

STEREOTYPED-INFORMATION BEHAVIOR CAUSED BY SOCIAL MEDIA: A CASE STUDY OF TIKTOK

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ABSTRACT

This study delves into the phenomenon of stereotyped-information behavior within the realm of social media, with a specific focus on the TikTok platform. Employing a multi-method approach, we aim to unravel the intricate dynamics at play when users engage with content that may reinforce existing beliefs and stereotypes. The prevalence and multifaceted nature of stereotyped-information behavior are illuminated through a comprehensive analysis of user interactions on TikTok. Our findings reveal a compelling pattern: users exhibit a tendency to engage with content that aligns with their pre-existing beliefs. A distinctive feature of TikTok is its visual-centric format, characterized by short, engaging videos. This aspect amplifies the potential for stereotype reinforcement. Visuals and memes, in particular, emerge as powerful tools for the dissemination of both accurate and biased information. Furthermore, our investigation sheds light on the formation of filter bubbles and echo chambers within the TikTok ecosystem. Users tend to be enveloped in content and interactions that reaffirm their existing beliefs, potentially limiting exposure to diverse perspectives. This phenomenon mirrors observations on other social media platforms and emphasizes the need for strategies to foster a more inclusive information environment. This research underscores the pressing need for continued investigation into the ways social media platforms influence the consumption and processing of information. As these platforms continue to shape public discourse, it is imperative that users, content creators, and platform developers alike remain vigilant in their efforts to mitigate the potential perpetuation of stereotypes.

Keywords: Stereotyped-Information Behavior; Filter Bubbles; Echo Chambers; Social Media; TikTok.

COMPORTAMIENTO INFORMACIONAL ESTEREOTIPADO CAUSADO POR LAS REDES SOCIALES: UN ESTUDIO DE CASO DE TIKTOK

RESUMEN

Este estudio profundiza en el fenómeno del comportamiento de información estereotipada en el ámbito de las redes sociales, con un enfoque específico en la plataforma TikTok. Empleando un enfoque multimétodo, nuestro objetivo es desentrañar las dinámicas intrincadas que entran en juego cuando los usuarios interactúan con contenido que puede reforzar creencias y estereotipos existentes. La prevalencia y naturaleza multifacética del comportamiento de información estereotipada se iluminan a través de un análisis exhaustivo de las interacciones de los usuarios en TikTok. Nuestros hallazgos revelan un patrón convincente: los usuarios muestran una tendencia a interactuar con contenido que se alinea con sus creencias preexistentes. Una característica distintiva de TikTok es su formato centrado en lo visual, caracterizado por videos cortos y atractivos. Este aspecto amplifica el potencial para el refuerzo de estereotipos. Las imágenes y los memes, en particular, emergen como herramientas poderosas para la difusión de información tanto precisa como sesgada. Además, nuestra investigación arroja luz sobre la formación de burbujas de filtro y cámaras de eco dentro del ecosistema

de TikTok. Los usuarios tienden a estar inmersos en contenido e interacciones que reafirman sus creencias existentes, limitando potencialmente la exposición a perspectivas diversas. Este fenómeno refleja observaciones en otras plataformas de redes sociales y subraya la necesidad de estrategias para fomentar un entorno de información más inclusivo. Esta investigación subraya la apremiante necesidad de continuar investigando sobre cómo las plataformas de redes sociales influyen en el consumo y procesamiento de información. A medida que estas plataformas siguen dando forma al discurso público, es imperativo que los usuarios, creadores de contenido y desarrolladores de plataformas permanezcan vigilantes en sus esfuerzos por mitigar la posible perpetuación de estereotipos.

Palabras-Clave: Comportamiento Informacional Estereotipado; Burbujas de Filtro; Cámaras de Eco; Redes Sociales; TikTok.

COMPORTAMENTO INFORMACIONAL ESTEREOTIPADO CAUSADO PELAS MÍDIAS SOCIAIS: UM ESTUDO DE CASO DO TIKTOK

RESUMO

Este estudo aprofunda o fenômeno do comportamento de informação estereotipada no âmbito das redes sociais, com foco específico na plataforma TikTok. Utilizando uma abordagem multimétodo, nosso objetivo é desvendar as dinâmicas intrincadas envolvidas quando os usuários interagem com conteúdo que pode reforçar crenças e estereótipos existentes. A prevalência e a natureza multifacetada do comportamento de informação estereotipada são iluminadas por meio de uma análise abrangente das interações dos usuários no TikTok. Nossas descobertas revelam um padrão convincente: os usuários mostram uma tendência a interagir com conteúdo que está alinhado com suas crenças preexistentes. Uma característica distintiva do TikTok é seu formato centrado no visual, caracterizado por vídeos curtos e envolventes. Este aspecto amplifica o potencial para o reforço de estereótipos. Imagens e memes, em particular, emergem como ferramentas poderosas para a disseminação de informações precisas e enviesadas. Além disso, nossa pesquisa lança luz sobre a formação de bolhas de filtro e câmaras de eco dentro do ecossistema do TikTok. Os usuários tendem a estar imersos em conteúdo e interações que reafirmam suas crenças existentes, limitando potencialmente a exposição a perspectivas diversas. Esse fenômeno reflete observações em outras plataformas de redes sociais e destaca a necessidade de estratégias para promover um ambiente de informação mais inclusivo. Esta pesquisa destaca a necessidade urgente de continuar investigando como as plataformas de redes sociais influenciam o consumo e o processamento de informações. À medida que essas plataformas continuam a moldar o discurso público, é imperativo que os usuários, criadores de conteúdo e desenvolvedores de plataformas permaneçam vigilantes em seus esforços para mitigar a possível perpetuação de estereótipos.

Palavras-Chave: Comportamento Informacional Estereotipado; Bolhas de Filtro; Câmaras de Eco; Mídias Sociais; TikTok.

1 INTRODUCTION

Social media platforms have gained substantial importance as information sources. They have revolutionized the way we access and consume information, transformed how we obtain information, offering an extensive range of content readily available to us. As a

result, these platforms play a pivotal role in shaping public opinion and attitudes (McGregor, 2019). Also, they were considered a more practical tool for understanding the public's attitude than traditional polls. While social media offers numerous benefits, it has

also been accused of contributing to the formation and reinforcement of stereotypes in different types and shapes (Dobson & Knezevic, 2018; Intravia & Pickett, 2019; Seiter, 2006; Xu, 2022). Information processing may also have been stereotyped over time (Seiter, 2006). This phenomenon, as we consider it in this study, can be expanded as stereotyped-information behavior, which can be caused by mediums like social media and refers to the selective exposure and consumption of information that reinforces individuals' existing beliefs and stereotypes.

Among the various social media platforms, *TikTok* has emerged as one of the most popular and influential, particularly

among younger generations. With its short-form videos and widespread global reach, *TikTok* holds significant potential to impact the dissemination of information and perceptions of societal norms. However, this popularity also raises questions about the platform's role in perpetuating or challenging stereotypes (Liu, 2021; Matamoros Fernandez et al., 2022; Ng & Indran, 2023).

This case study delves into *TikTok*, aiming to explore how stereotyped-information behavior manifests among its users. The study points to analyze users' reactions to a number of *TikTok* posts that exhibit different sorts of stereotyped information behavior.

