

# The Impact of TikTok's Information Cocoon on Negative Emotions in Different Age Groups

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**Abstract.** The ongoing study investigates the impact of TikTok's "info cocoon," an algorithm-driven feature, on the negative emotions experienced in different generations. Grounded on theories underpinning filter bubbles, "algorithmic culture," and "generational identity," the study investigated the implications of TikTok's recommendation algorithm on different emotions for different generations. Applying the case study research method, an in-depth investigation was made on exemplars from the following generation groups: adolescents, young people, and elderly audiences in the Western environment and mainland China ecosystem, respectively. The findings from the study made it clear that vulnerable individuals, with a particular concern for academic-related anxiety and body image, are mainly affected by political divisiveness and economic insecurity, but also senior adults who feel fear and distrust, mainly because health-related misinformation is included in sensationalised content. Of much more concern is the position played by the information cocoon in each group on TikTok: it is an amplifier for affectively rich information, thus being an element in the construction of "affective echo chambers," in which exposure is reduced to largely negative experiences. The research argues that these implications serve only to increase intergenerational rifts in addition to trust in institutions, thereby evidencing the commoditization of emotional vulnerability in the cultural construction of digital technology.

## 1 Introduction

In the last ten years, the world's social media landscape has largely evolved into increasingly "algorithmically mediated social media systems that disseminate information and also constitute the affective experiences of their users," with TikTok, launched in 2016, symbolizing the embodiment of these trends today in terms of its massive following around the world in the shortened video-sharing platform category with its "stunning recommendation algorithm," whose "algorithmic mediation enables every TikTok user to have their own personalized page, commonly referred to as the 'For You Page' (FYP), with its own information ecosystem that is increasingly described in academic literature today as an 'information cocoon' or 'filter bubble'" [1].

This research explores the effects of the information cocoon created by TikTok on

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negative emotions in terms of anxiety, anger, fear, and distrust among different generations of users from an algebraic perspective using the concept of generational theory [2].

The study continues with a literature review on the concept of information cocoons, algorithmic culture, and the emotional implications derived from social media engagement. The method adopted is a qualitative case study focusing on exemplary evidence regarding the usage of TikTok in different age demographics, with special interest in the localisation trend in China – Douyin – and the subsequent adaptations in the Western setting. The results define the extent to which negative emotions categorically exist within set age demographics, with implications reaching beyond social constructs into commercialised forms of vulnerability.

## **2 Literature review**

### **2.1 The information cocoon and filter bubble**

The idea of information cocooning emerged in relation to "echo chambers," where Cass [3] discussed its significance from the perspective of the media information ecosystem. Similarly, in regard to a "filter bubble," Eli [1] articulated his views in terms of filter bubbles on the programming aspect in the media ecosystem. In these settings, individuals only receive information that aligns with their own preferences, as opposing views are excluded from the information provided, a phenomenon which is further theorized by the concept of the "algorithmic imaginary," [3] whereby users acknowledge the notion in relation to their experiences with it on the internet in terms of how it is processed by users in their/ecosystem settings with algorithms on the internet. TikTok's "For You Page," in effect, creates an endless loop where the users feel it is a result of serendipity, though in reality, it is restrictive in terms of exposure for the viewer on TikTok.

### **2.2 Social media and emotional consequences**

There is an ever-growing body of research indicating that social media usage is indirectly linked with emotions. As these sites enable connections, research continues to emerge on correlations between algorithm-driven views on these social media sites and poor emotional states.

Social media sites themselves function with the goal of maximising interactions by favouring emotionally engaging content. Social media tends to spread moral-emotional language quickly, an observation made by [2] that is true for TikTok in that it favours videos triggering viewers' anger, fear, or sorrow, while the information cocoon turns out to be unbalanced in terms of emotions.

