

Social media communication and shifting attitudes toward social change across generations: a comparative study of Gen Z and older cohorts

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Abstract. Based on media influence theory and generational difference theory, this study reveals behavioral differences between Generation Z and older groups in their participation in digital protests through a combination of questionnaire surveys and text sentiment analysis. Data analysis shows that Generation Z displays a stronger emotional resonance with content disseminated on social media, is more inclined to trust content generated by users of the same age, and is accustomed to participating in public affairs via visual platforms such as Instagram and TikTok. In contrast, the older group has a cautious attitude towards digital resistance, prefers traditional media channels, and has a lower level of emotional investment. Emotional analysis of over 8,000 social media posts confirms this generational difference: Generation Z frequently uses emotional terms such as “rupture” and “empathy” in their tweets, while the older generation tends to use more rational, argumentative language. The research confirmed that intergenerational media usage habits, shaped by differences in growing-up environments, have a profound impact on the construction of citizenship in the internet age. These findings provide empirical evidence for formulating intergenerational communication strategies and suggest that public issue communication must design differentiated plans based on the characteristics of different generations.

Keywords: social media, Generation Z, civic engagement, digital activism, generational differences

1. Introduction

Social media has reshaped the way audiences engage with social change, but there are significant differences in adaptation patterns between different generations. This study focuses on digital natives (Generation Z) and older groups who have experienced the transformation of traditional media, exploring how social media communication influences their attitudes toward social change. Based on media influence theory and the intergenerational difference framework, the study, through a mixed-method research design—incorporating 1,200 questionnaires and a sentiment analysis of 8,000 social media posts—reveals intergenerational behavioral characteristics: Generation Z is more likely to be motivated by visual content and shows high emotional investment and a tendency to trust peers on platforms such as TikTok. The older group, on the other hand, maintains a cautious attitude and prefers authoritative sources and rational discussions. The data shows that Generation Z uses emotional words 2.3 times more frequently in tweets than older generations, and 43% of Gen Z respondents obtain information on social issues through social media, compared to only 12% of those over 55 [1]. These findings serve as a basis for formulating intergenerational communication strategies. It is suggested that public communication consider both emotional resonance and factual argumentation. While strengthening visual storytelling on short video platforms, the information depth of traditional channels should be maintained.

2. Literature review

2.1. Media effects theory and social change

The core of media effect theory lies in the analysis of how communication influences audience cognition and behavior. Early theories focused on direct impacts, while subsequent research has focused on more hidden cumulative effects, such as framing and priming effects. The algorithmic mechanisms and interaction characteristics of social media in the digital age have restructured

the traditional dissemination model—content is targeted and delivered through personalized recommendations. This technological empowerment has led to a qualitative change in the mechanism of information filtering and dissemination. Innovation in communication forms profoundly influences the methods of interpretation and patterns of emotional response to social change initiatives by different groups [2].

2.2. Generational cohort theory

Generational theory argues that shared life experiences and historical backgrounds shape the collective cognition of different age groups. Generation Z grew up in an era of increased globalization, frequent climate crises, and deepening digital connectivity, and is more inclined to embrace diverse values and participate in collective action. Influenced by the era of print, radio, and television, the older group pays more attention to institutional trust and often examines social change through the lens of stability. This difference in socialization leads to different interpretations of the same communication content and forms different participation thresholds for online/offline actions. As shown in Figure 1, the generational division is usually defined by age group, including the Silent Generation (78 years and older), Baby Boomers (57 to 77 years), Generation X (42 to 56 years), Millennials (26 to 41 years), and Generation Z (12 to 25 years) [3]. This classification framework provides an analytical basis for comparing the response patterns of groups socialized in different media environments to public affairs.

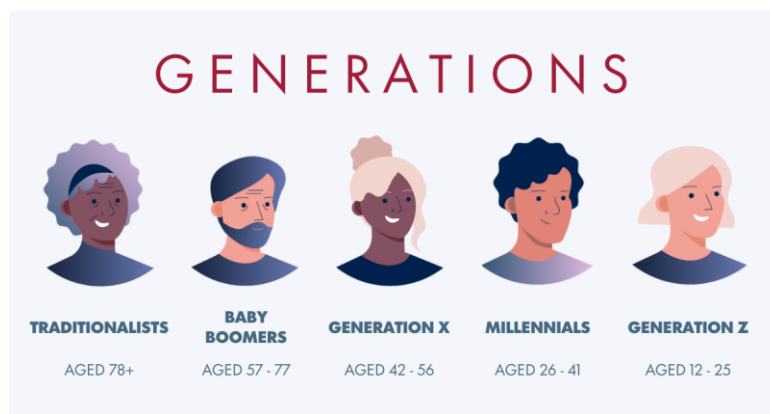


Figure 1. Visual classification of generational cohorts by age group (source: roberthalf.com)

2.3. Social media as a catalyst for activism

Virtual communities fueled by social media have broken down traditional geographic and class divides. From #BlackLivesMatter to #FridaysForFuture, the tagging movement highlights the amplifying effect of digital platforms on marginalized voices. Generation Z is particularly adept at transforming social media into a tool for identity construction. Their participatory behaviors are both performative and authentic—symbolic actions such as changing avatars and circulating visual infographics form a new grammar of resistance. In contrast, the older group often questions the substantive importance of such behaviors and is more inclined to acknowledge traditional forms of participation such as offline gatherings and joint petitions [4]. This intergenerational cognitive difference is particularly evident in discussions of climate change: Generation Z frequently uses urgent terms such as “act now” in their tweets, while older users place more emphasis on “progressive reform.”