2 LITERATURE REVIEW

In the literature review, we delve into the foundational concepts that underpin our study on stereotyped information behavior caused by social media, with a focus on the popular platform *TikTok*. Stereotypes, as cognitive shortcuts and simplified belief systems, play a significant role in how individuals perceive and interact with the world around them. We explore the intricate interplay between stereotypes and social media, where algorithms and personalized content curation can inadvertently perpetuate biases and reinforce preexisting stereotypes.

2.1 Stereotype and Stereotyping

Stereotypes often manifest as what linguists refer to as "generics" (Beeghly, 2015). Typically, these mindsets are straightforward, overgeneralized, commonly held beliefs that are frequently resistant to alteration (Arendt, 2023). Stereotypes are "short cuts" that individuals unconsciously use to make decisions more quickly and readily, which explains the propensity to accept them without question (Gouvernement du Québec, n.d.). Stereotypes as implicit beliefs significantly contribute to the formation of implicit biases (2015). They are persistent and strong in part

This literature review further investigates the concept of stereotyped information behavior, where individuals selectively engage with and process information that aligns with their existing beliefs and perspectives. We analyze the effects of filter bubbles and echo chambers, confirmation bias, polarization, and tribalism, as well as the amplification of stereotypes through visuals and memes. By examining the extensive body of research on these topics, we lay the groundwork for our empirical investigation into the manifestations of stereotyped information behavior on *TikTok*.

because they influence how we perceive the world, despite the fact that we may assume we are only describing it based on our subjective experiences (Green, 2015).

They involve magnified beliefs about specific subjects, such as individuals or representations of groups (Augoustinos & Walker, 1998), which can either be accurate or mistaken. Nevertheless, these mentalities and acts of stereotyping often tend to emerge prominently in depictions of people (Turner & Turner, 2011). Our information processing utterly relies on stereotypes as they mitigate

the complexity of almost everything (Arendt, 2023) by serving to stabilize, make predictable, and make manageable a given person's view of social reality (Hamilton, 2015).

In another term, Stereotypes function as cognitive shortcuts, simplifying perception,

2.2 Stereotypes and Social Media

The AI employed on social media platforms can forecast consumers' behaviors for various purposes, like commercial objectives; prioritizing and presenting selective contents with respect to users' inclinations and favoring them the most could, however, foster biases or stereotypic attitudes (Institut für Sozialarbeit und Sozialpädagogik e.V. Agency, 2022). As a consequence, it can interfere and shape users' behaviors, besides confirming preexisting biases that cause stereotyping (Fosch-Villaronga et al., 2021), as response biases could be crucial in the perpetuation of stereotypes (Stangor, 1988). Stereotypical portrayals can be seen on social media with a persuasive post.

For years, a large body of research has pinpointed discrepant stereotypes related to reliance on different social media platforms (Bosco et al., 2023; Dobson & Knezevic, 2018;

2.3 Stereotyped Information Behavior

Stereotypes function as cognitive shortcuts, simplifying perception, judgment, and response. Each and every one of us believes in some stereotypes since they let our brain sort information by categorizing things into different types (Gouvernement du Québec, n.d.). streamlining the complexities of the social world (Macrae et al., 1994). They are generally perceived by the cognitive perspective as belief systems or cognitive biased that can shape information processing (Jr & Srull, 2014). From the perspective of social psychologists, stereotypes can be understood through the lens of cognitive abilities, representing a specific type of mental

judgment, and response by streamlining the complexities of the social world (Macrae et al., 1994). They are conceptual frameworks that act as a connection that connects a social group to a collection of qualities or behaviors (Jr & Srull, 2014).

Döring et al., 2016; Maftai & Merlici, 2022). In fact, the interaction of stereotyping within social media platforms has led to the transformation of one element into a visual representation closely associated with another element, along with the reinforcement of other preconceived stereotypes (Dobson & Knezevic, 2018). In order to form opinions or make decisions about the social world, people frequently turn to stereotypes (Yuen, 2019).

The visual nature of platforms like *TikTok*, with its emphasis on videos and imagery, can intensify the impact of stereotypes or propel stereotypes through compelling visual portrayals. Therefore, just like its counterparts, *TikTok* has been allegedly accused of stereotyping such as gender (Huber & Baena, 2023), older adults (Ng & Indran, 2023), race (Matamoros Fernandez et al., 2022) and so on among others.

classification that aids in the organization of information (Seiter, 2006).

Given the importance of stereotypes as one of the main or even only reasons for a person's judgment or decision (Beeghly, 2015), information behavior would also be stereotyped from information seeking to acceptance and from processing to decision-making.

Stereotypically, users tend to selectively opt for information that resonates with their demographics and belief systems, leveraging the diversity of news, ideas, information, and opinions available on social media while simultaneously sidestepping or

neglecting content that contradicts their own perspectives or biases (Intravia & Pickett, 2019).

Within the cognitive approach toward stereotypes, stereotyping is linked to social groups and can be seen as a layer of information in social schemas. Information processing in social schemas often starts at higher levels and moves downward. This involves encoding the person's features into working memory, then matching them with stored features to categorize them. Once categorized, traits linked to the category are

2.4 Filter Bubbles and Echo Chambers

A filter bubble is an unseen particular and, private universe of information that is generated by personalized information filters that have been particularly created for a user. In other words, Users are virtually being placed in a bubble where they only see content that matches their past consumption patterns using algorithms designed to customize and personalize their online experiences (Pariser, 2011). The characteristics of users, including their cultural diversity, have the potential to impact the extent of the filter bubble (S. J. Min & Wohn, 2020). Algorithms aim to connect users with preferred content by prioritizing certain items over others, thus creating a personalized content stream with various choices for users (Rader & Gray, 2015), but they nonetheless propel users to consume, as Pariser (2011) described, junk food-like information rather than a more balanced diet-like information.

2.5 Confirmation Bias

Confirmation bias refers to the inclination to search for or interpret evidence or data in manners that favor one's pre-existing beliefs, expectations, or hypotheses, which may finally approve or straighten the original opinion (Nickerson, 1998). Confirmation bias

2.6 Polarization and Tribalism

recalled, and potential behaviors based on these traits are generated from memory (Stephan, 1989). As for information retrieval, a number of common processing biases or stereotyped mindsets might also affect the retrieval of data related to social categories (1989). Thus, information, which encompasses retrieval and processing, would be affected by the stereotypes and consequently been stereotyped itself over time.

Here are a few key points and salient common examples of stereotyped information behavior caused by social media:

Alongside, the filter bubble itself, as an intermediate structure, provokes polarization and echo chambers in social media (Y. Min et al., 2019). Echo chambers are spaces where like-minded individuals interact and uphold a common narrative. Social media platforms could potentially restrict exposure to a variety of viewpoints and promote the creation of clusters of users who share similar opinions (Cinelli et al., 2021).

Having said that, a number of scholars are not one hundred percent agree with the beneficial or disruptive impact of these phenomena in communication spaces and highlight the possibility of misunderstanding the essence of the polarizations and the causes alike (Bruns, 2019). Furthermore, Davies (2018) argued that it is comparatively less likely to confirm the presence of the filter bubble as a significant concern.

interferes with both gathering and utilizing information (Jones & Sugden, 2001). It literally propels us to modify information that undermines past choices and judgments on various issues (Kappes et al., 2020).

Information polarization is a mere selective exposure or a limitation that users imply to narrow down the information they are about to consume or are about to be exposed to despite the wide availability of content and information online (Schmidt et al., 2017). A set of biased viewpoints can lead to polarization when individuals hold strong biases (Dandekar et al., 2013).