### **2.3 Generational differences in media use**

Theory on generations helps understand the difference in experiences in algorithmic environments for different generations. [2] pointed out the importance of formative experiences in constituting a generation's identity, and [4] illustrated Gen Z's increase in experiences of anxiety and loneliness because they belong to the smartphone generation. Adolescents happen to be vulnerable to negative emotions because of their developmental stage. At the same time, young adults face stresses in terms of employment, politics, and relationships, making them more likely to feel angry and irritated. In contrast, senior adults, specifically in a nation such as China where Douyin is popular, happen to feel fear and mistrust in regard to health/safety information they obtain from the app [3].

## **2.4 Information cocoons and intergenerational consequences**

The presence of information cocoons has other social implications. In the TikTok scenario, the emotional hierarchy in the different age cohorts is a function not only of technology but also of societal structures – fear of competition in education for the young, anger at an uneven system for young adults, and fear of change for senior adults.

## **3 Research methodology**

The research uses a qualitative case study research method [5] in order to investigate exemplary instances of TikTok content with respect to different age cohorts. Case studies are useful in understanding the complex, contextual aspects of media events in an in-depth manner.

### **3.1 Data collection**

1. Social media hashtag/thematic search studies on TikTok/Douyin (2019-2024) for content-related studies on education anxiety, politics/speech, health/narratives of fear.
2. Identification of Eight Representative Case Studies for All Ages.
3. Supplementing research with news stories, surveys, and secondary analyses on usage patterns on TikTok.

### **3.2 Analytical framework**

The research used three dimensions:

Content Analysis: Visuals, Captions, Sound, and Themes.

Emotional framing: Identifying negative emotions (fear, anger, anxiety, distrust).

Generational context: positioning emotional experience within a wider social and cultural milieu.

### **3.3 Limitations**

Additionally, the research identifies its own limitations, which recognise the challenge in understanding TikTok's ever-changing algorithmic system as well as its reliance on publicly visible content [6]. Results are subject to interpretation, with no implications for other users.

## **4 Case studies**

To grasp the mechanism by which the information cocoon constructed by TikTok gives rise to specific negative emotions for each generation, the following section discusses exemplary cases with implications for each generation in relation to negative emotions triggered by TikTok's operation.

### **4.1 Case sampling framework**

Table 1 details that this study mainly selects research cases from three dimensions: age group, cultural background, and emotional type. The 8 cases cover adolescents (academic, physical anxiety), youth (political, work anxiety), the elderly (health, safety anxiety) and intergenerational groups (intergenerational hostility, epidemic information cocoon room), each age group accounts for about 25%; it also focuses on Western and East Asian cultural

backgrounds, because TikTok in these regions, users are diverse and social and cultural backgrounds have different impacts on algorithms. The West embodies the polarization of political ideologies, while Asia emphasizes the influence of education-related social and cultural backgrounds. In terms of emotional types, each case corresponds to prominent emotional variables such as anxiety, anger, fear, and distrust without overlap, thus covering the key negative emotional reactions in the algorithmic environment.

**Table 1.** Explanation of Case Selection.

<b>Sampling Dimension</b>	<b>Specific Criteria</b>	<b>Case Coverage and Explanation</b>
<b>Age Grouping</b>	Adolescents (12–17), Young Adults (18–35), Older Adults (60+)	All 8 cases are represented over these three cohorts: 2 cases from the adolescent group (school anxiety, body comparison), two from the young adult group (political anger, work anxiety), two from the centenarian group (health fear, safety anxiety), two from a mixed case (cross-generation hostility, pandemic knowledge cocoon). Each generation is 25% of the total number.
<b>Cultural Context</b>	Western (United States, Europe), East Asian (China, Japan)	The filtering system gives higher preference to these two cultural fields because TikTok has millions of diverse users, in addition to the different sociocultural settings that affect algorithmic activities. Western studies show the ideological polarisation in relation to politics, while the Asian studies emphasise education in relation to sociocultural settings influenced by algorithms on TikTok.
<b>Emotional Type</b>	Anxiety, Anger, Fear, Distrust	Associated with each case is only one prominent affective variable, without overlap: Adolescents → Anxiety (academic, body image), Young Adults → Anger (political, economic), Older Adults → Fear (health, safety), Cross-Generational → Distrust (intergenerational, pandemic). By doing this, it is able to cover all key negative affect responses in algorithmic environments.

