy is crucial because it is ultimately individuals themselves who determine what information to expose or accept. Media literacy is regarded as a buffer that minimises the likelihood of being exposed to or affected by negative experiences in the digital world (Kellner & Share, 2007). Similarly, media literacy is cited as a tool that can help overcome conspiracy theory endorsement (Bartlett & Miller, 2011; Craft *et al*., 2017) Given that media literacy increases critical attitudes towards media messages and improves the ability to spot fallacies, it can be said that media literacy reduces conspiracy theory beliefs. Pickles *et al*. (2021) showed that higher levels of COVID-19 conspiracy theory beliefs are significantly related to lower levels of digital health literacy. However, this idea has recently been critiqued by Bruns (2019: 57), who stated:

> There is a significant caveat to this argument for media literacy: the very strategies
> of critical media literacy have also been adopted and weaponised by the merchants
> of mis- and disinformation themselves.

Bruns's comment raises a crucial point about the negative association between media literacy and conspiracy theories beliefs.

Historical evidence suggests that the association between political extremity and conspiracy theory beliefs is strong (Bartlett & Miller, 2010; Inglehart, 1987), regardless of whether political

ideology is left or right-wing (Uscinski & Parent, 2014). Political extremists are prone to having strongly structured thoughts that are aimed at understanding social events (van Prooijen, Krouwel, & Pollet, 2015). Also, the cognitive inclination of political extremists to regard societal events as simpler can lead to the development of conspiracy theory beliefs (van Prooijen & Krouwel, 2019). Given that conspiracies about 5G and COVID-19 are seemingly disseminated through the far-right community, we can say that individuals with a salient group identity tend to be more drawn to conspiracy theory beliefs (Hartman *et al.*, 2021).

Selective Exposure

The term *selective exposure* was coined in the book *The People's Choice*, written by Lazarsfeld, Berelson, and Gaudet (1948). The authors observed a phenomenon in which voters more often encountered attitude-consistent messages compared to viewpoint-uncongenial ones. The concept of selective exposure can be defined as a person's tendency to seek out information that matches pre-existing attitudes, beliefs, and behaviours, while avoiding counter-attitudinal information (Hart *et al.*, 2009; Klapper, 1960; Knobloch-Westerwick & Meng, 2011; Olson & Stone, 2005).

The behavioural pattern of selective exposure is not only 'approach' but also 'avoidance' (Iyengar & Hahn, 2009) and can be driven by several causes. One view is that selective exposure is a means of effective information processing (Ditto & Lopez, 1992; Ditto, Scepansky, Munro *et al.* 1998; Smith *et al.*, 2008). Given that people spend more cognitive energy processing counter-attitudinal information, they tend to process information that supports their predispositions in order to simplify their mental tasks (Johnson *et al.*, 2009). Another view is that people predominantly seek supporting information over conflicting information because they consider information that challenges their opinions as irrational or less credible (Fischer *et al.*, 2005; Melican & Dixon, 2008).

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

From Offline (Personal Characteristics) to Online (Selective Exposure)

The dominant theoretical and empirical framework for selective exposure is cognitive dissonance theory (Frey, 1986; Hart *et al.*, 2009, Stroud, 2010), which was originally formulated by Festinger in 1957. The major idea behind the theory is that selective exposure is considered a highly strategic means of reducing dissonance. Discomfort arising from cognitive dissonance motivates people to eliminate unpleasant psychological states (Festinger, 1957). Therefore, they selectively seek information that is consistent with their prior attitudes or beliefs while avoiding information that is inconsistent with them. Cognitive dissonance results in people accessing a less diverse range of information, despite today's high-choice media environment that has countless media outlets (Mutz & Martin, 2001).

Some research has suggested that selective exposure is not a result of cognitive dissonance (e.g. Garrett, 2009; Iyengar *et al.*, 2008). Nevertheless, the cognitive and psychological drivers that are intrinsic to cognitive dissonance theory make it a meaningful theoretical framework for understanding how selective exposure works. Selective exposure can be viewed as an explicit behavioural consequence of cognitive dissonance. In this respect, cognitive dissonance theory can explain the cognitive and psychological mechanisms that influence an individual's attitudes towards information they consume.

Among the many factors arousing cognitive dissonance, one's political predispositions are considered to be a dominant personal characteristic that can result in selective exposure (Garrett, 2009; Iyengar & Hahn, 2009; Sunstein, 2009; Stroud, 2008, 2010). As noted by Lazarsfeld *et al.* (1948), human beings have long shown patterns of partisan selective exposure. They are inclined to engage in politically motivated selective exposure, which is the act of choosing congenial messages depending on their political purpose (Feldman *et al.*, 2014), and purposefully select information that matches their political predispositions and beliefs while avoiding disconfirmatory information that conflicts with them (Stroud, 2008).

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

The intensity of political predispositions is also strongly related to patterns of selective exposure. For decades, research has shown that higher levels of confidence and certainty about one's beliefs result in more selective exposure (Iyengar & Hahn, 2009; Jonas *et al.*, 2001; Lord *et al.*, 1979; Moerman & Jonas, 2002; Stroud, 2008). The more conviction a person has about the correctness of their cause, the stronger their tendency to seek out information that is consistent with their convictions (Bennett & Iyengar, 2008).

Given that individual socio-demographic characteristics and media literacy are closely related to media access, skills, and breadth of use, they can also affect selective exposure. For example, news media literacy (NML) messages contribute to decreasing selective exposure and avoidance (Vraga & Tully, 2019). But, more highly-educated individuals tend to offer an evidence of more varied patterns of selective exposure (Ladd, 2010; Stroud, 2011).

From Online (Selective Exposure) to Offline (Conspiracy Theory Beliefs)

Technological factors

There is a link between selective exposure and media and technology environments. Stroud (2007) states that people are highly likely to show stronger patterns of selective exposure when they can access more media channels and have more content to choose from. Compared to newspapers, more varied information environments – such as the Internet, radio, and cable television – facilitate the use of selective exposure approach and avoidance strategies (Stroud, 2008).

Ironically, despite the increased range of options, individuals can get stuck in 'echo chambers' that arise from selective exposure to one-sided information. An 'echo chamber' is a metaphor for an environment where people only acknowledge or attend to a narrow band of ideas or information that accords with their pre-existing beliefs (Colleoni *et al.*, 2014; Jamieson & Cappella, 2008; Sunstein, 2001, 2009). Sunstein (2009) points that echo chambers gather

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

momentum under a high-choice information environment; he asserts that information technologies such as the Internet encourage people to listen to more and louder echoes of their own voices and screen out the voices of others. Echo chambers create an environment in which inner-group members preferentially link to each other while limiting outside connections. What is particularly problematic is that echo chambers can serve to widely circulate inner views within the echo chamber network, amplifying the pre-existing beliefs and attitudes of its members (Bruns, 2017; Iyengar & Hahn, 2009; Jamieson & Cappella, 2008; Slater, 2007; Stroud, 2010; Sunstein, 2007). It has been pointed out that:

> … [W]ithout free movement of ideas and information, people inside echo chambers will believe that this is all there is. Under these circumstances, anyone who disagrees is misinformed at best and willfully ignorant at worst. (Dubois & Blank, 2018: 729)

Scholars suggest that echo chambers contribute to the reinforcement of beliefs. Empirical studies have provided some evidence to support this idea (Conover *et al.*, 2011; Himelboim *et al.*, 2013). Research has also shown that selective exposure directly affects polarisation (Lin, 2009; Stroud, 2010; Slater, 2007) and that there is a causal link between selective exposure and misinformation (Del Vicario *et al.*, 2016). However, only a small number of studies have been conducted on the direct association between selective exposure and conspiracy theory beliefs. One such study, Warner and Neville-Shepard's (2014) experimental research into how the media affects the development of conspiracy theory beliefs, offers a key finding: that media echo chambers cultivate conspiracy theory beliefs despite the presence of debunking messages.

Some scholars have raised concerns that technological environments can support the activation of echo chamber mechanisms. This view is closely related to the concept of 'filter bubbles' coined by Pariser (2011), which holds that algorithm-driven recommendation systems present biased results that are specifically linked to users' interests. Pariser warns that

this tailored selection, which is filtered by more algorithms, contributes to the building of 'information cocoons' that reinforce previously held views.

Ideas about echo chambers and filter bubbles have been much critiqued. Bruns (2019) does not deny the existence of selective exposure and homophily (the tendency to interact with similar individuals at a higher rate) because it is largely true that some users selectively consume information that aligns with their existing patterns of belief. However, he criticises the very idea of filter bubbles and echo chambers, calling them outlandish and even unrealistic because multimedia users can utilise multiple sources. Indeed, some empirical studies do not support the view that echo chambers and filter bubbles exist (Bakshy *et al.*, 2015; Goel, *et al.*, 2010). Dubois and Blank (2018) raised questions about the impact of echo chambers, reporting that people with diverse media diets and a strong interest in politics tend not to be caught in echo chambers. Furthermore, Hosanagar *et al.* (2014) showed that consumer fragmentation does not appear on personalised recommendation systems; rather, personalisation contributes to broadening users' interests.

Cognitive factors

The idea of echo chambers or filter bubbles can be excessively skewed towards technological determinism. It should be noted that in complicated online mediated environments, the link between cause and consequence can never be explained as being simply a result of technology. This does not mean that there are no effects of technology; rather the filter bubble and echo chamber approaches overly focus on the technological dynamics behind the relationship between digital engagement and behavioural outcomes. The problem with this approach is that dominant, one-sided views of technological determinism can make people overlook the complexity of the cognitive and psychological mechanisms of information-seekers who process information online. The relationship between individual selectivity and consequences

must be considered to develop a thorough understanding of the complicated psychological dynamics.

As Bruns (2019) argued, individual users have the opportunity to check multiple sources through multiple channels and platforms; they are not simply immersed in isolated information cocoons. Nevertheless, some people fail to emerge from their false beliefs. But their incomprehensible attitudes cannot be said to arise from technology alone. Bruns suggests a transition of focus from media-related to psychology-related research, highlighting that it is crucial to examine how some people process and then integrate information into their closed-off worldview. Given this assertion, the role of selective exposure in information processing must be considered through a cognitive lens.

Fischer (2011) argues that an information-seeker's systematic information-processing is based on a desire to validate and confirm their previously held worldviews; as such, it lays the psychological foundation for selective exposure that is based on a psychological approach – motivation. This argument is similar to the idea of directional reasoning introduced by Kunda (1990), which posits that an individual's reasoning processes are based on motivation to endorse and espouse their existing worldview. People with directional reasoning purposefully process information that is consistent with their views and they give weight to hypothesis-confirming information. Many studies of social judgment have shown that individuals tend to overweigh evidence that is supportive of their viewpoint, while they undervalue uncongenial evidence (Nickerson, 1998).

The concept of confirmation bias offers a useful conceptual framework for understanding how information-seeker's behaviours can be biased by a cognitive mechanism activated during information processing. Oswald and Grosjean (2004: 79) state that confirmation bias is when "information is searched for, interpreted, and remembered in such a way that it systematically impedes the possibility that the hypothesis could be rejected – that is, it fosters the immunity

of the hypothesis". Confirmation-biased selective exposure patterns can be driven by information-seeking mechanisms aimed at bolstering one's views. Indeed, confirmation bias is generally regarded as the main indicator of selective exposure (Jonas *et al.*, 2001). Nickerson (1998: 175) conceptualised confirmation bias as being "the inappropriate bolstering of hypotheses or beliefs whose truth is in question". Confirmation-biased selective exposure patterns can engender false beliefs. This concept can help us to understand the relationship between cognitive mechanisms and conspiracy theory beliefs.

Conceptual Framework, Research Question, and Hypotheses

This research aimed to examine the mediation effect of selective exposure on the relationship between personal characteristics and conspiracy theory beliefs. Baron and Kenny (1986: 1176) state that "whereas moderator variables specify when certain effects will hold, mediators speak to how or why such effects occur". In other words, mediator-oriented research can be useful for exploring the mechanism behind the relationship between the predictor and the criterion.