Likewise, tribalism, which is the state of being organized by, or advocating for, tribes or tribal lifestyles, is the strong sense of loyalty, identity, and belonging that individuals often feel towards a particular group, often based on

shared cultural, social, or ideological characteristics (Clark & Winegard, 2020). In other words, tribal loyalty can lead to tribalism. In conclusion, they can, for instance, selectively approach information that favors their tribe's standards, embracing information that aligns with their group's beliefs and avoiding information that could potentially not approve of their tribe's ideology (Ditto et al., 2019).

Tribalism tendencies can result in distorted information processing based on ideologies and values (Clark & Winegard, 2020).

2.7 Amplification of Stereotypes Through Visuals and Memes

Social media, with its interactive nature commonly exacerbates stereotypes via visuals and memes, amplifying a wide range of stereotypes (Quillian & Pager, 2010). Stereotype amplification utterly amplifies community risk perceptions and mediates the relationship between political ideologies and risk perception (Haner et al., 2020).

A considerable number of studies have focused on investigating the physical,

behavioral, and persona stereotypes reinforced through social media usage. Given the importance of stereotypes as one of the main or even only reasons for a person's judgment or decision (Beeghly, 2015), information behavior would also be stereotyped from information seeking to acceptance and from processing to decision-making. In this study, we investigate the stereotypic information behavior on *TikTok*.

3 OBJECTIVES

Understanding how these engagement dynamics contribute to the perpetuation of stereotypes is crucial for developing strategies that foster more inclusive and responsible social media usage. The objective of this study is to explore and understand the manifestations of stereotyped information

behavior on *TikTok*. By analyzing users' reactions to a number of posts, this study aimed to provide insights into the prevalence, types, and impact of different forms of stereotyped information behavior within the *TikTok* platform.

4 METHODOLOGY

This study employed an exploratory research design to gain insights into users' reactions to *TikTok* posts that exhibit various forms of stereotyped information behavior. The exploratory approach was chosen to uncover patterns, trends, and potential relationships that can inform a deeper understanding of how stereotyped information behavior manifests on the *TikTok* platform.

To build the sample, a comprehensive set of *TikTok* posts will be collected using relevant keywords and trending topics. The collected posts will then be categorized based on the different forms of stereotyped information behavior identified in the literature, including filter bubbles, confirmation bias, viral misinformation and disinformation, polarization and tribalism, and

the amplification of stereotypes through visuals and memes. Each category will be represented in the final sample.

Despite the algorithmic use of hashtags by *TikTok* to categorize and group video content, making it easier for users to search for and share videos, As such, we fairly adapted this technique, plus the modified method used by Unni and Weinstein (2021). Initially, we utilized *TikTok's* Creative Center to identify trending hashtags and videos(*TikTok: Creative Center, n.d.*) (Table 2). The selection criteria focused on hashtags that were relevant to our area of study and potentially challenging to existing mindsets and beliefs. This approach allowed us to gain an advantage in analyzing the content and user reactions.

To narrow down our focus, we excluded excessively general categories and selected six categories that aligned with the study's objectives (Table 1). In each chosen category, we randomly selected one of the top-ten hashtags from the US within a 30-day span. Subsequently, we identified and analyzed one of the top videos associated with these hashtags that is much relevant to the objectives of our study. We finally ended up with 5 posts.

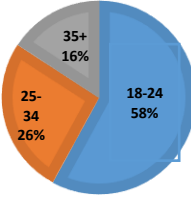
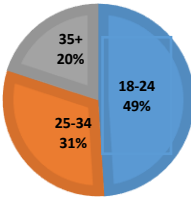
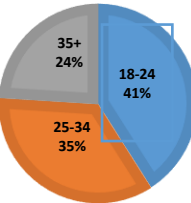
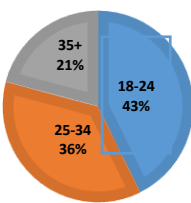
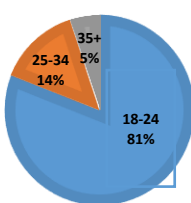
Our analysis encompassed an in-depth examination of the selected videos, categorizing them based on different manifestations of stereotyped information behavior. Furthermore, we scrutinized the top 6 comments on each video to identify any signs of stereotyped information behavior.

Table 1: TikTok's Creative Center themes and status for the current study

Categories	Status
Apparel & Accessories	excluded
Baby, Kids & Maternity	excluded
Beauty & Personal Care	excluded
Business Services	excluded
Education	Considered
Financial Services	Considered
Food & Beverage	excluded
Games	excluded
Health	Considered
Home Improvement	excluded
Household Products	Considered
Life Services	excluded
News & Entertainment	Considered
Pets	excluded
Sports & Outdoor	excluded
Tech & Electronics	Considered
Travel	excluded
Vehicle & Transportation	excluded

Source: Own drafting (2023).

Table 2: Trends on TikTok

Theme	Hashtag	Age Range	Total Posts	Total Views
Education	factsyou didnt know		30K	2B
Financial Services	moneytips		577K	3B
HEALTH	collagen		757K	4B
Household Products	journaling		928K	6B
Tech & Electronics	headphones		412K	9B

Source: Own drafting (2023).

5 RESULTS

The following section presents the results of our investigation into stereotyped-information behavior on the TikTok platform. Through a systematic analysis of user

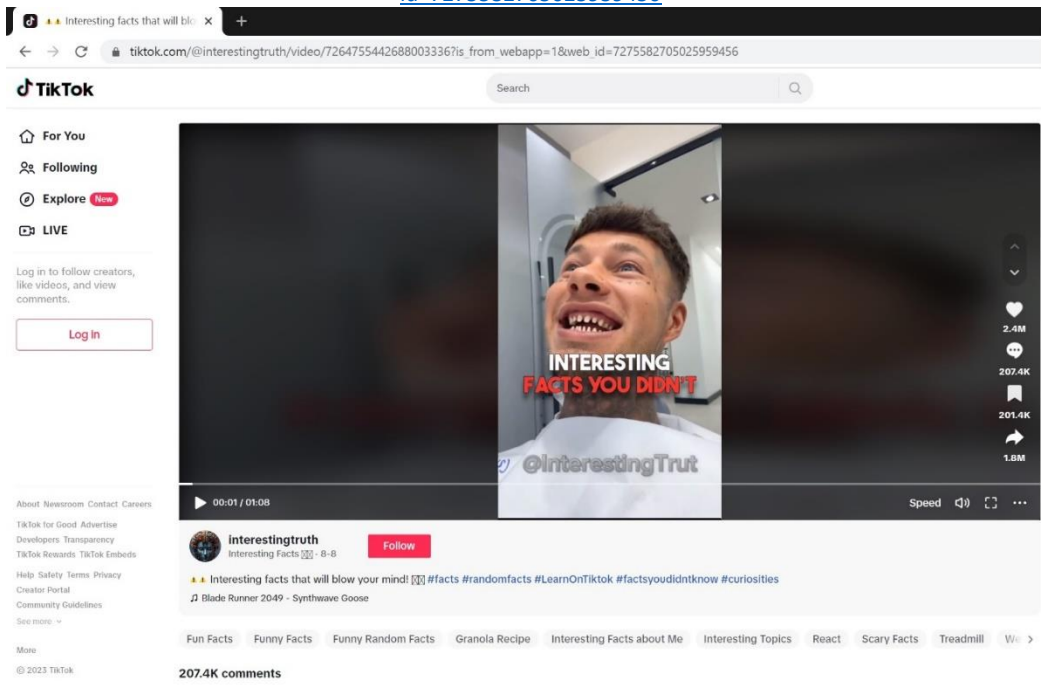
interactions with selected posts, we gained valuable insights into the various manifestations of this behavior. The results are categorized based on different types of

stereotyped information behavior identified in the literature, including confirmation bias, filter bubbles, polarization and tribalism, and

the amplification of stereotypes through visuals and memes.