#### 4.2 Adolescents and academic anxiety (2019–2024)

Among the most popular emotion-related themes on TikTok for young audiences is academic anxiety. Hash tags #ExamPrep, #StudyWithMe, and #GaokaoCountdown have amassed billions of views worldwide, succinctly conveying the presence of academic anxiety in the West as well as in the Asian regions. The overwhelming evidence supporting academic anxiety on TikTok is provided by a video where a 16-year-old Chinese student on the app Douyin could be seen preparing for Gaokao in the following words: “Only 100 days left for Gaokao. No time to waste.” There were encouraging remarks from viewers like “Stay strong, I am in the same boat,” with others expressing solidarity in the form of “I feel more anxious watching this video.”

The TikTok algorithm is able to identify levels of user engagement for these videos quickly and begins to steer the user in the direction of more videos much like these, thus entrapping an information cocoon replete with countdowns, motivational talks, and representations of weary students in an already-stressed system. Rather than bringing a level of equanimity, these applications continue to fuel fear in an already-quite-troubled adolescence with their own versions in the West in #SATPrep videos, for example, trending in much the same manner.

#### 4.3 Adolescents, body image, and social comparison (2023–2024)

Another area in which adolescents appear vulnerable is in relation to body image and comparison associated with physical appearance. Viral TikTok trends like

#WhatIEatInADay, #GlowUpChallenge, or #Thinspo frequently involve unbalanced ideas of physical beauty on these sites. In one instance, a 15-year-old girl amasses millions of fans with weight-regulated "healthy living" videos, with "congrats on your discipline," "I feel so ugly," or "I feel so inadequate" scattered throughout the video's comments.

After interacting with such content, the algorithms on TikTok amplify it, with the result being an infinite loop of weight loss advice, "before and after" makeovers, and exercise videos. However, for young girl users in particular, such a cocoon creates anxiety, self-esteem issues, and even disordered eating practices. Social media, according to [1], imposes "attention economies," where users conform to strict standards, which TikTok's system reinforces by encouraging content that creates strong positive emotions such as admiration and jealousy in users. Here, the information cocoon becomes a "digital mirror," where children's self-comparison is trapped in an "infinite loop."

#### **4.4 Young adults and political outrage (2020)**

TikTok is also a type of platform where young adults vent their anger and make their voices heard for political reasons. When the 2020 presidential election rolled around in the US, videos marked with the #BlackLivesMatter hashtag and others with #MAGA garnered views in the hundreds of millions. Beneath one video that went viral on TikTok were accounts from individuals coupled with sombre background music, with messages like "This is America," referencing police violence in horror news footage.

Having identified political engagement, the algorithm then reduced recommendations to increasingly more partisan content. Individuals experienced themselves being led into an echo chamber where conflicting views were nonexistent. As predicted by [4], such settings nurture polarisation, converting social media sites into arenas for deliberation to outrage multipliers where young adults were stuck in emotional nestings of politics, where cynicism, hopelessness, and fatigue, aside from mobilisation, were experienced.

#### **4.5 Employment insecurity and economic anxiety (2021–2023)**

Politics aside, young adults also experience TikTok cocoons with regard to the vulnerability in the labour market and the hopelessness in the economy. In the Chinese mainland, a popular trend on TikTok went by the name #TangPing, referred to in English as the "Lying Flat Movement." The phrase #TangPing referred to a protest against the "996 work ethic," in other words, from 9 a.m. to 9 p.m., six days a week. There is a 24-year-old TikTok influencer who performed skits involving his 14-hour work days; these were captioned with "This is no life; it is barely surviving."