To explore the role of selective exposure as a mediator, Baron and Kenny's (1986) model of mediation, which is widely accepted as the most representative mediation approach, was used in this research. Under this model, three preconditions should be met prior to testing mediation: Path *a* (X predicting M), Path *b* (M predicting Y), and Path *c* (X predicting Y) (see Figure 1).
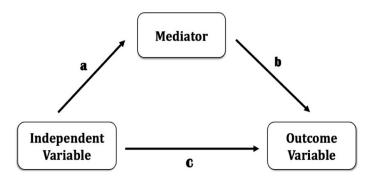
Eunbin Ha

Figure 1. The basic causal chain related to mediation (Baron & Kenny, 1986)

Baron and Kenny's (1986) model, therefore, presents a mediation causal chain that accounts for a three-variable system. The conceptual model for this research (see Figure 2) was designed following the assumptions in this mediation model.

The research question was formulated as follows:

> **Research Question:** To what extent does selective exposure mediate the relationship between personal characteristics and users' conspiracy theory beliefs?
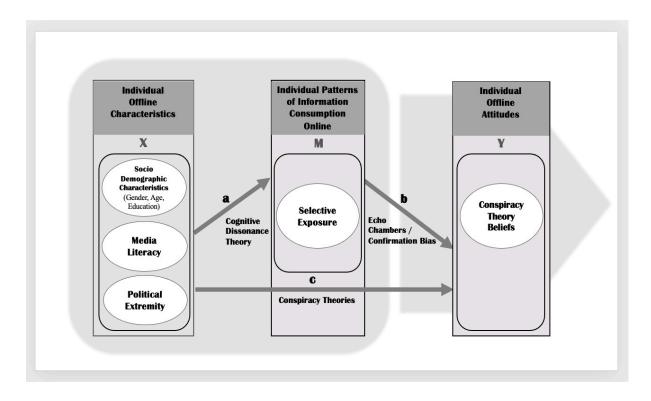
Figure 2. Conceptual model for the research

In this research, independent variables are three personal characteristics: socio-demographic characteristics, media literacy, and political extremity. And, mediator variable is selective exposure. Outcome variable is conspiracy theory beliefs.

For preconditions, three causal paths should be fulfilled prior to testing mediation: Path *a* (the impact of X on M), Path *b* (the impact of M on Y), and Path *c* (the impact of X on Y). While the previous literature on this topic offers clear explanations for Path *a* (personal characteristics ➜ selective exposure) and Path *c* (personal characteristics ➜ conspiracy theory beliefs), Path *b* (selective exposure ➜ conspiracy theory beliefs) has only been explored in a few studies. The hypothesis for Path *b* was formulated as:

H1: Selective exposure is positively related to conspiracy theory beliefs.

Given the broad scope of the research question presented above, three hypotheses were derived to examine whether selective.

> **H2:** Selective exposure mediates the relationships between three socio-demographic characteristics (gender, age, and education) and conspiracy theory beliefs.

> **H3:** Selective exposure mediates the relationship between media literacy and conspiracy theory beliefs.

> **H4:** Selective exposure mediates the relationship between political extremity and conspiracy theory beliefs.

METHODOLOGY

Research Context and Study Population

The context of this research is 'COVID-19 (Coronavirus Disease 2019) infordemic'. The COVID-19 pandemic is the first of its kind in the digital communication era and reflects the phenomenon of an infodemic. An *infodemic* is "an overabundance of information – some accurate and some not – occurring during an epidemic" (World Health Organization [WHO], 2020, para. 1). The problem with infodemics is that the available information about a disease outbreak contains deliberate attempts to mislead individuals towards one or more alternative agendas (WHO, 2020). In this respect, infodemics circulate on online platforms and amplify conspiracy theories. Douglas (2021) explains that individuals are drawn to conspiracy theories to avoid uncertainty in an environment where emotional stability might suffer. Van Prooijen

and Jostmann (2013) showed that conspiracy theory beliefs are prone to being stronger under conditions where uncertainty can proliferate. Given that COVID-19-induced uncertainty continues, arguably, the relationship between personal characteristics and COVID-19 conspiracy theory beliefs will also be strong. Thus, the information related to COVID-19 provided an appropriate context for this research.

The study population was 'South Korean YouTube users aged 18 and over'. Firstly, YouTube is an algorithm-driven social media platform that is usually criticised for using filter bubbles. Its technological functions are therefore relevant for the design of this study. More importantly, YouTube is a universally popular platform that has no gender, age, or education level constraints, which is a crucial feature given the focus on these factors in this research. Also, YouTube is now a crucial channel for retrieving information; it is no longer used only for entertainment. According to a study by the Reuters Institute for the Study of Journalism at Oxford University (see Newman, Fletcher, Schulz, Andi, & Nielsen, 2020), since 2016, the use of YouTube for news purposes in South Korea has surged to 45% and further increased since the outbreak of COVID-19, while the readership of newspapers has plummeted drastically. A 2020 research report by the Korea Press Foundation (KPF) (Lee & Park, 2020) showed a similar pattern: at 45%, YouTube digital news usage in South Korea was considerably higher than the 27% average of 40 other countries, and compared to a 2019 survey, had increased by 7 percentage points.

Secondly, South Korea was chosen because, according to Yang and Oh's (2018) research with 1,218 South Koreans, 77.8% were direct YouTube users and 94.2% were exposed to YouTube content through video-sharing or social media. YouTube was used by 91.3% of young people in their twenties and 67.1% of the over 60 age group, indicating that South Korean's YouTube usage is not affected by age. This contrasts 38 other countries, where people are less likely to access YouTube news-related content as they get older (Kim & Kim, 2019). Furthermore, South

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

Koreans with conservative or liberal political ideologies are more likely to use news-related YouTube content than are those with moderate views (10% difference), while there are no significant political ideology differences in the use of news-related YouTube content across 38 other countries (Kim & Kim, 2019). Given such unique tendencies, South Korea was considered a suitable study population for this research. The focus was on participants aged 18 and over because of the ethical issues with collecting data from people younger than age.

Research Approach

This research used a quantitative self-administered web survey to examine the mediation effect of selective exposure on the relationship between personal characteristics and conspiracy theory beliefs. The research needed to be user-centric – i.e. designed to collect original user data – therefore, a range of direct research methods whereby participants respond to questions asked (surveys, experiments, and interviews) were considered. A quantitative self-administered web survey was deemed the most suitable because researchers can statistically examine the association between two or more variables and generalise findings to a larger population; this approach can therefore offer strong evidence about the patterns of observed phenomena (Groves *et al.*, 2009; McLeod, 2019).

In contrast, qualitative in-depth or focus group interviews can provide a more rich interpretation of individual subjective perceptions or views within specific contexts (Denzin & Lincoln, 2000; McLeod, 2019), But, findings cannot be generalised. Qualitative studies are also heavily dependent on the subjective interpretations of the researcher and are harder to replicate (de Vaus, 1995). The differences between quantitative and qualitative research were considered in relation to this study. The aim was to estimate the mediating effect of selective exposure on the South Korean population based on the findings observed in a small sample group of South Koreans. Therefore, a method that allowed for statistical generalisation was

needed. In this respect, interviews were not considered appropriate despite them having other benefits.

Another method, experimental research, can be a powerful tool to estimate causality (Fisher, 1935) based on conditions of association, time order, and nonspuriousness (Check & Schutt, 2012). However, statistical generalisation is difficult if the sample is not statistically representative of the population (de Vaus, 1995). Experimental research was therefore considered inappropriate despite its advantages for identifying causal mechanisms.

Selecting the research methods for a study must be considered alongside the study topic. Given that this research handled a fairly sensitive topic – conspiracy theory beliefs – the anonymity and confidentiality of a self-administered survey was particularly appropriate. People tend to be reluctant or unwilling to report true answers to sensitive questions (Biemer & Lyberg, 2003). This is related to 'social desirability', which refers to the inclination to give answers that are seen to be more socially acceptable (Lavrakas, 2008). Sensitivity can be a trigger for social desirability (Tourangeau & Yan, 2007), which is often activated by the presupposition that behaving in a way that is consistent with 'the norm' is desirable while the opposite is not; strong conditions of perceived normative pressure are associated with a high tendency to hide one's true response. Under interview conditions, the presence of the interviewer can 'pressure' the respondent into giving socially desirable responses to sensitive questions (Groves *et al.*, 2009). On the other hand, self-completion, where there is no interviewer, brings about fewer social desirability biases and can limit response issues associated with sensitive topics (Corkrey & Parkinson, 2002); the privacy of the self-administered survey enables respondents to feel 'safer' and increases true response rates for sensitive or potentially embarrassing questions (Groves *et al.*, 2009).

Practical issues (budgetary and time constraints), circumstantial factors, and characteristics of the sample were considered when choosing the research method. Web surveys are relatively

cheap to implement and can reach a large target population within a short time period, and completed questionnaires can be stored online and easily retrieved through electronic devices (Tourangeau *et al.*, 2013). Also, because of COVID-19, it was expected that people would not want to participate in a face-to-face survey; a contactless survey method was therefore deemed more suitable for increasing the response rate. Furthermore, given that the sample was YouTube users, who are likely to be 'technology-friendly', it was considered more strategic to use an electronic form of data collection.

However, surveys have limitations. The total survey error (TSE) framework (Groves *et al.*, 2009) specifies seven errors that can arise at different stages of survey implementation: construct validity, measurement, processing, coverage, sampling, nonresponse, and adjustment errors. These can reduce research validity and reliability (Biemer, 2010). This research was designed to minimise errors as much as possible and maximise survey quality.

Sampling Strategy

The ideal sampling strategies for quantitative research are probability sampling, whereby each individual in the population is known and has a non-zero probability of inclusion (Yeager *et al.*, 2011) and stratified random sampling, which is "the technique of organizing a sample frame into subgroups that are internally homogeneous and externally heterogeneous to ensure that sample selection is 'spread' properly across important population subgroups" (United Nations, 2008: 28). These strategies can improve the statistical efficiency of the sample (Heeringa *et al.*, 2010) and are ideal for obtaining a more representative sample. However, a non-probability sampling strategy was used in this research due to time constraints and issues with accessing the sample: participants self-selected (volunteered) themselves for survey completion (Tourangeau *et al.*, 2013). It was acknowledged at the outset, however, that this strategy could result in a somewhat distorted sample (Fowler, 2009).

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

The target population was South Korean YouTube users aged 18 and over who had been exposed to COVID-19 information in the last month. There were no constraints on gender, age, or education level. However, the survey population was restricted because it excluded people with technological limitations – they either could not use online technology or were unable access to it. To minimise potential bias, a strategy called deliberate over-coverage was used. The sample was extracted from a larger population than a subpopulation, and members of the subpopulation through early screening questions were detected. The survey was carried out only by the persons who were not screened out through a series of questions.

The participants were recruited through an invitation posted on a broad range of targeted websites and acquaintances' social network accounts. The invitation was posted on social media sites such as Instagram, Facebook, or Naver Band and was forwarded to diverse age groups in chat rooms. To ensure a good gender balance, it was also posted on male- and female-orientated websites and was distributed to all age groups via Kakao-Talk, a South Korean messaging application. Given the 'political orientation' variable (see below), it was also posted on right-wing and left-wing representative communities. The invitation included a link to a Qualtrics survey where participants could complete the survey anonymously. Participants self-selected or volunteered themselves into the research.

Screening questions were used to screen out users below 18 years of age, non-YouTube users, and those who had not been exposed to COVID-19 information. A final total of 487 participants that met the research criteria were identified. The sample was 55% male/45% female, with a varied range of educational levels and a mean age of 47.56 (SD = 15.03).

Measures

Socio-demographic characteristics

The socio-demographic variables (age, gender, and education) were held as independent variables in the model. Gender was a binary measure (male/female). Education was measured using five categories. Age was measured in the form of a continuous variable using the question 'In what year were you born?'

Media Literacy

Media literacy was held as another independent variable and was measured using a 20-item 5-point scale from 1 (perfectly disagree) to 5 (perfectly agree). The items were adapted from the New Media Literacy Scale (NMLS)[1] (Koc & Barut, 2016). The four categories in the scale – 'Functional Consumption', 'Critical Consumption', 'Functional Prosumption', and 'Critical Prosumption' – were rated. The average score of the total twenty items was calculated to use for analysis, consistent with other researchers (Lee *et al.*, 2021).