5.1 Results Obtained from Video 1:

Table 3: Selected video 1 and follow up comments

Selected Video in this Hashtag	
<p>https://www.tiktok.com/@interestingtrut/video/7264755442688003336?is_from_webapp=1&sender_device=pc&web_id=7275582705025959456</p> 	
Comment 1	I would rather hang out with a random dog than most people
Comment 2	pretty sure 3 people know the recipe
Comment 3	Albert Einstein’s last words were “I’m in the hands of a fate that I can’t control”
Comment 4	I don’t think that’s true
Comment 5	Trying to prove it wrong...
Comment 6	Wait! If the jellyfish is immortal, why will it die when eaten?

Source: Own preparation, based on research data (2023).

The hashtag has been used in over 30,000 posts and has garnered a total of 2 billion views. It was most prevalent among the 18–24 age group, accounting for 58%, followed by the 25–34 age group at 26%. Interest waned among those aged 35 and older, comprising only 16%.

The selected post attempted to share a number of what the creators referred to as facts, including they are only two people who know the recipe of Coca-Cola; the ability to

know the person who has a crush on a user on *TikTok*; the preferences of pet owners to hang out with their pet companionship instead of others; those who are into potent fragrances like nail polishing, gasoline, etc. have a strong tendency to do drugs; Albert Einstein said a few words before passing out for the last time in German to the nurse, who did not speak German; the existence of a unique jellyfish that is biologically and theatrically immortal unless it gets eaten; the oldest gum belongs to 9000 years ago and was found in Sweden; and the

probability of drinking a glass of water with the molecule passing from the dinosaurs is almost one hundred percent.

The video itself and the comments can be seen, as can a number of stereotyped-information behaviors:

- Confirmation Bias: The highlighted comments can reflect confirmation bias. For instance, the comments "I don't think that's true" and "Trying to prove it wrong..." indicate skepticism or a desire to challenge the presented information.
- Polarization and Tribalism: The comment "I would rather hang out with a random dog than most people" reflects a preference for the company of pets over people. This can be indicative of a tribal mindset, where individuals align

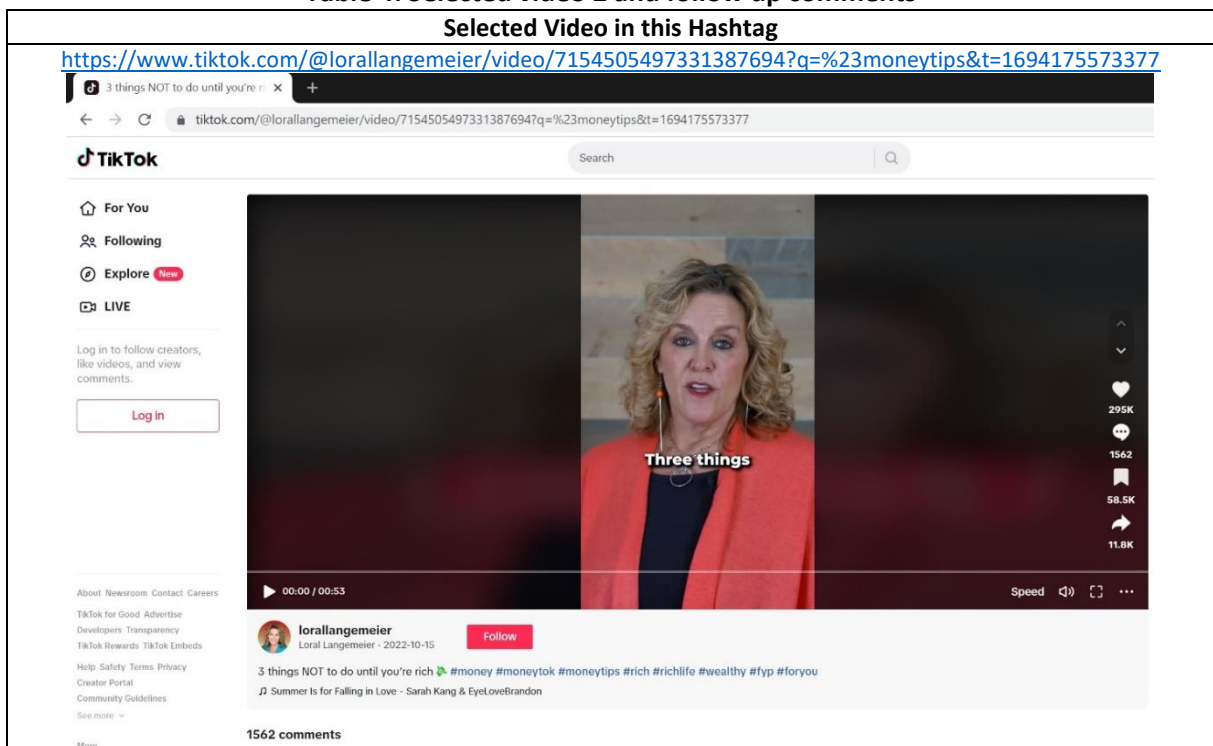
themselves strongly with a particular group or ideology (in this case, pet lovers).

- Filter Bubbles and Echo Chambers: If the individuals engaging with the video and comments share similar beliefs or interests, it could contribute to the formation of a filter bubble or echo chamber. This means that they may be more likely to accept and reinforce information that aligns with their existing viewpoints.
- Amplification of Stereotypes through Visuals and Memes: The video's format of presenting "facts" can be seen as a form of amplification through visuals. The use of visual content is a powerful way to convey information, and in this case, it's used to reinforce certain beliefs or stereotypes.

5.2 Results Obtained from Video 2:

Table 4: Selected video 2 and follow up comments

Selected Video in this Hashtag



The screenshot shows a TikTok video player with the following details:

- URL:** <https://www.tiktok.com/@lorallangemeier/video/7154505497331387694?q=%23moneytips&t=1694175573377>
- Video Title:** 3 things NOT to do until you're rich
- Hashtags:** #money #moneytok #moneytips #rich #richlife #wealthy #fyp #foryou
- Engagement:** 295K likes, 1562 comments, 58.5K shares, 11.8K reposts.
- Creator:** @lorallangemeier (Loral Langemeier - 2022-10-15)
- Comments:** 1562 comments

Comment 1	And then you die before when the little you made, life doesn't wait until you get reach. Live while you still breathing....
Comment 2	And then you die before when the little you made, life doesn't wait until you get reach. Live while you still breathing...
Comment 3	What about if you get rich when you're 30 but in your 20's you didn't enjoy your 20's just working, working, working, millions can't buy that
Comment 4	don't listen to a woman whose talking about money
Comment 5	Definitely learned my lesson with the last one
Comment 6	Should I stop travelling until I'm rich?

Source: Own preparation, based on research data (2023).