The algorithm favoured these posts, grouping them according to stories of burnout, resignation, and anger. Over time, users who participate in this cocoon feel hopelessness and anger with the system. The equivalent in the West would be #AntiWork or #GenZQuitting, demonstrating a similar pattern where the information cocoon constructs an aggrieved collective from individual disappointment, but with an air of hopelessness. TikTok is perpetuating cycles of economic anxiety rather than providing any kind of structural antidote.

#### **4.6 Older adults and health fear narratives (2020–2024)**

However, for senior citizens in particular, on the Douyin platform in China, TikTok is used for health-related fear-mongering. In one video, a popular vegetable is prompted to "cause cancer," with fear-inducing background music and health-related warnings flashing on the screen. Despite health authorities' efforts to counter its claims, it garnered over 10 million views, in addition to recommendations for similar videos from viewers who engaged with it.

Other factors also making these claims unlikely to be subjected to critical evaluation would be senior citizens, who, on average, have weaker knowledge of the internet, and are thus less likely to do so. As pointed out by [7], senior Chinese netizens continue to remain vulnerable to health-related misinformation on the internet. Such scary health stories continue to fuel fears, paranoia, and distrust in institutions. There were also such trends during the COVID-19 pandemic in the West, where senior TikTok users were actively engaging with videos with undertones of conspiracies on vaccination and state surveillance on the app.

#### **4.7 Older adults and social safety anxiety (2021–2024)**

In addition to health-related videos on Douyin, the elderly audience views other videos that exaggerate the danger posed by scams, robbery, and neighbourhood crimes in their communities. Furthermore, videos that exaggerate reenactments of street fraud and burglaries with captions that read “Protect your family before it is too late,” for example, appeal to their fears on these channels. Additionally, viewers’ reactions to these videos mainly consist of remarks that read “I am afraid to go out alone now,” “I trust no one anymore,” among others.

Fear Cocoon widens the gap between trust in society and could even impact relationships between the generations, where elders can relay scary reports to their young relatives. All these factors highlight the different ways in which a single platform where young people enjoy funny skits holds senior audiences in the fear cycle.

#### **4.8 Intergenerational tensions in the cocoon (2019–2022)**

TikTok also airs real-life conflicts between different generations, with an emphasis on recommendations contained within TikTok itself. There is also a popular trend in which young people mock their parents’ advice for being old-fashioned, with other parents airing videos criticizing young people for being lazy or idle. There is also a trend in which a video aired in Japan in which a young man demonstrated in protest against his father’s encouragement to pursue an unconventional occupation, then offered his stern reply to his father’s lecture.

The algorithms underscore these relationships, thus developing a kind of cocoon in which the users remain eternally trapped within their generation stereotypes. The young feel their parents are controlling and ignorant; in return, their parents think they are being disrespected. Like #OkBoomer before it, TikTok probes these tensions into self-encircling cycles of aggravation and alienation.

#### **4.9 Pandemic information cocoons (2020–2022)**

The COVID-19 pandemic offered a rare instance where the TikTok algorithm amplified fears worldwide. In 2020, #StayHome, #COVIDConspiracy, and other hashtags trended together on TikTok. The young generation got flooded with videos discussing school shutdowns and lockdowns, spreading loneliness and anxiety. The young generation got overwhelmed with videos of buckle-breaking hospitals, government failures, and spreading anger, hopelessness, and frustration in their lives. The senior generation got flooded with videos discussing exaggerated vaccine reactions, spreading fear into their lives.

“This period exemplifies the ways in which the same event resulted in the construction of specific emotional cocoons for each generation in terms of anxiety, anger, and fear.” Significantly, it is apparent that TikTok’s structure made it possible for a user’s entire feed to be flooded with increasingly drastic versions of the “pandemic story” once they started following pandemic-related content on the website.

## 5 Research results

The results show that the information cocoon constructed by TikTok varies with each age group, because the algorithm provided by TikTok is tailored to meet their emotional needs.