Political Extremity

Political extremity, another independent variable, was operationalised as 'the degree to which personal political ideology has been biased toward one of the extremes'. It was measured as a single item (Ksiazkiewicz & Krueger, 2017) with the answer scale ranging from 1 to 7. After measuring, each pair of 1 and 7 (extremely liberal and conservative), 2 and 6 (liberal and

---

[1] The NMLS was developed based on a theoretical framework originally proposed by Chen, Wu, and Wang (2011). The NMLS enables the research to measure comprehensively two continuums of media literacy from consumption to prosumption, as well as from functionality to criticality. The research chose the NMLS based on the following reasons. First, On YouTube, unlike traditional media, anyone can watch anything uploaded by a third party, as well as freely produce content with very few time and location constraints. Given this interactive trait of the platform, the levels of consumption and prosumption are considered together to measure a user's media literacy levels. Also, in South Korea, YouTube (31%) is regarded as the most likely platform in which misinformation or biased information is circulated rather than Facebook (10%) (Lee & Park, 2020). Given this circumstance of South Korea, the comprehensive consideration of not only functionality but criticality can help measure more accurate levels of media literacy.

conservative), and 3 and 5 (slightly liberal and conservative) was converted to a separate value of 4, 3, and 2, respectively; 4 (moderate) was then converted into a value of 1.

Selective Exposure

This was a mediator variable and was operationalised as 'the act of an individual to selectively consume COVID-19 content that accords with one's pre-existing views or attitudes'. It was measured using eight items on a 5-point scale from 1 (none) to 5 (every day). The higher the score, the stronger is the degree of selective exposure. Initial items were based on relevant literature (Weeks *et al.*, 2017; Johnson *et al.*, 2009).

After pilot tests (see below), the initial items were revised to better reflect the traits of South Korean YouTube users. The top six results from Oh and Song's (2019) research into South Korean YouTube users' routes to accessing content were used to design items: channel subscription, keyword retrieval, video-related recommendation, home feeds, shared links by acquaintances, influx through the webpage.

The definition of COVID-19 content used in this research was also based on four infodemic themes – the cause of disease, illness, treatment, and interventions – which were predefined by the WHO and categorised by Islam *et al*. (2020).

There was an option to respond 'I can't remember' in the response options to 'buffer' the risk of fake responses. Given that the selective exposure responses were based on experiences in the past month, respondents were required to retrieve information from long-term memory (Tourangeau & Rasinski, 1988). Such cognitive burden can cause respondents to randomly select response alternatives (Krosnick, 1991), which can contribute to low validity and reliability.

Conspiracy theory beliefs

This dependent variable was operationalised as 'the degree to which individuals believe COVID-19 conspiracy theories are true'. It was measured by using a 10-item scale consisting of a random mix of four true statements and six conspiracy theory statements. This was a strategy to reduce measurement errors arising from bias. The four true statements were extracted from the WHO and Korea Disease Control and Prevention Agency (KDCA) homepages. The six conspiracy theory statements were extracted from relevant literature on COVID-19 conspiracy theories (Allington *et al.*, 2020; Islam *et al.*, 2020; Shapiro *et al*, 2016). The items were measured on a 5-point scale from 1 (definitely not true) to 5 (definitely true). A higher score reflected stronger conspiracy theory beliefs. Although 'true' statements were included in the questionnaire, the scores were excluded from the analysis.

Procedure

Data were collected from South Korean YouTube users over the age of 18 through a self-administered web survey. Before the main data collection, cognitive interviews were conducted in early July 2021 with a small number of participants to assess whether individuals could understand the survey questions and how they dealt with the response process (Conrad & Blair, 2009). The necessity of more thoroughly considering YouTube consumption patterns in the selective exposure questions was detected and two unnecessary items were excluded. These items were then re-designed (see above). The conspiracy theory beliefs items were given special focus in the cognitive interviews as the questions were potentially sensitive: it was concluded that the items could measure conspiracy theory beliefs without bias.

The main survey was conducted from 20 July 2021 to 4 August 2021. The participants accessed the Qualtrics questionnaire through the anonymous link provided in the recruitment invitation (see above). Questionnaires were only accessible to participants who completed a consent form on the first page. Screening questions were presented first and the survey was

terminated if a respondent did not fulfil the research criteria. The research questions were presented in the following order: media literacy, selective exposure, conspiracy theory beliefs, socio-demographic characteristics, political ideology. A copy of the questionnaire is given in Appendix B.

Analytical approach

A two-pronged mediation analysis was conducted. First, the most widely-used approach, popularised by Baron and Kenny (1986), was used to test whether selective exposure functions as a mediator. To proceed with mediation analysis, three preconditions should first be fulfilled: there should be a significant correlation between variables in each path. After the preconditions are met, the final step for mediation analysis can be carried out [2]. Thus, three preconditions were tested. It was followed by mediation analysis.

However, given recent criticism on Baron and Kenny's model, additional analysis was carried out. In the second part of the analysis, the bootstrapping test (Preacher & Hayes, 2008) was conducted by using the SPSS PROCESS Macro. This offers a test for mediation using bootstrap sampling whereby the confidence interval is used to confirm the indirect effect. If this does not include zero, it can be concluded that the tested path is statistically significant (Preacher *et al*, 2007).

Ethics and Reflexivity

No data was collected until approval was given by the researcher's supervisor. The survey was conducted in accordance with London School of Education's ethical guidance (LSE, n.d.).

---

[2] Mediation is evidenced if, in regression 1, the predictor affects the mediator; in regression 2, the independent variable affects the outcome variable; and in regression 3, the mediator affects the outcome variable. When the mediator is included in regression 3, if a previously significant association between the predictor and the outcome variable becomes non-significant, this is evidence for 'full mediation'. Furthermore, in regression 3, if the association between the independent and dependent variables is weakened compared to in regression 2, this indicats 'partial mediation'.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

Participants were required to complete a consent form and were given information about the research aims and participants' rights before being allowed access to the main survey (see Appendix A). It was explained that participants could exit the survey or withdraw their data at any time. No financial incentives were offered for participation to ensure more sincere responses and limit the possibility of bias in the data.

Reflexivity is a continual process (Guillemin & Gillam, 2004). Throughout the research, I tried to scrutinise and reflect on my working processes in order to maintain the transparency of the study, even at the point where the research ethics committee cannot access.

To maintain the integrity of the data, I adopted measures already cited as reliable by academic scholars instead of developing items myself; however, in the pilot study, an unanticipated problem arose. I had not considered the differences between Western and Eastern cultures and viewed all individuals in the same way based on international standards. This caused me to overlook the cultural tendencies of the research sample. Fortunately, I had time to further develop my measures to secure a higher quality survey for the main study. The data was stored on a password protected computer and was only accessible to myself. It was anonymised at the point of delivery because no names were taken from respondents when they completed the survey. Also, to draw thoroughly objective research findings based on ground, I tried to reflect on the criticisms of scholar's who had been involved in similar research.

Importantly, I ceaselessly reflected on myself to break my intrinsic stereotypes. I looked further at the objective evidence on COVID-19 conspiracy theories to better block my own subjective biases towards sensitive topics such as conspiracy theories. As a YouTube user myself, I have inherent thoughts and fixed personal views on YouTube usage. I tried not to judge the participants based on my personal information consumption patterns and I tried to prevent my prejudices towards extremists and conspiracists from impacting on the research.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

RESULTS

Data Cleaning

Prior to analysis, the dataset was 'cleaned' and re-organised. A total of 940 South Koreans participated in the survey; 156 incomplete surveys were dropped from the dataset, 784 complete surveys were retained. The N = 784 dataset was re-cleaned based on the research criteria and screening questions; two surveys from participants under the age of 18, and 292 surveys from respondents who had not accessed COVID-19 information in the previous month, were dropped from the dataset. 'Straightlining problems' which are nearly identical responses (Kim *et al.*, 2019) were discovered in three surveys, which were excluded to support better data quality. A total of 487 valid responses were retained for the final analyses. All the analyses were conducted using SPSS (Statistical Package for the Social Sciences) software.

Missing Values

There were no missing values in the N = 487 dataset. However, for the selective exposure measure, there was an 'I can't remember' response option. This was classed as a missing response for the analysis and was present from zero to seven out of a total of eight items. Specifically, there were 181 missing values out of 3896 total values; this accounted for only 4.65% of the total cases. Listwise deletion can be considered when missing values are lower than approximately 5% because bias and loss of power are negligible (Graham, 2009).

However, a stricter strategy for handling missing values was used here. First, to check whether missing data was MCAR (missing completely at random), MAR (missing at random), or MNAR (missing not at random), Little's Missing Completely At Random test was conducted (Little, 1988). The null hypothesis MCAR was rejected (x^2 = 251.386(179), p = .000), which means that missing values were MAR or MNAR (Little & Rubin, 1987) and could not be ignored or removed using listwise or pairwise deletion. Therefore, Expectation-Maximization

(EM) algorithm was used to impute missing values. This method is regarded as more effective than mean substitution or regression-based single imputation (Nelwamondo *et al.*, 2007).

Reliability Analysis

Cronbach's Alpha was used to assess the internal consistency of the survey items (Cronbach, 1951): $\alpha = 0.94$ for media literacy (strong reliability; 20 items), 0.52 for selective exposure (low reliability; 8 items), and 0.87 for conspiracy theory beliefs (high reliability; 6 items). Note that only the conspiracy items were used to develop the conspiracy theory beliefs scores; the four true statements were excluded.

There are conflicting arguments about Cronbach's Alpha reliability criteria, with acceptable values ranging from 0.45 to 0.98 (Taber, 2018). According to Murphy and Davidshofer (1988), an acceptable level of reliability is 0.7 or above (with 0.7 = low, 0.8 = moderate, and 0.9 = high). While some scholars (Morera & Stokes, 2016; Streiner, 2003) class above 0.5 as acceptable, 0.7 is regarded as the acceptable standard and this has been used here.

On this basis, because of the low Cronbach's α for selective exposure, more accurate reliability and construct validity were derived using factor analysis. It was found that answers to two items that were reverse-scored on the survey (no. 5 and no. 8) appeared in the opposite direction to what they should have been. This meant that some respondents answered as if these items were not reverse-scored. It appeared that because no. 5 and no. 8 were similar to two other items (no. 1 and no. 3), respondents might have misunderstood what they were required to do. Therefore, no. 5 and no. 8 were excluded for final analysis purposes and the new 6-item selective exposure scale achieved $\alpha = 0.94$ (high reliability).

Correlation Analysis

Table 1 shows the descriptive statistics (means and standard deviations) and correlations. Correlations between pairs of variables were measured using Pearson's *r*. Preliminary

examination revealed that some variables, especially the independent variables, were significantly associated. Education was positively associated with age ($r = .274$, $p < .001$), and media literacy was negatively related to gender ($r = -.161$, $p < .001$) and age ($r = -.388$, $p < .001$). Political extremity was also was negatively related to gender ($r = -.110$, $p < .05$) while there was a positive relationship between political extremity and age ($r = .253$, $p < .01$). There was a negative association between selective exposure and gender ($r = -.175$, $p < .001$), but a positive relationship between selective exposure and age ($r = .161$, $p < .001$) and selective exposure and media literacy ($r = .199$, $p < .001$). There was also a positive correlation between conspiracy theory beliefs and media literacy ($r = .157$, $p < .001$), and between conspiracy theory beliefs and selective exposure ($r = .174$, $p < .001$).

Table 1. Means, standard deviations, and correlations

Variable	Descriptive Statistics		Correlations						
	M	SD	1	2	3	4	5	6	7
1. Gender[a]	.45	.50	—						
2. Age (in years)	47.56	15.03	−.004	—					
3. Education[b]	3.66	1.08	−.069	.274***	—				
4. Media Literacy	3.70	.64	−.161***	−.388***	.013	—			
5. Political Extremity	2.03	.89	−.110*	.253**	.048	.036	—		
6. Selective Exposure	3.06	1.04	−.175***	.161***	.025	.199***	.085	—	
7. CT Beliefs	2.84	.80	.053	−.035	−.087	.157***	.084	.174***	—

Note: $N = 487$. Cronbach's alpha given in parentheses; CT Beliefs = Conspiracy Theory Beliefs.