The hashtag has been used in more than 577K posts and receives a total of 3 billion views. The hashtag was more common in the age group 18–24 with 49%, followed by 25–34 with 31%, and less popular among those 35 and older with only 20%.

The selected video is about three pieces of financial advice to follow until you become wealthy:

1. Prioritize buying assets before indulging in a lavish lifestyle. You should build your assets step by step.
2. Avoid accumulating significant debt and damaging your credit score. It's important to use debt wisely, and maintaining good credit is paramount.
3. Refrain from lending money to friends and family, as they may not repay you."

The video content and highlighted comments can be categorized under several types of stereotyped information behavior:

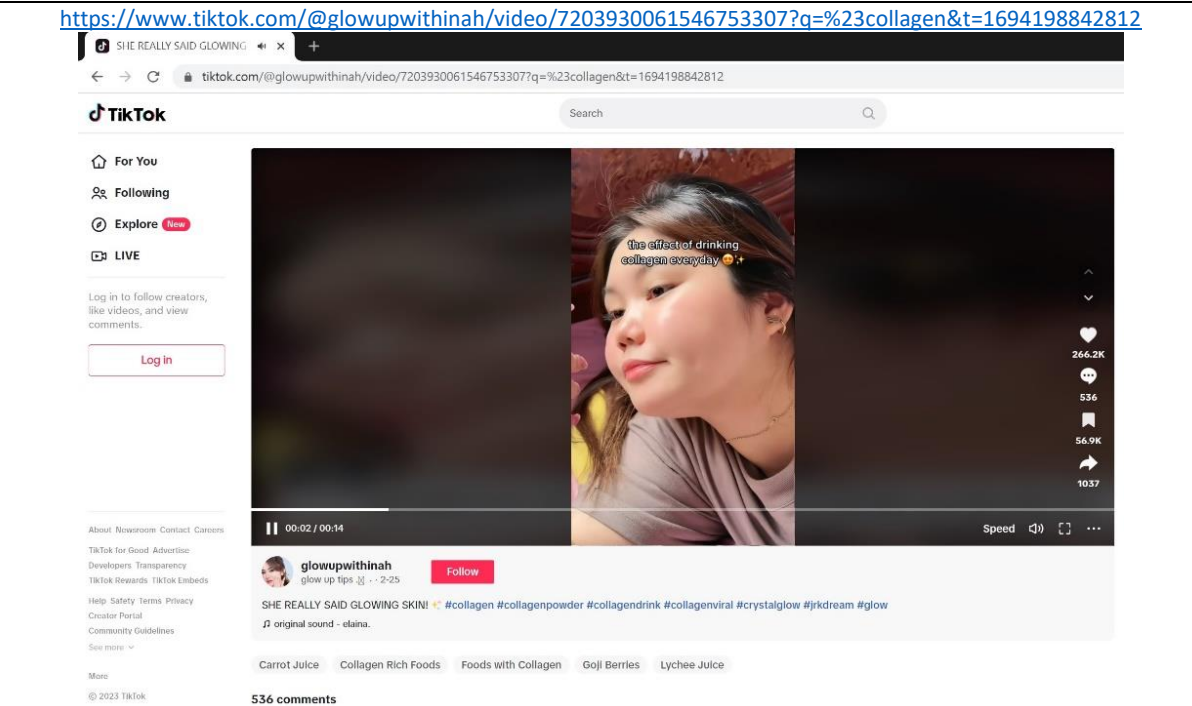
- Confirmation Bias: Comments such as "Thanks, but I don't need my lifestyle when I'm 50, I need that

bag, food and travel now" and "What about if you get rich when you're 30 but in your 20's you didn't enjoy your 20's just working, working, working, millions can't buy that" reflect confirmation bias. These comments suggest that individuals are expressing opinions or preferences that align with their existing beliefs or experiences.

- Polarization and Tribalism: Comments like "Should I stop travelling until I'm rich?" and "Definitely learned my lesson with the last one" reflect individual viewpoints on financial decisions. This can be indicative of tribal mindsets, where individuals align themselves strongly with a particular financial philosophy. Also, the comment "don't listen to a woman whose talking about money" reflects a stereotype about women and financial discussions. It implies a gender bias, assuming that women may not be knowledgeable or credible when it comes to financial matters.

5.3 Results Obtained from Video 3:

Table 5: Selected video 3 and follow up comments

Selected Video in this Hashtag	
	
Comment 1	3 month of taking collagen and you can see the noticeable changes in the skin, hair, or joint health
Comment 2	Put it in oatmeal
Comment 3	Collagen can't be absorbed through the skin so this is probably better
Comment 4	I'm so easily influenced I bought it so fast
Comment 5	would this be helpful for someone who has dehydrated skin and eczema?
Comment 6	consider me influenced

Source: Own preparation, based on research data (2023).

The hashtag has been used in more than 757K posts and gets a total of 4B views. The hashtag was more common among the age group 18–24 with 41%, then 25–34 with 35%, and less popular among those 35 and older with only 24%.

The selected post claimed the effect of drinking collagen every day on facial expression.

The video content and highlighted comments can be categorized under several types of stereotyped information behavior:

- Confirmation Bias: The highlighted comments reflect confirmation

bias. For example, comments like "3 months of taking collagen and you can see noticeable changes" and "consider me influenced" indicate a positive bias towards the effectiveness of collagen. These individuals may be more inclined to accept information that supports their belief in collagen's benefits.

- Amplification of Stereotypes through Visuals and Memes: The video's use of statistics and the popularity of the hashtag (#collagen) can be seen as a form

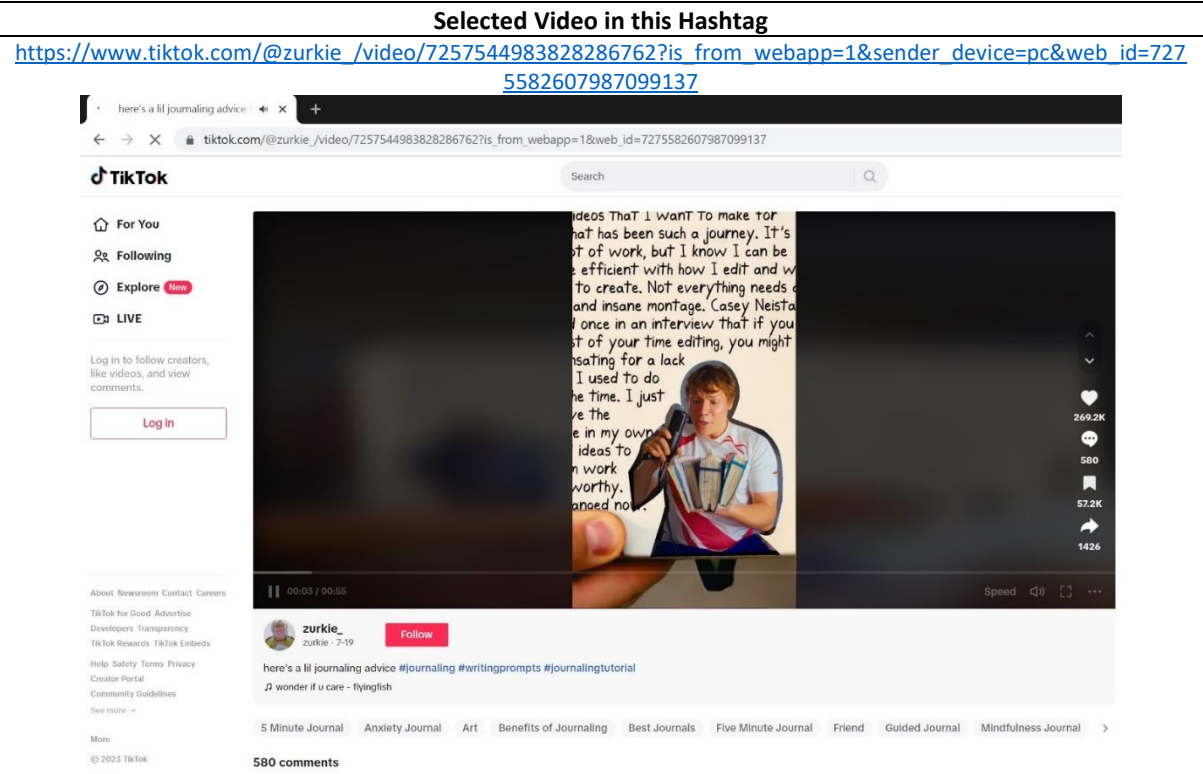
of amplification through visuals. By presenting data on the number of posts and views, it reinforces the perception that collagen is widely used and popular.