In the case of adolescents, the algorithm relies on “school-related tags,” “educational keywords,” with an emphasis on disseminating “academic or body comparison-related content.” The algorithm takes advantage of the deep desire for validation demonstrated by adolescents in particular, thereby perpetuating anxiety in terms of exposure to “study motivation videos” and “body images.”

In the young adult group, algorithmic recommendation is activated by keywords associated with political engagement or employment, with the subsequent feed being dominated by radical or polarising content. In this case, it leverages the young generation’s need for social engagement in order to stir anger with regard to social inequality, economic insecurity, or intergenerational tensions.

Seniors: The algorithm learns from search history related to health concerns, with low levels of interaction, then disseminates sensational health/safety stories. Because it appeals to their need for security, it increases fear and ambiguity with loops of misinformation on health scares, scams, and physical safety.

Ce cas éclaircissait en ce qui concerne le cercle de renseignements de TikTok, en soulignant la disponibilité de la plateforme de réseaux soc

Adolescents: trapped in cycles of academic. An’ body image anxiety.

Young adults are surrounded by political anger and economic desperation.

Older adults: Exposed to health fears and safety paranoia.

In every category, one thing holds true for all: it is the preference for emotionally engaging content that not only perpetuates negative emotions but also widens the gap between generations.

However, even though the eight cases are arranged according to “age = theme,” there is no horizontal comparison between each section for the reader to distinguish similarities and differences on their own. For example, in the “adolescent” section, academic-related anxiety is experienced due to external factors (grades, parental expectations), while body image anxiety is a result of internal self-comparison, which could have been highlighted explicitly. Similarly, in the “intergenerational conflict” case and in “pandemic information,” the relation between algorithmic personalisation and group polarisation is experienced, but it is left unelicited.

Therefore, a comparative summary table is provided below to understand the similarities in overlap and differences in each age group.

### 5.1 Comparative summary of algorithmic effects across age groups

According to the content in Table 2, it can be seen that TikTok’s algorithm will form differentiated information cocoons for different age groups: for teenagers, the algorithm uses “school labels” and “education-related keywords” to identify users, push academic competition and body comparison videos, and strengthen the peer recognition cycle, causing their anxiety to be aggravated by continuous comparison and academic pressure; for young people, the algorithm uses “political interaction” and “career-related keywords” Trigger recommendations and push polarized or extreme content to incite social anger, trigger emotional exhaustion, anger, and amplify feelings of unfairness and instability; for the elderly, the algorithm pushes sensational health and safety content based on "health search" and "low interaction frequency" to maintain attention, leading to increased fear, exposure to more false information, and safety paranoia. By systematically documenting these effects, the research

illustrates the ways in which TikTok’s “emotional architecture” is influencing not only content views but also intergenerational emotional milieu. It argues that algorithm-based personalisation is simultaneously a technological feature and a manipulation of the psyche, for which emotion is suddenly the appropriate currency for attention.

**Table 2.** Summary of Case Analysis.

Age Group	Algorithmic Mechanism	Primary Emotional Impact
Adolescents	Uses “school tags” and “education-related keywords” to identify users; pushes academic competition and body-comparison videos; reinforces peer validation loops.	Heightened anxiety from constant comparison and academic pressure.
Young Adults	Triggers through “political interaction” and “career-related keywords”; promotes polarizing or extremist content that fuels social outrage.	Emotional fatigue and anger; amplified sense of injustice and instability.
Older Adults	Learns from “health searches” and “low engagement frequency”; pushes sensational health and safety content to maintain attention.	Heightened fear, misinformation exposure, and safety paranoia.

Analysis of cases identifies the following key findings:

1. Age-Specific Psychological Response: There is anxiety in adolescents, anger in young adults, and fear is present in elders.
2. Algorithmic Amplification of Negativity: TikTok’s FYP amplifies extremes of
3. Intergenerational Outcomes: The issue of emotional segregation breeds poverty.