[a] 0 = male; 1 = female.

[b] 1 = below middle school; 2 = high school; 3= partial college; 4 = bachelor; 5 = above master.

*$p < .05$, **$p < .01$, *** $p < .001$.

Generally, a correlation is considered weak at $r = 0.3$ or lower, while an r between 0.4 and 0.6 is considered moderate, and $r = 0.7$ or above is regarded as strong (Akoglu, 2018; Cohen, 1988; Field, 2003; Taylor, 1990). A correlation coefficient of zero means no correlation exists. It can

be concluded that here, although the correlations were significant, the relationships were weak.

Collinearity did not need to be considered because all the *r* rates were below 0.7. However, to more accurately examine the similarity between the predictor variables, a multicollinearity test was undertaken. Multicollinearity can occur when independent variables highly correlate in the same regression model (Faraway, 2004) and latent interrelationships among independent variables can be a problem as it is difficult to distinguish between the individual effects of the predictor variables on the response variable (Aiken & West, 1991). Multicollinearity is detected by examining the variance inflation factor (VIF) of a predictor; a VIF value of 5 or larger indicates high multicollinearity (Becker *et al.*, 2015; Kutner *et al.*, 2004). In this research, all the VIF values (shown below in Table 3) were less than 5, indicating that no multicollinearity was present.

Hypothesis Testing

Mediation Analysis Based on Baron and Kenny's (1986) Model

The most widely-used method of mediation analysis, popularised by Baron and Kenny (1986), was used to test whether selective exposure functioned as a mediator. Before mediation analysis, three preconditions were tested. The first precondition was to examine Path *b*: there should be a significant correlation between the mediator (selective exposure) and the dependent variable (conspiracy theory beliefs). The correlation was $r = .174$ ($p < .001$; see Table 1) and a simple linear regression test to examine H1 showed that the hypothesis was supported; selective exposure was positively related to conspiracy theory beliefs ($\beta = .174$, $p < .001$) (see Table 2). In other words, more selective exposure was significantly associated with higher conspiracy theory beliefs. The precondition, Path *b*, was satisfied.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

Table 2. Simple regression results for the effect of selective exposure on conspiracy theory beliefs

Variable	Conspiracy Theory Beliefs				
	B	SE	β	t	P
(Constant)	2.434	.111		21.925	.000
Selective Exposure	.133	.034	.174	3.881	.000
F			15.061***		
R^2			.030		

Note: $N = 487$.

*$p < .05$, **$p < .01$, *** $p < .001$.

The preconditions for Path *a* and Path *c* also need to be met. The two preconditions and mediation were then tested using regression analysis. To establish mediation, first, the mediator (selective exposure) was regressed on the predictor variable (media literacy, and political extremity and socio-demographic characteristics) (Model 1 in Table 3); second, the outcome variable (conspiracy theory beliefs) was regressed on the predictor variable (media literacy, and political extremity and socio-demographic characteristics) (Model 2 in Table 3); and third, the outcome variable (conspiracy theory beliefs) was regressed on both the predictor variable (media literacy, and political extremity and socio-demographic characteristics) and the mediator (selective exposure) (Model 3 in Table 3).

The three preconditions were satisfied for media literacy and education. Only these variables were analised for the mediating effect.

Firstly, media literacy was significantly related to selective exposure in Model 1 ($β = .294$, $p < .001$) and significantly related to conspiracy theory beliefs in Model 2 ($β = .187$, $p < .001$). The effect of media literacy on conspiracy theory beliefs was weakened when selective exposure was included in the model (Model 3; $β = .140$, $p < .01$). The reduction of $β$ from .187 to .140 indicates that selective exposure is only a partial mediator of the relationship between media literacy and conspiracy theory beliefs.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

Table 3. Regression results for verifying the mediation effect of selective exposure

| Variable | Selective Exposure | | Conspiracy Theory Beliefs | | | |
| | Model1 | | Model2 | | Model3 | |
	β	t	β	t	β	t
Gender[a]	−.133	−3.056	.085	1.871	.106*	2.342
Age (in years)	.296	5.848	.045	.852	−.002	−.042
Education[b]	−.068*	−1.529	−.100*	−2.135	−.089	−1.917
Media Literacy	.294***	6.159	.187***	3.748	.140**	2.730
Political Extremity	−.012	−.276	.080	1.716	.082	1.777
Selective Exposure					.160***	3.395
F	13.987***		4.833***		6.037***	
R^2	.127		0.48		0.70	
Ranges for VIF	1.04-1.42		1.04-1.42		1.06-1.52	

Note: N = 487. VIF = variance inflation factor.

[a]0 = male; 1 = female.

[b]1 = below middle school; 2 = high school; 3= partial college; 4 = bachelor; 5 = above master.

*$p < .05$, **$p < .01$, *** $p < .001$.

Education was significantly related to selective exposure in Model 1 (β = −.068, $p < .05$) and significantly related to conspiracy theory beliefs in Model 2 (β = −.100, $p < .05$). The previously significant association between education and conspiracy theory beliefs was no longer significant (β = −.089) when selective exposure was included in Model 3. This indicated that selective exposure served as a full mediator of the relationship between education and conspiracy theory beliefs.

Mediation Analysis Based on the Bootstrapping Test (Preacher & Hayes, 2008)

Baron and Kenny's (1986) traditional causal steps approach to mediation has been criticised for having low statistical power to detect effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Also, the identification of indirect effects is determined not by quantification but by logical inference; Hayes (2009) argued that if better alternatives existed, the use of Baron

and Kenny's (1986) method would be suboptimal and that the only reason for its widespread use is that it is simple and easy to understand. Given these criticisms, mediation was also tested using the SPSS PROCESS Macro, developed by Preacher and Hayes (2008).

Following Mallinckrodt, Abraham, Wei, and Russell (2006), a 10,000-replications bootstrapping analysis using a 95% confidence interval was performed. The findings (see Table 4) were different from those using Baron and Kenny's (1986) approach.

Table 4. Bootstrapping results for the indirect effect of selective exposure

			95% Confidence Interval	
Paths	Effect	*BootSE*	Lower	Upper
Gender[a] → SE → CT Beliefs	−.0532	.0189	−.0940	−.0202
Age (in years) → SE → CT Beliefs	.0016	.0006	.0005	.0029
Education[b] → SE → CT Beliefs	.0033	.0060	−.0084	.0158
Media Literacy → SE → CT Beliefs	.0368	.0144	.0120	.0681
Political Extremity → SE → CT Beliefs	.0128	.0080	−.0008	.0306

Note: N = 487. Confidence intervals created with 10,000 bootstrap resamples; CT Beliefs = Conspiracy Theory Beliefs.

[a]0 = male; 1 = female.

[b]1 = below middle school; 2 = high school; 3= partial college; 4 = bachelor; 5 = above master.

*p < .05, **p < .01, *** p < .001.

Consistent with the Baron and Kenny analyses, it was found that selective exposure mediated the relationship between media literacy and beliefs in conspiracy theories; the 95% confidence interval did not encompass zero (B = .0368, 95% CI [.0120, .0681]), which means that the indirect effect of selective exposure was significant.
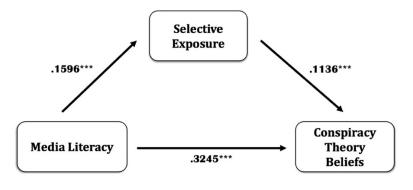
However, there was no evidence that selective exposure mediated the relationship between education and conspiracy theory beliefs because the 95% confidence interval overlapped zero (B = .0033, 95% CI [−.0084, .0158]). This contrasted with the Baron and Kenny analyses.

33

There was no significant effect of political extremity, also consistent with the Baron and Kenny analyses, but in opposition to the Baron and Kenny analyses, significant indirect effects were found for gender (B = −.0532, 95% CI [−.0940, −.0202]), and age (B = .0016, 95% CI [.0005, .0029]).

Overall Conclusion

Taking the Baron and Kenny (1986) and bootstrapping (Preacher & Hayes, 2008) analyses into account, it can be concluded that selective exposure mediates the relationship between media literacy and conspiracy theory beliefs. Figure 3 presents the mediation model for this effect.

*p < .05, **p < .01, *** p < .001.

Figure 3. Mediation model for the effect of selective exposure on the relationship between media literacy and conspiracy theory beliefs

Overall, H1 was supported: selective exposure was found to be positively related to conspiracy theory beliefs. H2, H3 and H4 examined the mediation effect of selective exposure on the relationship between personal characteristics and conspiracy theory beliefs. Selective exposure was found to mediate only the relationship between media literacy and conspiracy theory beliefs; therefore, while H3 was supported, H2 (socio-demographic variables) and H4 (political extremity) were not.

DISCUSSION

Interpretation of the Results

This study explored the relationships between selective exposure, a range of individual-specific characteristics – media literacy, political extremity, and socio-demographic variables (gender, age and education) – and conspiracy theory beliefs. Each hypothesis is discussed in turn below.

Hypothesis 1

The results confirmed that selective exposure is positively related to conspiracy theory beliefs. However, we must be cautious when interpreting these findings as they do not conclusively mean that there is a direct effect of selective exposure on conspiracy theory beliefs. Given that a survey design rather than an experiment was used, 'cause and effect' cannot be guaranteed. Also, it is not possible to determine whether the positive correlation between conspiracy theory beliefs and selective exposure results from cognitive filtering or is related to the technological features of YouTube. The relationship between selective exposure and conspiracy theory beliefs needs to be examined in greater depth before more definitive conclusions about causality can be made.

Hypothesis 2

Selective exposure did not mediate the relationship between socio-demographic characteristics and conspiracy theory beliefs. The findings indicate that the activation of biased information processing towards conspiracy theory beliefs is led by individual attitudes and beliefs rather than characteristics such as gender, age and education level. The findings can be interpreted relative to particular circumstances in South Korea.

South Korea has been ranked as the most connected nation in the world in 2021, showing a connectivity score of 9.55 out of 10 (CircleLoop, n.d.). Internet penetration in South Korea

stood at 91.9% of the population in 2020 (Chung, Min, Lee, & Han, 2021) and 4G availability was nearly 98.3%. In addition, in 2020, the overall level of digitalisation among South Koreans was high at 72.7% (Lee *et al.*, 2021). Given the country's outstanding digital infrastructure and high level of access to digital information, connectivity differences between different groups are not huge. According to a report (Lee *et al.*, 2021) on the digital divide in South Korea, there are no substantial differences in the level of digitalisation[3] between men and women (7.8% difference), the young and the elderly (12.7% difference) even though there are somewhat differences between those with and without a bachelor's degree (21.3% difference). Where the digital divide is not large, selective exposure behaviour patterns are more likely to be dependent on individual attitudes and beliefs rather than on group characteristics. This tendency might be reflected in the results presented here.

Hypothesis 3

As hypothesised, selective exposure was a highly significant mediator of the relationship between media literacy and conspiracy theory beliefs. The direction of the association was somewhat unexpected. Media literacy was positively related to selective exposure and conspiracy theory beliefs and indicates that media literacy increases conspiracy theory beliefs. These results are inconsistent with previous literature that indicates that media literacy helps to decrease conspiracy theory beliefs (Bartlett & Miller, 2010; Craft *et al.*, 2017).

It is generally regarded that media literacy assists people to discriminate and assess media content (Kellner & Share, 2007), so helping them to avoid the consequences of negative content. Intuitively, it seems plausible that an increase in media literacy would lead to a reduction in conspiracy theory beliefs. However, while media literacy is deemed to be a seemingly simple concept, it is multidimensional; it is not just a series of skills but is "both an individual

---

[3] The average of the summed scores from three categories (digital access, skill, and breadth of use).

accomplishment [and] a social and cultural practice" (Livingstone, 2008, p. 114). In this respect, the activation of biased information processing towards conspiracy theory beliefs should be considered within a broader social and societal context.