- Polarization and Tribalism: While not explicitly mentioned in the

provided content, discussions around health and beauty products like collagen can sometimes lead to polarization, where individuals strongly align with certain beliefs or products, and may form tribes around those preferences.

5.4 Results Obtained from Video 4:

Table 6: Selected video 4 and follow up comments

Selected Video in this Hashtag	
<p>https://www.tiktok.com/@zurkie_/video/7257544983828286762?is_from_webapp=1&sender_device=pc&web_id=7275582607987099137</p> 	
Comment 1	If I have to sit down every day at the same time it starts to feel like a chore I journal when I need to have a talk with myself it keeps it exciting
Comment 2	my biggest problem is that I HATE my handwriting and that'd literally be enough of a reason that I wouldn't want to look at it ever again
Comment 3	The creativity of this video!
Comment 4	junk journaling is GREAT! I have severe adhd and writing long entries can start to feel like a chore. collect receipts, stickers, scraps etc.!
Comment 5	I love this video somehow! I think I've been journaling for maybe 4 years! And I love it!!
Comment 6	why should I journal though?

Source: Own preparation, based on research data (2023).

The hashtag has been utilized in over 928,000 posts, accumulating a total of 6 billion views. Its prevalence was highest among individuals aged 18–24, constituting 71% of

users. The 25–34 age group followed with 20%, while those 35 and older showed less engagement, comprising only 9%.

The post aims to provide some tips about journaling. Here are three tips to help you get started: Step one: Create the habit. Find a consistent place where you can sit down and journal at the same time. Designate a specific spot so that when you sit down, Number 2. Start small. Break it down into smaller chunks. Finally, number 3: Just do it. Don't hold yourself back. You're going to make mistakes. You're going to write things.

The video content and highlighted comments can be categorized under the following types of stereotyped information behavior:

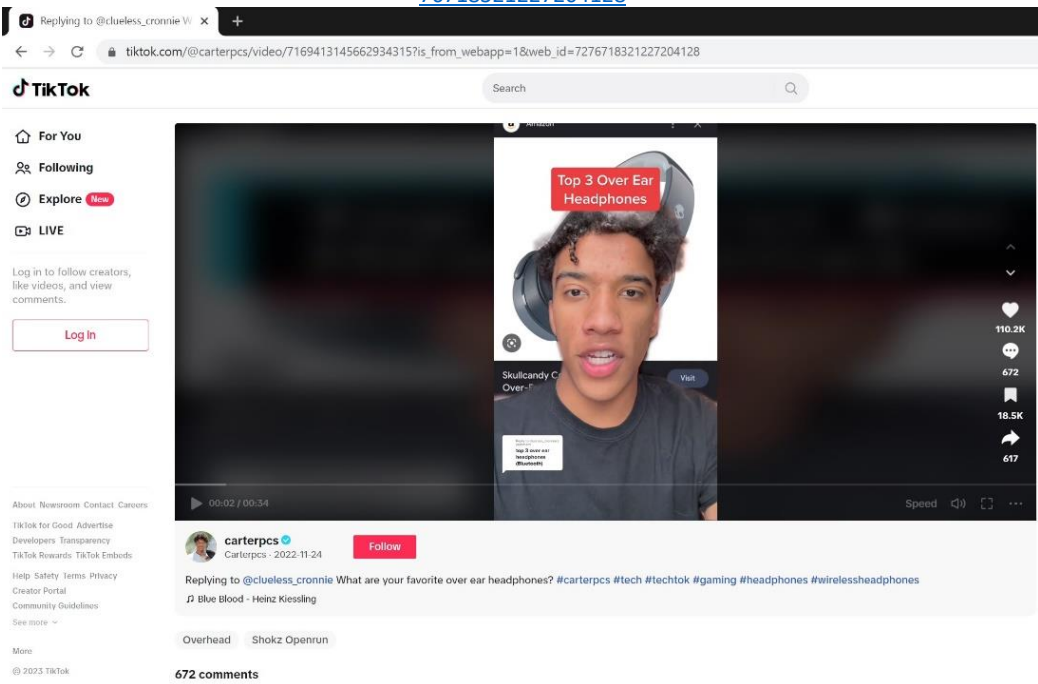
- Confirmation Bias: The comment "If I have to sit down every day at the same time it starts to feel like a chore" reflects a confirmation bias. The commenter expresses a preference for a different approach to journaling, which aligns with their existing beliefs and preferences. Simultaneously, the comment "my biggest problem is that I HATE my handwriting and that'd literally be enough of a reason that I wouldn't want to look at it ever again" highlights an individual's unique preferences and challenges with journaling. This is not a stereotype per se, but it does demonstrate how individuals' personal characteristics can influence their approach to journaling.
- Polarization and Tribalism: The comment "my biggest problem is

that I HATE my handwriting..." expresses a strong personal preference. This indicates a polarized view on the topic of journaling, where the user's specific preference (in this case, a strong dislike for their handwriting) could potentially be a factor in their engagement with the content.

- Amplification of Stereotypes: The video content itself focuses on providing tips about journaling. While not explicitly perpetuating stereotypes, it does provide specific advice that may resonate more strongly with certain audiences. For example, the emphasis on consistency (finding a specific time and place) might resonate more with individuals who thrive on routine.
- Filter Bubbles and Echo Chambers (Indirect): While the video content itself doesn't necessarily contribute to filter bubbles, the demographic information provided (age groups engaging with the content) could be indicative of specific audience preferences and interests. This could indirectly contribute to filter bubbles if the content predominantly reaches and resonates with a specific demographic.

5.5 Results Obtained from Video 5:

Table 7: Selected video 5 and follow up comments

Selected Video in this Hashtag	
<p>https://www.tiktok.com/@carterpcs/video/7169413145662934315?is_from_webapp=1&sender_device=pc&web_id=7276718321227204128</p> 	
Comment 1	You just don't like anything related to an Apple why not beats
Comment 2	I'm wear the crusher evos rn over all the best headphones I've ever used
Comment 3	Sony really putting in that work I've never had headphones even close to as good as the xm4's
Comment 4	I am not trying to spend \$350 on xm4s
Comment 5	Air Pods Max is my #1
Comment 6	Skull candy crushers are so nice. The bass is insane

Source: Own preparation, based on research data (2023).