## 6 Discussion

### 6.1 Theoretical contributions

The proposed study is significant in terms of understanding the concept of an information cocoon because it introduces an emotional dimension to an otherwise cognitive procedure. In contrast to previous theories on the subject by [8], ideological polarisation, where algorithms separate users into belief systems, is no longer the only aspect in play; instead, the emotional aspect provided by algorithmic personalisation is also key in terms of polarisation using emotions rather than beliefs.

By validating the claim in [9] that algorithms “structure feeling,” the research redefines the information cocoon in terms of affective architecture. The logic of TikTok’s architecture, with its short loops, endless scroll, and immediate feedback, constructs a self-feeding loop where emotions serve as data. Therefore, this research validates [10]’s “cognitive polarisation” model with an “affective twist,” indicating that users are made to feel differently, in addition to thinking differently.

In terms of generations, it verifies the “generational consciousness” described in relation to the algorithmic amplification of each generation’s vulnerability to emotions. Additionally, the evidence that young adults express their anger with ironic forms of activism disproves that the iGen generation is “politically passive.” Conversely, it appears that digital emotionality is behind the latest forms of civic engagement for these generations.

### 6.2 Theoretical limitations

Despite these contributions, there exist theoretical limitations in the research being conducted. First, since it is an investigation into negative affect—*anxiety, anger, and fear*—it tends towards the more pessimistic experiences associated with emotion in algorithms. However, it is possible that emotional cocoons also involve more positive experiences such as *solidarity,*

empathy, or motivation, which remain uninvestigated in the present research. Future research could investigate the difference between positive and negative emotional cocoons in terms of their algorithms.

Second, even though the research is in line with affective algorithm theory, it does not incorporate other approaches like media psychology or emotion regulation theories that could potentially be used to understand the conscious handling of algorithmic power by users on the platform. Lastly, the research is more associated with interpretation than it is with statistics, since it is more exemplifying emotional levels rather than measuring their intensity.

### **6.3 Practical implications**

The results also have a number of implications for different parties.

As far as the platforms are concerned, the need is for “algorithmic transparency,” in addition to incorporating “emotional diversity metrics” into algorithms so that users do not get stuck in affective loops.”

Where the teacher, the media, and the general populace are concerned, media literacy classes could also teach awareness of one’s emotions in terms of discerning between genuine versus algorithmically influenced interaction.

Policymakers would benefit from these outcomes in terms of the importance of affective governance, whereby policies would need to regard emotional well-being as an aspect of internet rights rather than just internet privacy rights.

Altogether, these implications highlight the importance that the information cocoon provided by TikTok is both technological and social in nature. By incentivising emotionally focused content, it redefines engagement in affectively focused ways, restructurally rebuilding the way in which human engagement with each other is realised over multiple generations. Therefore, a new emotionally stratified paradigm is required, in addition to [7]

## **7 Conclusion**

From the research, it is apparent that TikTok’s “Information Cocoon” is more than just a technology function; it is also an emotional phenomenon because the algorithm on TikTok is doing more than filtering information; it is actually bonding emotions into structures since it favors emotionally engaging content, with regard to engaging with the platform being an emotional conditioning function rather than an information filtering function, since each generation is locked into different cycles of anxiety, anger, fear, and so on.

Pragmatically, these implications signify that more is required of the platforms in terms of their role in the emotional impact associated with their design choices. Transparency in algorithms is an issue that should be approached from the aspect of humanity’s emotional manipulation with these systems’ amplification. Governments and learning institutions need to enhance emotional literacy awareness for manipulation identification in their content exposure, among other strategies.

At a more general level, it becomes apparent from this research that a public ethics for emotion in algorithms is required because, with emotional engagement commoditised, the emotional health of society now becomes a concern for digital rights. Future research could be done on positive emotional cocoons to identify differences in cultural constructions between TikTok and Douyin to understand the different contextual constructions of emotions in each region.

In conclusion, TikTok’s information cocoon is an expression of a new type of emotional governance, in which users feel secluded in their emotions rather than in facts. Overcoming this challenge means understanding the need for more emotional algorithms in the industry.

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