Media literacy is required to comprehensively review two sub-dimensions of literacy: functional literacy and critical literacy (Koc & Barut, 2016). Firstly, functional literacy can increase digital engagement given that it is related to technical skills. However, Helsper (2021) argues that its outcomes provide both opportunity and risk, which means that the same activities can lead to beneficial and negative consequences. Following this argument, purposeful use of functional literacy can facilitate negative outcomes, such that high functional literacy eases access to large volumes of pro-attitudinal sources and can contribute to biased information processing towards conspiracy theory beliefs. Thus, the incremental exposure to supporting information that is boosted by functional literacy can make individuals endorse conspiracy theories.

Secondly, critical literacy is related to the analysis, evaluation and critique of media content. It is often cited as a tool for helping decrease the endorsement of conspiracy theories (Bartlett & Miller, 2011; Craft *et al.*, 2017). However, it should be emphasised that discrimination or evaluation itself may not always lead to information rejection instead of information acceptance. Bruns (2019) argues that:

> There is a significant caveat to this argument for media literacy: the very strategies
> of critical media literacy have also been adopted and weaponised by the merchants
> of mis- and disinformation themselves (Bruns, 2019: 57).

In other words, critical literacy can function as a trigger for biased information processing. Bruns's (2019) comment raises an important point about the role of selective exposure as a mediator between media literacy and conspiracy theory beliefs. Recent research in South

Korea (Yum & Jung, 2019) supports Bruns's argument, showing that critical literacy helps to decrease the sharing of misinformation but also increases exposure to it. There is also the assertion that because critical literacy is intertwined with critical consciousness, high levels of critical literacy can reinforce biased information (Ashley *et al.*, 2010; Maksl *et al.*, 2015; Nyhan & Reifler, 2015). Individuals with high levels of critical literacy are more likely to perceive all types of information critically, which can contribute to more biased information processing based on their values and preferences.

The findings here suggest that conspiracy theory beliefs might be rooted in a cognitive deficit and not related to a lack of skills or abilities. In this respect, as Bruns's (2019) argues, media literacy can be a useful weapon for facilitating confirmatory information processing in some people, which can magnify their existing beliefs.

Hypothesis 4

The findings of this research indicate that political extremity does not predict selective exposure or conspiracy theory beliefs and that selective exposure does not function as a mediator between these two concepts. Although being somewhat inconsistent with previous research, these findings can be explained. The behavioural pattern of selective exposure includes the tendency to both 'approach' attitude-consistent messages and 'avoid' counter-attitudinal information (Garrett, 2009; Iyengar & Hahn, 2009). However, Garrett (2009) found that politically strong supporters do not avoid opinion-challenging information and approach opinion-supporting information; fundamentally, they show no systematic bias against counterarguments. This reframes the widely-held idea that reinforcement-seeking comes with challenge-avoidance. Individuals with extreme attitudes are less prone to 'swing' but are prepared to readily abandon or dispute attitude-discrepant information (Knobloch-Westerwick & Meng, 2009). This may be the reason why, in this research, political extremity did not lead to a tendency for selective exposure.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

The lack of correlation between political extremity and conspiracy theory beliefs can also be explained by the idea that conspiracy theory beliefs are multidimensional, even within politically extreme groups. A wide range of cross-cultural research has shown a strong relationship between political extremity and conspiracy theory beliefs (van Prooijen *et al.*, 2015) and that conspiracy theory beliefs differ according to political spectrum. For example, conservatives tend to be more drawn towards conspiracy theories than are individuals with liberal views (Galliford & Furnham, 2017). Although both conservative and liberal ideologies tend to bolster conspiracy convictions, the link could be stronger for far 'right-wingers' than far 'left-siders'. Jost *et al.* (2003) state that "the core ideology of conservatism stresses resistance to change and justification of inequality and is motivated by needs that vary situationally and dispositionally to manage uncertainty and threat" (p. 339). Thus, under the COVID-19 environment, with its high uncertainty, the personality predispositions of far-right conservatives might contribute more to their endorsement of conspiracy theory beliefs than might those of far-left liberals. However, the characteristics of both sides can be blurred under the integrated concept of 'political extremity' and their differences might not be reflected on the political spectrum. Given the limitations of the concept of political extremity itself, future research should carefully consider its sub-dimensions.

Theoretical and Practical Implications

Being situated outside the relatively narrow perspective rooted in technological determinism, this research helps us comprehend the mediation mechanisms that underlie cause and effect in complicated online environments. The observed findings underscore the importance of research into the psychological mechanisms of media literacy and how it is related to user selectivity. It must be emphasised that in the new era of minimal effects, it is not technology itself but individuals that determine what information to accept or share. With an abundance of user options, individuals are no longer just passive message receptors. This is the crucial reason why researchers must discover the various drivers of information-seeking and

interpretation by conducting user-centric research in the digital world. The link between 'offline' and 'online' should be explored to examine which individuals (offline) use what information processes (online) and what consequences (offline) they lead to. In this respect, this research is meaningful for challenging the current excessive attention on technological power that is rooted in the idea of filter bubbles and instead exploring the different drivers behind the interaction between individuals and technology on an algorithm-driven platform.

Limitations and Future Research

This study has several limitations. First, only 'approach' selective exposure patterns were measured and not 'avoidance' ones. Previous research has not found a tendency towards 'avoidance' when measuring selective exposure. However, given Iyengar and Hahn's (2009) argument that the behavioural pattern of selective exposure is not only 'approach' but also 'avoidance', future research should examine how 'approach' and 'avoidance' are conceptualised and measured.

Second, this research measured selective exposure by using retrospective self-report measures: this refers to a technique whereby respondents retrospectively report the extent to which they can recall information from the past (Clay *et al.*, 2013). However, retrospective self-reports can motivate respondents to give biased answers in order to minimise cognitive dissonance about their political position (Prior, 2013; Rosenbaum, Rosenbaum, & McGinnies, 1974). Also, there can be a problem of self-presentation concerns, which can lead to bias in the data. Clay *et al.* (2013) states that they have also been criticised because selective exposure can be blended with a concept of selective attention and selected retention (Clay *et al.*, 2013). Being reliant on retrospective reports, this research is also subject to such limitations. Future research into selective exposure might apply social network analysis given that 'big data' is regarded as an alternative method to avoid these issues (Garrett, 2013).

Third, the design of this study had limited utility for assessing causality. This was a cross-sectional research study, which by its nature is insufficient for assessing causality because all the data was collected at the same period in time. Also, the fully opt-in, non-probability-based survey design was unlikely to result in a representative sample and inherent biases, such as coverage and selection bias, might have weakened the external validity of the data (Bethlehem, 2010).

Finally, this study examined the mediation effect of selective exposure but only in the context of YouTube. Thus, it should not be concluded that the discovered mediating effect can be generalised to other algorithm-driven platforms. Additional research in different contexts must be undertaken before more definitive conclusions can be made. Similarly, cultural differences are not reflected in the findings, given that this research was conducted only with South Koreans. 'Self' and the environment tend to be interrelated and psychological frames of reference are derived from the social conditions in which individuals are situated, which means that decision-making can vary according to culture (Hoshino-Browne *et al.*, 2005). There is evidence that collectivistic Easterners are less likely to experience cognitive dissonance than individualistic Westerners (Heine & Lehman, 1997; Peng & Nisbett, 1999; Suh, 2002). Therefore, research in Western cultures might draw different findings. Overall, therefore, future research should examine the mediation of selective exposure in different contexts and cultures.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

CONCLUSION

> In a hyperconnected yet deeply polarised world, the most important filter remains
> in our heads, not in our networks (Bruns, 2019: 61).

Today's unprecedented high-choice information environment has afforded individuals the opportunity to live in information abundance. On the one hand, people can access digitally-driven information from multiple channels with a few clicks and within seconds. On the other hand, the endless flow of information makes people struggle to handle the potentially infinite information; thus, they experience information overload. 'Information overload' is a term popularised by a futurologist Alvin Toffler in his book *Future Shock* (1970) and refers to how information in-flow rates outweigh information processing capacity (see Rodriguez *et al.*, 2014). Given bounded brain capacities, individuals as information-seekers are likely to have biased information-processing mechanisms (Walgrave & Dejaeghere, 2017) and select information that is consistent with their existing views.

This research has focused on individuals' confirmation-biased selective exposure. Given that algorithm-driven recommendation systems present biased results that are tailored to user's preferences (Pariser, 2011), such technological features can make it easier for individuals to seek out information that accords with their views while avoiding the rest. Although biased selection is a feasible option on algorithm-driven platforms, this does not mean that the consequences of polarised use or conspiracy theory beliefs arise from technology itself. This may be the case for some users but not all. As Bruns (2019) argued, most people do not live in information cocoons. Nevertheless, some people still purposefully engage in conspiracy-based information processing, which magnifies their entrenched and cemented beliefs. In this respect, it is plausible that when information-seekers immerse themselves in cognitive filters, this activates confirmation-biased selective exposure patterns.

The Role of Selective Exposure in 'A New Era of Minimal Effects'

Eunbin Ha

Bennett and Iyengar (2008) foreshadow a 'New Era of Minimal Effects'. It should be emphasised that under the condition with an abundance of user options, individuals are no longer just passive message receptors. In the new era where the interactions between media and users is begun by users' selectivity, user selectivity can be an essential concept for explaining the patterns of rapidly changing media effects. In this respect, media effects cannot simply be thought of as consequential outcomes of mass communication; rather, they would be consequences of media usage by individuals (Bennett & Iyengar, 2008, 2010). In this respect, individual's selectivity should be considered a vital research theme.

The contribution of this research lies in understanding the new relationships between media and its users by examining the role of selective exposure using a user-centric approach. The research highlights that this approach should take centre stage in media and technology studies that are currently immersed in a media technology-led approach.

REFERENCES

Aiken, L. S. and West, S. G. (1991) *Multiple regression: Testing and interpreting interactions*, Newbury Park, CA: SAGE Publications.

Akoglu, H. (2018) User's guide to correlation coefficients, *Turkish Journal of Emergency Medicine* 18(3): 91-93.

Allington, D., Duffy, B., Wessely, S., Dhavan, N. and Rubin, J. (2020) Health-protective behaviour, social media usage and conspiracy belief during the COVID-19 public health emergency, *Psychological Medicine* 51(10): 1-7.

Alper, S., Bayrak, F. and Yilmaz, O. (2020) Psychological correlates of COVID-19 conspiracy beliefs and preventive measures: Evidence from Turkey, *Current Psychology* 40(11): 5708-5717.

Ashley, S., Poepsel, M. and Willis, E. (2010) Media literacy and news credibility: Does knowledge of media ownership increase skepticism in news consumers?, *Journal of Media Literacy Education* 2(1): 37-46.

Aufderheide, P. (1993) *Media literacy: a report of the National Leadership Conference on Media Literacy*, Washington, D.C.: The Aspen Institute.

Bakshy, E., Messing, S. and Adamic, L. (2015) Exposure to ideologically diverse news and opinion on Facebook, *Science (American Association for the Advancement of Science)* 348(6239): 1130-1132.

Baron, R. M. and Kenny, D. A. (1986) The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations, *Journal of personality and social psychology* 51(6): 1173-1182.

Bartlett, J. and Miller, C. (2010) *The power of unreason: Conspiracy theories, extremism and counter-terrorism*, London: Demos.

Bartlett, J. and Miller, C. (2011*) Truth, lies and the Internet: A report into young people's digital fluency*, London: Demos.

Becker, J., Ringle, C., Sarstedt, M. and Völckner, F. (2015) How collinearity affects mixture regression results, *Marketing Letters* 26(4): 643-659.

Benkler, Y., Faris, R., Roberts, H. and Zuckerman, E. (2017) Study: Breitbart-led right-wing media ecosystem altered broader media agend. *Columbia Journalism Review*, 3 March, URL: https://www.cjr.org/analysis/breitbart-media-trump-harvard-study.php [Last consulted July 5, 2021].

Bennett, W. and Iyengar, S. (2008) A new era of minimal effects? The changing foundations of political communication, *Journal of Communication* 58(4): 707-731.

Bennett, W. and Iyengar, S. (2010) The shifting foundations of political communication: Responding to a defense of the media effects paradigm, *Journal of Communication* 60(1): 35-39.