The hashtag has been used in more than 412K posts and has garnered a total of 9 billion views. It was most commonly used by the 18-24 age group, accounting for 81%, followed by the 25-34 age group with 14%. Interest was lower among those 35 and older, comprising only 5%. This post is about the creator's top three favorite Bluetooth over-ear wireless headphones. Number 3: The Skullcandy Crusher Evos, or any other Skullcandy headphones. Number 2: Bose QuietComfort headphones have always been very good. They are very comfortable with great active noise cancellation. If the design looked a little better, I think these would be a

close contender for number one. Number 1: Sony w2000X five.

The video content and comments can be categorized as follows:

- Confirmation Bias: Comments like "You just don't like anything related to Apple why not beats" and "Air Pods Max is my #1" reflect confirmation bias. These comments suggest a preference for certain brands (Apple, Beats) and a reluctance to consider alternatives.

- Polarization and Tribalism: Comments expressing strong brand preferences, such as "I'm wearing the crusher evos rn over all the best headphones I've ever used" and "Sony really putting in that work I've never had headphones even close to as good as the xm4's," indicate a form of tribalism. Users are aligning themselves with specific brands and expressing loyalty to them.
- Amplification of Stereotypes through Visuals and Memes: Although the content is primarily text-based, it's discussing popular headphone brands and models. This can contribute to the amplification of stereotypes related to certain brands being superior or more desirable.

6 DISCUSSION

The findings of our study provide valuable insights into the intricate dynamics of stereotyped-information behavior on the TikTok platform and try to shed light on several critical aspects:

1. Prevalence of Stereotyped-Information Behavior: The analysis revealed that stereotyped-information behavior is not only prevalent but also multifaceted. Users engage with content in ways that often align with their pre-existing beliefs, demonstrating tendencies towards confirmation bias and polarization this closely align with the result of the two studies done by Munrro and Ditto (1997) when they examined biased assimilation and attitude polarization occurrence in the processing of information and the effect in these processes.
2. Role of Visual Content in Stereotyping: The visual nature of *TikTok*, characterized by short, engaging videos, amplifies the potential for stereotype reinforcement. Visuals and memes play a significant role in conveying information and can be powerful tools for the dissemination of both accurate and biased information.

3. Filter Bubbles and Echo Chambers: The study suggests that *TikTok*, like other social media platforms, contributes to the formation of filter bubbles and echo chambers. Users may find themselves surrounded by content and interactions that reaffirm their existing beliefs, potentially limiting exposure to diverse perspectives (Cinelli et al., 2021).

The findings of this study contribute to existing theories related to information behavior, social media engagement, and cognitive biases. By unpacking the nuanced ways in which users interact with content on *TikTok*, we provide empirical support for concepts such as confirmation bias, filter bubbles, and polarization.

It is important to acknowledge the limitations of this study. The sample size and duration of data collection may impact the generalizability of the findings. Additionally, while efforts were made to categorize comments accurately, interpretations are subject to some level of subjectivity.

Future research could expand on this study by incorporating a larger and more diverse sample. Longitudinal studies could provide insights into how stereotyped information behavior evolves over time. Furthermore, qualitative approaches may offer

a deeper understanding of user motivations and perceptions.

7 CONCLUSION

The present study delved into the phenomenon of stereotyped-information behavior within the realm of social media, with a specific focus on the *TikTok* platform. Through an exploratory approach, we sought to unravel the intricate dynamics at play when users interact with content that may reinforce existing beliefs and stereotypes.

In conclusion, this research underscores the need for continued investigation into the ways social media platforms influence the consumption and processing of information. As these platforms continue to shape public discourse, it is imperative that users, content creators, and platform developers alike remain vigilant in their efforts to mitigate the potential perpetuation of stereotypes.

8 REFERENCES

- Arendt, F. (2023). Media stereotypes, prejudice, and preference-based reinforcement: Toward the dynamic of self-reinforcing effects by integrating audience selectivity. <https://doi.org/10.1093/joc/jqad019>.
- Augoustinos, M., & Walker, I. (1998). The Construction of Stereotypes within Social Psychology: From Social Cognition to Ideology. *Theory & Psychology*, 8(5), 629–652. <https://doi.org/10.1177/0959354398085003>.
- Beeghly, E. (2015). What is a Stereotype? What is Stereotyping? *Hypatia*, 30(4), 675–691. <https://doi.org/10.1111/hypa.12170>.
- Bosco, C., Patti, V., Frenda, S., Cignarella, A. T., Paciello, M., & D'Errico, F. (2023). Detecting racial stereotypes: An Italian social media corpus where psychology meets NLP. *Information Processing & Management*, 60(1), 103118. <https://doi.org/10.1016/j.ipm.2022.103118>.
- Bruns, A. (2019). Filter bubble. *Internet Policy Review*, 8(4). <https://policyreview.info/concepts/filter-bubble>.
- Cinelli, M., De Francisci Morales, G., Galeazzi, A., Quattrociocchi, W., & Starnini, M. (2021). The echo chamber effect on social media. *Proceedings of the National Academy of Sciences*, 118(9), e2023301118. <https://doi.org/10.1073/pnas.2023301118>.
- Clark, C. J., & Winegard, B. M. (2020). Tribalism in War and Peace: The Nature and Evolution of Ideological Epistemology and Its Significance for Modern Social Science. *Psychological Inquiry*, 31(1), 1–22. <https://doi.org/10.1080/1047840X.2020.1721233>.
- Dandekar, P., Goel, A., & Lee, D. T. (2013). Biased assimilation, homophily, and the dynamics of polarization. *Proceedings of the National Academy of Sciences*, 110(15), 5791–5796. <https://doi.org/10.1073/pnas.1217220110>.
- Davies, H. (2018). Redefining filter bubbles as (escapable) socio-technical recursion. *Sociological Research Online*, 23(3). <https://ora.ox.ac.uk/objects/uuid:c78b6c16-0d9a-44f9-986a-ba4343fa384c>.