Bennett, W. and Manheim, J. (2006) The one-step flow of communication, *The Annals of the American Academy of Political and Social Science* 608(1): 213-232.

Bethlehem, J. (2010) Selection bias in web surveys, *International Statistical Review* 78(2): 161-188.

Biemer, P. (2010) Total survey error: Design, implementation, and evaluation, *Public Opinion Quarterly* 74(5): 817-848.

Biemer, P. and Lyberg, L. (2003) *Introduction to survey quality*, Hoboken, NJ: Wiley.

Bogart, L. and Bird, S. (2003) Exploring the relationship of conspiracy beliefs about HIV/AIDS to sexual behaviors and attitudes among African-American adults, *Journal of the National Medical Association* 95(11): 1057-1065.

Bogart, L. and Thorburn, S. (2006) Relationship of African Americans' sociodemographic characteristics to belief in conspiracies about HIV/AIDS and birth control, *Journal of the National Medical Association* 98(7): 1144-1150.

Bruns, A. (2017) Echo chamber? What echo chamber? Reviewing the evidence, paper presented at the 6th Biennial Future of Journalism Conference (FOJ17), Cardiff, UK, 14-15/09.

Bruns, A. (2019) *Are filter bubbles real?,* Cambridge: Polity Press.

Byford, J. (2011) *Conspiracy theories,* London: Palgrave Macmillan.

Cassese, E. C., Farhart, C. E. and Miller, J. M. (2020) Gender differences in COVID-19 conspiracy theory beliefs, *Politics & Gender* 16(4): 1009-1018.

Check, J. and Schutt, R. K. (2012) *Research methods in education*, Thousand Oaks, CA: SAGE Publications.

Chen, D. T., Wu, J. and Wang, Y. M. (2011) Unpacking new media literacy, *Journal of Systemics, Cybernetics and Informatics* 9(2): 84-88.

Chung, B., Min, S., Lee, Y. and Han, Y. (2021) 2020 Survey on the Internet Use Statistical Table, *National Information Society Agency,* 20 April, URL:

https://www.nia.or.kr/site/nia_kor/ex/bbs/View.do;jsessionid=B1494BABC43A0A5201B7D339C9E3F949.bf0ccc4e810206361966?cbIdx=99870&bcIdx=23270&parentSeq=23270 [Last consulted August 7, 2021].

CircleLoop. (n.d.) Connected countries, URL: https://www.circleloop.com/connected-countries [Last consulted August 7, 2021].

Clay, R., Barber, J. and Shook, N. (2013) Techniques for measuring selective exposure: A critical review, *Communication Methods and Measures* 7(3): 221-245.

Cohen, J. (1988) *Statistical power analysis for the behavioral sciences,* Florence: Routledge.

Colleoni, E., Rozza, A. and Arvidsson, A. (2014) Echo chamber or public sphere? Predicting political orientation and measuring political homophily in Twitter using big data, *Journal of Communication 64*(2): 317-332.

Conover, M., Ratkiewicz, J., Francisco, M., Goncalves, B., Menczer, F. and Flammini, A. (2011) Political polarization on Twitter, paper presented at the 5th International AAAI Conference on Weblogs and Social Media, Barcelona, Spain, 17-21/07.

Conrad, F. and Blair, J. (2009) Sources of error in cognitive interviews, *Public Opinion Quarterly* 73(1): 32-55.

Constantinou, M., Kagialis, A. and Karekla, M. (2021) COVID-19 scientific facts vs. conspiracy theories: Is science failing to pass its message?, *International Journal of Environmental Research and Public Health* 18(12): 6343.

Corkrey, R. and Parkinson, L. (2002) A comparison of four computer-based telephone interviewing methods: Getting answers to sensitive questions, *Behavior Research Methods, Instruments, & Computers* 34(3): 354-363.

Craft, S., Ashley, S. and Maksl, A. (2017) News media literacy and conspiracy theory endorsement, *Communication and the Public* 2(4): 388-401.

Cremonesi, P., Garzotto, F. and Turrin, R. (2013) User-centric vs. system-centric evaluation of recommender systems, paper presented at the 14th IFIP TC 13 International Conference, Cape Town, South Africa, 2-6/09.

Cronbach, L. J. (1951) Coefficient alpha and the internal structure of tests, *Psychometrika* 16: 297-334.

de Vaus, D. (1995) *Surveys In Social Research (4th ed.),* Milton: Routledge.

Del Vicario, M., Bessi, A., Zollo, F., Petroni, F., Scala, A., Caldarelli, G., Stanley, H. E. and Quattrociocchi, W. (2016) The spreading of misinformation online, *PNAS Proceedings of the National Academy of Sciences of the United States of America* 113(3): 554–559.

Denzin, N. K. and Lincoln, Y. (2000) *Handbook of qualitative research (2nd ed.),* London: SAGE Publications.

Ditto, P. and Lopez, D. (1992) Motivated skepticism, *Journal of Personality and Social Psychology* 63(4): 568-584.

Ditto, P., Scepansky, J., Munro, G., Apanovitch, A. and Lockhart, L. (1998) Motivated sensitivity to preference-inconsistent information, *Journal of Personality and Social Psychology* 75(1): 53-69.

Douglas, K. M. (2021) COVID-19 conspiracy theories, *Group Processes & Intergroup Relations* 24(2): 270-275.

Douglas, K. M., Sutton, R., Callan, M., Dawtry, R. and Harvey, A. (2016) Someone is pulling the strings: Hypersensitive agency detection and belief in conspiracy theories, *Thinking & Reasoning* 22(1): 57-77.

Douglas, K. M., Uscinski, J., Sutton, R., Cichocka, A., Nefes, T., Ang, C. and Deravi, F. (2019) Understanding conspiracy theories, *Political Psychology* 40(S1): 3-35.

Dubois, E. and Blank, G. (2018) The echo chamber is overstated: The moderating effect of political interest and diverse media, *Information, Communication & Society* 21(5): 729-745.

Earnshaw, V., Eaton, L., Kalichman, S., Brousseau, N., Hill, E. and Fox, A. (2020) COVID-19 conspiracy beliefs, health behaviors, and policy support, *Translational Behavioral Medicine* 10(4): 850.

Faraway, J. J. (2004) *Linear models with R (Texts in statistical science),* London: Chapman & Hall/CRC.

Feldman, L., Myers, T., Hmielowski, J. and Leiserowitz, A. (2014) The mutual reinforcement of media selectivity and effects: Testing the reinforcing spirals framework in the context of global warming, *Journal of Communication* 64(4): 590-611.

Festinger, L. (1957) *A theory of cognitive dissonance,* Redwood City, CA: Stanford University Press.

Field, A. (2003) *Discovering statistics using IBM SPSS Statistics (4th ed.),* London: SAGE Publications.

Fischer, P. (2011) Selective exposure, decision uncertainty, and cognitive economy: A new theoretical perspective on confirmatory information search, *Social and Personality Psychology Compass* 5(10): 751-762.

Fischer, P., Jonas, E., Frey, D. and Schulz-Hardt, S. (2005) Selective exposure to information: The impact of information limits, *European Journal of Social Psychology* 35(4): 469-492.

Fisher, R. A. (1935) *The design of experiments,* Edinburgh: Oliver and Boyd.

Fletcher, R. (2020) The truth behind filter bubbles: Bursting some myths, *Reuters Institute for the Study of Journalism,* 24 January, URL: https://reutersinstitute.politics.ox.ac.uk/risj-review/truth-behind-filter-bubbles-bursting-some-myths [Last consulted July 5, 2021].

Fowler, F. (2009) *Survey research methods (4th ed.),* London: SAGE Publications.

Franks, B., Bangerter, A., Bauer, M. W., Hall, M. and Noort, M. C. (2017) Beyond "monologicality"? Exploring conspiracist worldviews, *Frontiers in psychology* 8: 861.

Freeman, D. and Bentall, R. (2017) The concomitants of conspiracy concerns, *Social Psychiatry and Psychiatric Epidemiology* 52(5): 595-604.

Frey, D. (1986) Recent research on selective exposure to information, *Advances in experimental social psychology* 19: 41-80.

Galliford, N. and Furnham, A. (2017) Individual difference factors and beliefs in medical and political conspiracy theories, *Scandinavian Journal of Psychology* 58(5): 422-428.

Garrett, R. (2009) Politically motivated reinforcement seeking: Reframing the selective exposure debate, *Journal of Communication* 59(4): 676-699.

Garrett, R. (2013) Selective exposure: New methods and new directions, *Communication Methods and Measures* 7(3-4): 247-256.

Goel, S., Mason, W. and Watts, D. (2010) Real and perceived attitude agreement in social networks, *Journal of Personality and Social Psychology* 99(4): 611-621.

Goertzel, T. (1994) Belief in conspiracy theories, *Political Psychology* 15(4): 731-742.

Graham, J. (2009) Missing data analysis: Making it work in the real world, *Annual Review of Psychology* 60(1): 549-576.

Green, R. and Douglas, K. (2018) Anxious attachment and belief in conspiracy theories, *Personality and Individual Differences* 125: 30-37.

Groves, R. M., Fowler, F. J. Jr., Couper, M. P., Lepkowski, J. M., Singer, E. and Tourangeau, S. (2009) *Survey methodology (2nd ed.),* Hoboken, NJ: Wiley.

Guillemin, M. and Gillam, L. (2004) Ethics, reflexivity, and "ethically important moments" in Research, *Qualitative Inquiry* 10(2): 261-280.

Haim, M., Graefe, A. and Brosius, H. B. (2018) Burst of the filter bubble? Effects of personalization on the diversity of Google News, *Digital journalism* 6(3): 330-343.

Hart, W., Albarracín, D., Eagly, A., Brechan, I., Lindberg, M. and Merrill, L. (2009) Feeling validated versus being correct, *Psychological Bulletin* 135(4): 555-588.

Hartman, T., Marshall, M., Stocks, T.V., McKay, R., Bennett, K., Butter, S., Miller, J.G., Hyland, P., Levita, L., Martínez, A.P., Mason, L., McBride, O., Murphy, J., Shevlin, M., Vallières, F. and Bentall, R. (2021) Different conspiracy theories have different psychological and social determinants: Comparison of three theories about the origins of the COVID-19 virus in a representative sample of the UK population, *Frontiers in Political Science* 3: 1-17.

Hayes, A. (2009) Beyond Baron and Kenny: Statistical mediation analysis in the new millennium, *Communication Monographs* 76(4): 408-420.

Heeringa, S. G., West, B. T. and Berglund, P. A. (2010) *Applied survey data analysis (Statistics in the social and behavioral sciences series),* Boca Raton, FL: CRC Press.

Heine, S. J. and Lehman, D. R. (1997) Culture, dissonance, and self-affirmation, *Personality and Social Psychology Bulletin* 23(4): 389-400.

Helsper, E. (2021) *The digital disconnect: The social causes and consequences of digital inequalities,* London: SAGE Publications.

Himelboim, I., McCreery, S. and Smith, M. (2013) Birds of a feather Tweet together: Integrating network and content analyses to examine cross-ideology exposure on Twitter, *Journal of Computer-mediated Communication* 18(2): 40-60.

Hosanagar, K., Fleder, D., Lee, D. and Buja, A. (2014) Will the global village fracture into tribes? Recommender systems and their effects on consumer fragmentation, *Management Science* 60(4): 805-823.

Hoshino-Browne, E., Zanna, A., Spencer, S., Zanna, M., Kitayama, S. and Lackenbauer, S. (2005) On the cultural guises of cognitive dissonance, *Journal of Personality and Social Psychology* 89(3): 294-310.

Inglehart, R. (1987) Extremist political positions and perceptions of conspiracy: Even paranoids have real enemies, pp. 231-244 in C. F. Graumann and S. Moscovici (eds) *Changing conceptions of conspiracy*, New York City, NY: Springer.

Islam, M. S., Sarkar, T., Khan, S. H., Mostofa Kamal, A. H., Hasan, S., Kabir, A., Yeasmin, D., Islam, M. A., Amin Chowdhury, K. I., Anwar, K. S., Chughtai, A. A. and Seale, H. (2020) COVID-19-related infodemic and its impact on public health: A global social media analysis, *The American journal of tropical medicine and hygiene* 103(4): 1621-1629.

Iyengar, S. and Hahn, K. (2009) Red media, blue media: Evidence of ideological selectivity in media use, *Journal of Communication 59*(1): 19-39.

Iyengar, S., Hahn, K., Krosnick, J. and Walker, J. (2008) Selective exposure to campaign communication: The role of anticipated agreement and issue public membership, *The Journal of Politics* 70(1): 186-200.

Jamieson, K. H. and Cappella, J. N. (2008) *Echo chamber: Rush Limbaugh and the conservative media establishment*, Oxford: Oxford University Press.

Jerit, J. and Barabas, J. (2012) Partisan perceptual bias and the information environment, *The Journal of Politics* 74(3): 672-684.

Johnson, T., Bichard, S. and Zhang, W. (2009) Communication communities or "CyberGhettos?": A path analysis model examining factors that explain selective exposure to blogs, *Journal of Computer-mediated Communication* 15(1): 60-82.

Jonas, E., Schulz-Hardt, S., Frey, D. and Thelen, N. (2001) Confirmation bias in sequential information search after preliminary decisions, *Journal of Personality and Social Psychology* 80(4): 557-571.

Jost, J., Glaser, J., Kruglanski, A. and Sulloway, F. (2003) Political conservatism as motivated social cognition, *Psychological Bulletin* 129(3): 339-375.

Kellner, D. and Share, J. (2007) Critical media literacy, democracy, and the reconstruction of education, pp. 3-23 in D. Macedo and S. R. Steinberg (eds) *Media literacy: A reader*, New York City, NY: Peter Lang Publishing.

Kim, S. and Kim, W. (2019) Media issue 5-3, *Korea Press Foundation*, 14 June, URL: https://www.kpf.or.kr/front/board/boardContentsView.do?board_id=246&contents_id=0003440 23CF07421F30ED65B47114EE4 [Last consulted July 13, 2021].

Kim, Y., Dykema, J., Stevenson, J., Black, P. and Moberg, D. (2019) Straightlining: Overview of measurement, comparison of indicators, and effects in mail–web mixed-mode surveys, *Social Science Computer Review* 37(2): 214-233.

Klapper, J. T. (1960) *The effects of mass communication*, Glencoe: The Free Press.

Knobloch-Westerwick, S. and Meng, J. (2009) Looking the Other Way, *Communication Research* 36(3): 426-448.

Knobloch-Westerwick, S. and Meng, J. (2011) Reinforcement of the political self through selective exposure to political messages, *Journal of Communication* 61(2): 349-368.

Koc, M. and Barut, E. (2016) Development and validation of New Media Literacy Scale (NMLS) for university students, *Computers in Human Behavior* 63: 834-843.

Krosnick, J. (1991) Response strategies for coping with the cognitive demands of attitude measures in surveys, *Applied Cognitive Psychology* 5(3): 213-236.

Ksiazkiewicz, A. and Krueger, R. (2017) The role of genes and environments in linking the need to evaluate with political ideology and political extremity, *Social Justice Research* 30(4): 381-407.

Kunda, Z. (1990) The case for motivated reasoning, *Psychological Bulletin* 108(3): 480-498.

Kutner, M. H., Nachtsheim, C. J. and Neter, J. (2004) *Applied linear regression models (4th ed.)*, Maidenhead: McGraw-Hill Education.

Ladd, J. (2010) The neglected power of elite opinion leadership to produce antipathy toward the news media: Evidence from a survey experiment, *Political Behavior* 32(1): 29-50.

Lavrakas, P. (2008) *Encyclopedia of survey research methods*, Thousand Oaks, CA: SAGE Publications.

Lazarsfeld, P. F., Berelson, B. and Gaudet, H. (1948) *The people's choice*, New York City, NY: Columbia University Press.

Lee, H., Hwang, Y. and Jeong. S. H. (2021) Information seeking and sharing while using media: The role of personality traits and digital literacy, *Korean Journal of Journalism & Communication Studies* 65(1): 236-269.

Lee, S. and Park, A. (2020) Media issue 6-3, *Korea Press Foundation,* 17 June, URL: https://www.kpf.or.kr/front/board/boardContentsView.do?board_id=246&contents_id=2927b26 e22734494897457933c73e014 [Last consulted July 13, 2021].

Lee, Y., Moon, H., Lee, J., Choi, D., Park, J. and Lim, H. (2021) The report on the Digital Divide, *Ministry of Science and ICT*, 10 March, URL:

https://www.msit.go.kr/bbs/view.do?sCode=user&mId=99&mPid=74&pageIndex=&bbsSeqNo=79&ntt SeqNo=3173382&searchOpt=ALL&searchTxt= [Last consulted August 7, 2021].

Lin, C. (2009) Selective news exposure, personal values, and support for the Iraq war, *Communication Quarterly* 57(1): 18-34.

Little, R. J. A. (1988) A test of missing completely at random for multivariate data with missing values, *Journal of the American Statistical Association* 83(404): 1198-1202.

Little, R. J. A. and Rubin, D. B. (1987) *Statistical analysis with missing data*, Edison, NJ: John Wiley & Sons.

Livingstone, S. (2008) Internet literacy: Young people's negotiation of new online opportunities, pp. 101-122 in T. McPherson (ed.) *The John D. and Catherine T. MacArthur foundation series on digital media and learning*, Cambridge, MA: MIT Press.

Lord, C., Ross, L. and Lepper, M. (1979) Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence, *Journal of Personality and Social Psychology* 37(11): 2098-2109.

LSE. (n.d.) Research ethics: Guidance on LSE research ethics, code of research conduct, and training, URP: https://info.lse.ac.uk/staff/divisions/research-and-innovation/research/research-ethics/research-ethics [Last consulted June 28, 2021].

Mackinnon, D., Lockwood, C., Hoffman, J., West, S. and Sheets, V (2002) A comparison of methods to test mediation and other intervening variable effects, *Psychological Methods* 7(1): 83-104.

Maksl, A., Ashley, S. and Craft, S. (2015) Measuring news media literacy, *Journal of Media Literacy Education* 6(3): 29-45.

Mallinckrodt, B., Abraham, W., Wei, M. and Russell, D. (2006) Advances in testing the statistical significance of mediation effects, *Journal of Counseling Psychology* 53(3): 372-378.

McLeod, S. A. (2019) Qualitative vs. quantitative research, *Simply Psychology*, 30 July, URL: https://www.simplypsychology.org/qualitative-quantitative.html [Last consulted July 13, 2021].

Melican, D. and Dixon, T. (2008) News on the net, *Communication Research* 35(2): 151-168.

Moerman, D. and Jonas, W. (2002) Deconstructing the placebo effect and finding the meaning response, *Annals of Internal Medicine* 136(6): 471-476.

Morera, O. F. and Stokes, S. M. (2016) Coefficient α as a measure of test score reliability: Review of 3 popular misconceptions, *American journal of public health* 106(3): 458-461.

Murphy, K. R. and Davidshofer, C. O. (1988) *Psychological testing: Principles and applications,* Englewood Cliffs, NJ: Prentice-Hall.

Mutz, D. C. and Martin, P. S. (2001) Facilitating communication across lines of political difference: The role of mass media, *The American Political Science Review* 95(1): 97-114.

Nechushtai, E. and Lewis, S. C. (2019) What kind of news gatekeepers do we want machines to be? Filter bubbles, fragmentation, and the normative dimensions of algorithmic recommendations, *Computers in Human Behavior* 90: 298-307.

Nelwamondo, F. V., Mohamed, S. and Marwala, T. (2007) Missing data: A comparison of neural network and expectation maximization techniques, *Current Science (Bangalore)* 93(11): 1514-1521.

Newman, N., Fletcher, R., Schulz, A., Andi, S. and Nielsen, R. K. (2020) Digital news report 2020, URL: https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021 [Last consulted July 13, 2021].

Nickerson, R. S. (1998) Confirmation bias: A ubiquitous phenomenon in many guises, *Review of general psychology* 2(2): 175-220.

Nyhan, B. and Reifler, J. (2015) The effect of fact-checking on elites: A field experiment on U.S. state legislators, *American Journal of Political Science* 59(3): 628-640.

Oh, S. and Song, H. (2019) YouTube recommendation algorithm and journalism, *Korea Press Foundation,* 30 November, URL: https://www.kpf.or.kr/front/research/selfDetail.do [Last consulted July 17, 2021].

Oliver, J. and Wood, T. (2014) Medical conspiracy theories and health behaviors in the United States, *JAMA Internal Medicine* 174(5): 817-818.

Olson, J. M. and Stone, J. (2005) The influence of behavior on attitudes, pp. 223-271 in D. Albarracín, B. T. Johnson and M. P. Zanna (eds) *The handbook of attitudes*, Mahwah: NJ: Lawrence Erlbaum Associates, Publishers.

Oswald, M. E. and Grosjean, S. (2004) Confirmation bias, pp. 79-96 in R. F. Pohl (ed.) *Cognitive illusions: A handbook on fallacies and biases in thinking, judgement and memory,* Hove: Psychology Press.

Pariser, E. (2011) *The filter bubble: What the Internet is hiding from you,* London: Viking.

Peng, K. and Nisbett, R. (1999) Culture, dialectics, and reasoning about contradiction, *The American Psychologist* 54(9): 741-754.

Pickles, K., Cvejic, E., Nickel, B., Copp, T., Bonner, C., Leask, J., Ayre, J., Batcup, C., Cornell, S., Dakin, T., Dodd, R. H., Isautier, J. M. J. and McCaffery, K. J. (2021) COVID-19 misinformation trends in Australia: Prospective longitudinal national survey, *Journal of medical Internet research* 23(1): e23805.

Rodriguez, M. G., Gummadi, K. and Schoelkopf, B. (2014) Quantifying information overload in social media and its impact on social contagions, paper presented at the 8th International AAAI Conference on Weblogs and Social Media (ICWSM-14), Ann Arbor, US, 1-4/06.

Preacher, K. and Hayes, A. (2008) Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models, *Behavior Research Methods* 40(3): 879-891.

Preacher, K., Rucker, D. and Hayes, A. (2007) Addressing moderated mediation hypotheses: Theory, methods, and prescriptions, *Multivariate Behavioral Research* 42(1): 185-227.

Prior, M. (2013) The challenge of measuring media exposure: Reply to Dilliplane, Goldman, and Mutz, *Political Communication* 30(4): 620-634.

Rosenbaum, W. B., Rosenbaum, L. L. and McGinnies, E. (1974) Sex differences in selective exposure?, *The Journal of Social Psychology* 92(1): 85-89.

Shapiro, G. K., Holding, A., Perez, S., Amsel, R. and Rosberger, Z. (2016) Validation of the vaccine conspiracy beliefs scale, *Papillomavirus Research* 2: 167-172.

Slater, M. (2007) Reinforcing spirals: The mutual influence of media selectivity and media effects and their impact on individual behavior and social identity, *Communication Theory* 17(3): 281-303.

Smith, M. R. (1994) Technological determinism in American culture, pp. 1-36 in M. R. Smith and L. Marx (eds), *Does technology drive history?: The dilemma of technological determinism*, Cambridge, MA: MIT Press.

Smith, S., Fabrigar, L. and Norris, M. (2008) Reflecting on six decades of selective exposure research: Progress, challenges, and opportunities, *Social and Personality Psychology Compass* 2(1): 464-493.

Stieger, S., Gumhalter, N., Tran, U. S., Voracek, M. and Swami, V. (2013) Girl in the cellar: A repeated cross-sectional investigation of belief in conspiracy theories about the kidnapping of Natascha Kampusch, *Frontiers in Psychology* 4: 297.

Streiner, D. (2003) Starting at the beginning: An introduction to coefficient alpha and internal consistency, *Journal of Personality Assessment* 80(1): 99-103.

Stroud, N. J. (2007) Media effects, selective exposure, and fahrenheit 9/11, *Political Communication* 24(4): 415-432.

Stroud, N. J. (2008) Media use and political predispositions: Revisiting the concept of selective exposure, *Political Behavior* 30(3): 341-366.