- Ditto, P. H., Liu, B. S., Clark, C. J., Wojcik, S. P., Chen, E. E., Grady, R. H., Celniker, J. B., & Zinger, J. F. (2019). At Least Bias Is Bipartisan: A Meta-Analytic Comparison of Partisan Bias in Liberals and Conservatives. *Perspectives on Psychological Science*, 14(2), 273–291. <https://doi.org/10.1177/1745691617746796>.
- Dobson, K., & Knezevic, I. (2018). “Ain’t Nobody Got Time for That!”: Framing and Stereotyping in Legacy and Social Media. *Canadian Journal of Communication*, 43(3), 381–397. <https://doi.org/10.22230/cjc.2018v43n3a3378>.
- Döring, N., Reif, A., & Poeschl, S. (2016). How gender-stereotypical are selfies? A content analysis and comparison with magazine adverts. *Computers in Human Behavior*, 55, 955–962. <https://doi.org/10.1016/j.chb.2015.10.001>.
- Fosch-Villaronga, E., Poulsen, A., Søråa, R. A., & Custers, B. H. M. (2021). A little bird told me your gender: Gender inferences in social media. *Information Processing & Management*, 58(3), 102541. <https://doi.org/10.1016/j.ipm.2021.102541>.
- Gouvernement du Québec. (n.d.). Effects of Stereotypes on Personal Development. Retrieved August 13, 2023, from <https://www.quebec.ca/en/family-and-support-for-individuals/childhood/child-development/effects-stereotypes-personal-development/definition-stereotypes>.
- Green, C. (2015, October 15). What are the causes of stereotypes? Getting Race Right. <https://blogs.hope.edu/getting-race-right/our-context-where-we-are/the-history-we-inhaled/what-are-the-causes-of-stereotypes/>.
- Hamilton, D. L. (2015). *Cognitive Processes in Stereotyping and Intergroup Behavior*. Psychology Press.
- Haner, M., Sloan, M. M., Pickett, J. T., & Cullen, F. T. (2020). Safe haven or dangerous place? Stereotype amplification and Americans’ perceived risk of terrorism, violent street crime, and mass shootings. *The British Journal of Criminology*, 60(6), 1606–1626.
- Huber, B., & Baena, L. Q. (2023). Women Scientists on TikTok: New Opportunities to Become Visible and Challenge Gender Stereotypes. *Media and Communication*, 11(1), 240–251. <https://doi.org/10.17645/mac.v11i1.6070>.
- Institut für Sozialarbeit und Sozialpädagogik e.V. Agency. (2022). Fact Sheet 6: Gender stereotypes on social media. Institut für Sozialarbeit und Sozialpädagogik e.V. Agency.
- Intravia, J., & Pickett, J. T. (2019). Stereotyping Online? Internet News, Social Media, and the Racial Typification of Crime. *Sociological Forum*, 34(3), 616–642. <https://doi.org/10.1111/socf.12515>.
- Jones, M., & Sugden, R. (2001). Positive confirmation bias in the acquisition of information. *Theory and Decision*, 50(1), 59–99. <https://doi.org/10.1023/A:1005296023424>.
- Jr, R. S. W., & Srull, T. K. (2014). *Handbook of Social Cognition: Volume 2: Applications*. Psychology Press.
- Kappes, A., Harvey, A. H., Lohrenz, T., Montague, P. R., & Sharot, T. (2020). Confirmation bias in the utilization of others’ opinion strength. *Nature Neuroscience*, 23(1), Article 1. <https://doi.org/10.1038/s41593-019-0549-2>.

- Liu, J. (2021). The Influence of the Body Image Presented Through TikTok Trend-Videos and Its Possible Reasons. 359–363. <https://doi.org/10.2991/assehr.k.210609.072>.
- Macrae, C. N., Milne, A. B., & Bodenhausen, G. V. (1994). Stereotypes as Energy-Saving Devices: A Peek Inside the Cognitive Toolbox. *Journal of Personality and Social Psychology*, 66(1), 37–47. <https://doi.org/10.1037/0022-3514.66.1.37>.
- Maftai, A., & Merlici, I.-A. (2022). Am I thin enough? Social media use and the ideal body stereotype: The mediating role of perceived socio-cultural pressure and the moderating role of cognitive fusion. *Current Psychology*. <https://doi.org/10.1007/s12144-022-02938-x>.
- Matamoros Fernandez, A., Rodriguez, A., & Wikstrom, P. (2022). Humor That Harms? Examining Racist Audio-Visual Memetic Media on TikTok During Covid-19. *Media and Communication*, 10(2), Article 2.
- McGregor, S. C. (2019). Social media as public opinion: How journalists use social media to represent public opinion. *Journalism*, 20(8), 1070–1086. <https://doi.org/10.1177/1464884919845458>.
- Min, S. J., & Wohn, D. Y. (2020). Underneath the Filter Bubble: The Role of Weak Ties and Network Cultural Diversity in Cross-Cutting Exposure to Disagreements on Social Media. *The Journal of Social Media in Society*, 9(1), Article 1.
- Min, Y., Jiang, T., Jin, C., Li, Q., & Jin, X. (2019). Endogenetic structure of filter bubble in social networks. *Royal Society Open Science*, 6(11), 190868. <https://doi.org/10.1098/rsos.190868>.
- Munro, G., & Ditto, P. (1997). Biased Assimilation, Attitude Polarization, and Affect in Reactions to Stereotype-Relevant Scientific Information. *Personality and Social Psychology Bulletin*, 23, 636–653. <https://doi.org/10.1177/0146167297236007>.
- Ng, R., & Indran, N. (2023). Videos about older adults on TikTok. *PLOS ONE*, 18(8), e0285987. <https://doi.org/10.1371/journal.pone.0285987>.
- Nickerson, R. S. (1998). Confirmation Bias: A Ubiquitous Phenomenon in Many Guises. *Review of General Psychology*, 2(2), 175–220. <https://doi.org/10.1037/1089-2680.2.2.175>.
- Pariser, E. (2011). *The filter bubble: How the new personalized web is changing what we read and how we think*. Penguin.
- Quillian, L., & Pager, D. (2010). Estimating Risk: Stereotype Amplification and the Perceived Risk of Criminal Victimization. *Social Psychology Quarterly*, 73(1), 79–104. <https://doi.org/10.1177/0190272509360763>.
- Rader, E., & Gray, R. (2015). Understanding user beliefs about algorithmic curation in the Facebook news feed. *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*, 173–182.
- Schmidt, A. L., Zollo, F., Del Vicario, M., Bessi, A., Scala, A., Caldarelli, G., Stanley, H. E., & Quattrociocchi, W. (2017). Anatomy of news consumption on Facebook. *Proceedings of the National Academy of Sciences*, 114(12), 3035–3039. <https://doi.org/10.1073/pnas.1617052114>.
- Seiter, E. (2006). Stereotypes and the Media: A Re-Evaluation. *Journal of Communication*, 36, 14–26. <https://doi.org/10.1111/j.1460-2466.1986.tb01420.x>.

- Stangor, C. (1988). Stereotype Accessibility and Information Processing. *Personality and Social Psychology Bulletin*, 14(4), 694–708.
<https://doi.org/10.1177/0146167288144005>.
- Stephan, W. G. (1989). A Cognitive Approach to Stereotyping. In D. Bar-Tal, C. F. Graumann, A. W. Kruglanski, & W. Stroebe (Eds.), *Stereotyping and Prejudice: Changing Conceptions* (pp. 37–57). Springer.
https://doi.org/10.1007/978-1-4612-3582-8_2.
- TikTok: Creative Center. (n.d.). Creative Center: One-stop creative solution for TikTok. Retrieved August 30, 2023, from <https://ads.tiktok.com/business/creativecenter>.
- Turner, P., & Turner, S. (2011). Is stereotyping inevitable when designing with personas? *Design Studies*, 32(1), 30–44.
<https://doi.org/10.1016/j.destud.2010.06.002>
- Unni, Z., & Weinstein, E. (2021). Shelter in Place, Connect Online: Trending TikTok Content During the Early Days of the U.S. COVID-19 Pandemic. *Journal of Adolescent Health*, 68(5), 863–868.
<https://doi.org/10.1016/j.jadohealth.2021.02.012>.
- Xu, W. (2022). (Non-)Stereotypical representations of older people in Swedish authority-managed social media. *Ageing & Society*, 42(3), 719–740.
<https://doi.org/10.1017/S0144686X20001075>.
- Yuen, N. W. (2019, June 4). How Racial Stereotypes in Popular Media Affect People—And What Hollywood Can Do to Become More Inclusive. Scholars Strategy Network.
<https://scholars.org/contribution/how-racial-stereotypes-popular-media-affect-people-and-what-hollywood-can-do-become>.