Stroud, N. J. (2010) Polarization and partisan selective exposure, *Journal of Communication* 60(3): 556-576.

Stroud, N. J. (2011) *Niche news: The politics of news choice*, Oxford: Oxford University Press.

Suh, E. (2002) Culture, identity consistency, and subjective well-being, *Journal of Personality and Social Psychology* 83(6): 1378-1391.

Sunstein, C. (2001) *Echo chambers: Bush V. Gore, impeachment, and beyond,* Princeton, NJ: Princeton University Press.

Sunstein, C. (2007) On the divergent American reactions to terrorism and climate change, *Columbia Law Review* 107(2): 503-557.

Sunstein, C. (2009) *Republic.com 2.0,* Princeton, NJ: Princeton University Press.

Sunstein, C. and Vermeule, A. (2009) Conspiracy theories: Causes and cures, *The Journal of Political Philosophy* 17(2): 202-227.

Swami, V., Chamorro-Premuzic, T. and Furnham, A. (2010) Unanswered questions: A preliminary investigation of personality and individual difference predictors of 9/11 conspiracist beliefs, *Applied Cognitive Psychology* 24(6): 749-761.

Swami, V. and Furnham, A. (2012) Examining conspiracist beliefs about the disappearance of Amelia Earhart, *The Journal of General Psychology* 139(4): 244-259.

Taber, K. (2018) The use of Cronbach's alpha when developing and reporting research instruments in science education, *Research in Science Education* 48(6): 1273-1296.

Taylor, R. (1990) Interpretation of the correlation coefficient: A basic review, *Journal of Diagnostic Medical Sonography* 6(1): 35-39.

Toffler, A. (1970) *Future shock,* London: Bodley Head.

Tourangeau, R., Conrad, F. G. and Couper, M. P. (2013) *The science of web surveys*, Oxford: Oxford University Press.

Tourangeau, R. and Rasinski, K. (1988) Cognitive processes underlying context effects in attitude measurement, *Psychological Bulletin* 103(3): 299-314.

Tourangeau, R. and Yan, T. (2007) Sensitive questions in surveys, *Psychological Bulletin* 133(5): 859-883.

United Nations. (2008) *Designing household survey samples: Practical guidelines*, New York City, NY: United Nations.

Uscinski, J. E. and Parent, J. M. (2014) *American conspiracy theories*, Oxford: Oxford University Press.

van Prooijen, J. W. and Jostmann, N. B. (2013) Belief in conspiracy theories: The influence of uncertainty and perceived morality, *European Journal of Social Psychology* 43(1): 109-115.

van Prooijen, J. W. and Krouwel, A. P. M. (2019) Psychological features of extreme political ideologies, *Current Directions in Psychological Science* 28(2): 159-163.

van Prooijen, J. W., Krouwel, A. P. M. and Pollet, T. (2015) Political extremism predicts belief in conspiracy theories, *Social Psychological & Personality Science* 6(5): 570-578.

Vraga, E. and Tully, M. (2019) Engaging with the other side: Using news media literacy messages to reduce selective exposure and avoidance, *Journal of Information Technology & Politics* 16(1): 77-86.

Walgrave, S. and Dejaeghere, Y. (2017) Surviving information overload: How elite politicians select information, *Governance* 30(2): 229-244.

Warner, B. and Neville-Shepard, R. (2014) Echoes of a conspiracy: Birthers, truthers, and the cultivation of extremism, *Communication Quarterly* 62(1): 1-17.

Weeks, B., Lane, D., Kim, D., Lee, S. and Kwak, N. (2017) Incidental exposure, selective exposure, and political information sharing: Integrating online exposure patterns and expression on social media, *Journal of Computer-mediated Communication* 22(6): 363-379.

Wood, M., Douglas, K. and Sutton, R. (2012) Dead and alive, *Social Psychological & Personality Science* 3(6): 767-773.

World Health Organization. (2020) Managing the COVID-19 infodemic: Promoting healthy behaviours and mitigating the harm from misinformation and disinformation, URL: https://www.who.int/news/item/23-09-2020-managing-the-covid-19-infodemic-promoting-healthy-behaviours-and-mitigating-the-harm-from-misinformation-and-disinformation [Last consulted July 13, 2021].

Yang, J. and Oh, S. (2018) Media issue 4-8, *Korea Press Foundation*, 30 August, URL: https://www.kpf.or.kr/front/board/boardContentsView.do?board_id=246&contents_id=000344023CEC351072F5E30EB086908A [Last consulted July 13, 2021].

Yeager, D. S., Krosnick, J. A., Chang, L., Javitz, H. S., Levendusky, M. S., Simpser, A. and Wang, R. (2011) Comparing the accuracy of RDD telephone surveys and Internet surveys conducted with probability and non-probability samples, *Public opinion quarterly* 75(4): 709-747.

Yum, J. Y. and Jeong, S. H. (2019) Predictors of fake news exposure and sharing: personality, new media literacy, and motives, *Korean Society For Journalism And Communication Studies* 63(1): 7-45.

APPENDICES

Appendix A: Consent form

Informed Consent Form

Thank you for considering taking part in the study. The survey is carried out as part of the MSc dissertation at the London School of Economics and Political Science (LSE). Prior to the survey, this page outlines the aim of the research and offers a description of participants' involvement and rights.

The purpose of this study is to examine the mediating effect of online information consumption patterns on the relationship between individual offline characteristics and offline attitudes. The survey is intended for South Korean YouTube users only. If you determine to take part in the survey, you will be asked to provide some personal data, including 'general demographic details, the general use of the media, the pattern of YouTube information consumption, and thoughts on a series of Covid-19 related statements'.

It is up to you to determine whether you participate or not. If you decide to participate in the survey, you will be required to sign a consent form. If any questions make you feel uncomfortable, you can withdraw at any point. This study went through an ethics review conforming to the LSE Research Ethics Policy and Procedure. Also, the given data from this study will be thoroughly kept as being anonymised and confidential. Should you have any questions, please do not hesitate to contact the researcher, X, at xxx@lse.ac.uk

The survey will take 5-7 minutes to complete. Note that all answers will be treated confidentially and anonymously. If you are happy to participate in the study, please click the button below to express agreement.
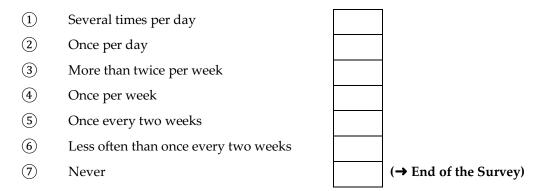
○ I consent.

Appendix B: Questionnaire

Part 1. Screening Questions

Please answer the following questions.

Q1. In the past one month, how often have you logged into YouTube?

①   Several times per day

②   Once per day

③   More than twice per week

④   Once per week

⑤   Once every two weeks

⑥   Less often than once every two weeks

⑦   Never   **(➜ End of the Survey)**

Q2. Have you come across or looked for any information concerning COVID-19 on YouTube?

①   YES

②   NO   **(➜ End of the Survey)**

Part 2. Questions about 'Media Literacy'

Q3. Here are some questions about your use of the medium in general. The notion 'medium' used in the given statements refers to current media platforms. For each of the following statements on your knowledge and skills, please indicate how much you agree or disagree.

		Perfectly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Perfectly disagree
3A	I know how to use searching tools to get information needed in the media.					

3B	It is easy for me to make use of various media environments to reach information.					
3C	I am good at catching up with the changes in the media.					
3D	I understand political, economical and social dimensions of media contents.					
3E	I perceive different opinions and thoughts in the media.					
3F	I am able to analyse positive and negative effects of media contents on individuals.					
3G	I can assess media in terms of credibility, reliability, objectivity and currency.					
3H	I can compare news and information across different media environments.					
3I	I am able to determine whether or not media contents have commercial messages.					
3J	It is easy for me to make decision about the accuracy of media messages.					
3K	It is easy for me to create user accounts and profiles in media environments.					
3L	I am good at sharing digital media contents and messages on the Internet**.**					
3M	I am able to rate or review media contents based on my personal interests and liking.					
3L	I can use basic operating tools (button, hyperlinks, file transfer etc) in the media.					

3O	I can make contribution or comments to media contents shared by others.					
3P	I manage to influence others' opinions by participating to social media environments.					
3Q	I can make contribution to media by reviewing current matters from different perspectives (social, economical, ideological etc.).					
3R	I am skilled at designing media contents that reflect critical thinking of certain matters.					
3S	I can make discussions and comments to inform or direct people in the media.					
3T	I am able to collaborate and interact with diverse media users towards a common purpose.					

Part 3. Questions about 'Selective Exposure'

Q4. Now, we would like to ask you some questions about your behavioural patterns on YouTube. In the past one month, how frequently did you do the following statement? Please tick as appropriate. Here, the information related to COVID-19 can include 'the cause of disease', 'illness', 'treatment', and 'governmental interventions'

		Every day	3 to 5 times a week	Once a week	1 to 3 times a month	None	I can't remember
4A	When I came across the COVID-19 content that accords with my pre-existing views or attitudes in my home feeds, I watched the YouTube content						

4B	When I came across the COVID-19 content that accords with my pre-existing views or attitudes in video-related recommendation, I watched the YouTube content						
4C	When my acquaintance shared the link for the COVID-19 content that accords with my pre-existing views or attitudes through social media, I watched the YouTube content.						
4D	I searched for the COVID-19 YouTube content that accords with my pre-existing views or attitudes through keyword box on YouTube.						
4E	When I came across the COVID-19 content that is inconsistent with my pre-existing views or attitudes in my home feeds, I watched the YouTube content (➜ **Reverse)**						
4F	I watched the COVID-19 YouTube content that accords with my pre-existing views or attitudes through YouTube channels that I subscribes						
4G	When I came across the COVID-19 content that accords with my pre-existing views or attitudes in the webpage of the internet, I watched the YouTube content						

4H	When I came across the COVID-19 content that is inconsistent with my pre-existing views or attitudes in my home feeds, I watched the YouTube content (➜ **Reverse**)					

Part 4. Questions about 'Conspiracy Theory Beliefs'

Q5. Here are some statements concerning COVID-19. Please estimate to what extent the following statements are true or untrue.

		Definitely true	Maybe true	Neither true nor untrue	Maybe not true	Definitely not true
5A	The first cases of COVID-19 were reported from Wuhan City, Hubei Province, China. (➜ **True Statement**)					
5B	COVID-19 new case data is often fabricated.					
5C	The outbreak of COVID-19 is a population control scheme.					
5D	Those with underlying medical problems are at higher risk of developing serious illness from COVID-19. (➜ **True Statement**)					
5E	The government is trying to cover up the link between COVID-19 vaccines and side effects.					

5F	The virus that causes COVID-19 was created in Chinese bio-laboratory.					
5G	People are deceived about COVID-19 vaccine safety.					
5H	The COVID-19 virus can spread in poorly ventilated indoor settings. (➜ **True Statement**)					
5I	The COVID-19 pandemic was planned by the Bill & Melinda Gates foundation to implant trackable microchips.					
5J	The country with the most COVID-19 deaths is the USA. (➜ **True Statement**)					

Part 5. Questions about 'Socio-Demographic Characteristics and Political Extremity'

Lastly, we would like to ask you some questions about yourself. Please tick as appropriate.

Q6. What is your gender?

① Male

② Female

Q7. In what year were you born?

Q8. What is the highest level of school you have completed?

① Below middle school

② High school

③ Partial college

④ Bachelor

⑤ Above master

Q9. The next question is about politics. Generally speaking, which of the following best describes your political ideology? Please tick as appropriate.

Extremely liberal	Liberal	Slightly liberal	Moderate	Slightly conservative	Conservative	Extremely conservative
1	2	3	4	5	6	7

Media@LSE MSc Dissertations Series

The Media@LSE MSc Dissertations Series presents high quality MSc Dissertations which received a mark of 75% and above (Distinction).

Selected dissertations are published electronically as PDF files, subject to review and approval by the Editors.

Authors retain copyright, and publication here does not preclude the subsequent development of the paper for publication elsewhere.

ISSN: 1474-1938/1946