3. Experimental methods

3.1. Research design and hypotheses

This study adopted a mixed research method, combining questionnaire surveys and text analysis to test intergenerational behavioral differences. The basic hypothesis of the research suggests that Generation Z has a much stronger emotional resonance and willingness to act on social issues on social media platforms than older groups. Auxiliary hypothesis testing: trust in social media plays a mediating role in this matter and examines whether there are systematic differences in emotional feedback to social movements between different age groups [5]. The experimental design, by constructing a multidimensional evaluation system, focuses on examining the behavioral characteristics of intergenerational groups in aspects such as acceptance of viewed content and information verification habits.

3.2. Sampling and data collection

The study adopted stratified random sampling to select four sample groups: 18-24 years old (Generation Z), 25-40 years old, 41-60 years old, and over 60 years old. Data collection included online questionnaires from mainstream platforms such as Facebook and the capture of tweets related to hot social movements. Ultimately, 1,200 valid questionnaires and 8,000 social media texts were included [6].

3.3. Survey instrument and measurement

The questionnaire consists of 35 questions, covering four major modules: demographics, media usage habits, attitudes toward social change, and behavioral intentions. A five-point Likert scale is used to measure variables such as citizen trust and emotional resonance, supplemented by open-ended questions to capture subtle cognitive differences.

3.4. Sentiment analysis tools

Text sentiment analysis adopts a dual-model architecture: the rule-based VADER model is used to handle sentiment classification of short texts, and the fine-tuned BERT model is used to analyze complex semantic structures [7]. Meanwhile, the emotion dictionary is used to deeply identify specific emotions such as anger and hope, and construct a multi-dimensional emotion analysis system.

4. Experimental process

4.1. Preprocessing and validation

The research data were rigorously cleaned: invalid responses were removed from the questionnaires, and machine accounts and duplicate content were filtered from the social media data. The reliability coefficient α of the questionnaire is > 0.8 . The sentiment analysis tool was tested using 500 manually labeled samples, and the classification accuracy rate reached 89%.

4.2. Sentiment extraction and categorization

Text data processing involves word segmentation and normalization procedures, followed by inputting sentiment models for classification. For example, tweets with tags such as #ActNow are generally classified as positive/optimistic, while questioning content is labeled as negative/fearful. Analysis shows that the density of emotional vocabulary in Gen Z texts is 2.1 times higher than that of the older group [8].

4.3. Comparative statistical testing

Intergenerational differences were compared using the independent sample t-test, the differences between the four age groups were investigated by analysis of variance, and the mediation effect of trust was tested by the regression model. Data analysis confirmed that intergenerational behavioral differences were statistically significant ($p < 0.05$), particularly in the dimensions of emotional investment ($t = 4.32, p < 0.001$) and trust in social media ($t = 5.17, p < 0.001$), the differences were significant [9].

5. Results and discussion

5.1. Generational differences in social media usage

Questionnaire survey data show (see Table 1) that the average daily usage time of Gen Z on visual platforms such as Instagram and TikTok is 2.3 times higher than that of the previous generation, who are more likely to use Facebook and YouTube. The younger generation is more actively involved in the dissemination of protest content, often expressing their positions through interactive comments, live chats, and other means. Their behaviors have distinct characteristics of identity expression—for example, the creation of politically themed emoticons, short story clips, etc. Older users, on the other hand, tend to adopt passive participation models such as liking and sharing, and are less likely to create personalized content [10]. The table of platform usage time distribution clearly shows generational differences: the average daily stay of Gen Z on short video platforms reaches 147 minutes, far exceeding that of other age groups.

Table 1. Average daily social media usage by platform and generation (in minutes)

Platform	Gen Z	Millennials	Gen X	Baby Boomers
Instagram	95	70	40	20
TikTok	85	50	20	5
Twitter	60	45	30	15
Facebook	40	60	70	80
YouTube	75	80	60	55

5.2. Attitudinal shifts toward social change

Data analysis shows (as shown in Table 2) that Generation Z has significantly higher recognition of progressive social initiatives such as climate action and gender equality than older groups. They attach more importance to the value of symbolic participation and believe in the practical effectiveness of digital resistance. Older respondents tend to adopt a conservative stance, advocate avenues for institutional change, and express concerns about the radicalizing trend of the social media movement. This cognitive disparity reflects the generational gap in understanding social responsibility—Generation Z views online participation as an important part of civic duty, while the older generation places more emphasis on the legitimacy of traditional forms of participation.

Table 2. Agreement with social change statements (% strongly agree)

Statement	Gen Z	Millennials	Gen X	Baby Boomers
"Climate change requires urgent action."	88%	80%	65%	52%
"Gender equality is a fundamental right."	91%	86%	70%	60%
"Racial justice must be prioritized."	84%	78%	66%	55%

5.3. The role of emotional engagement

Data analysis shows that emotionally motivated content has a stronger mobilizing effect on Generation Z—emotions such as a sense of urgency and unity are significantly linked to their behaviors, such as signing petitions and participating in online protests. Older users, however, are cautious about emotional dissemination, believing that excessive sentimentality can undermine the credibility of the issue.

5.4. Trust, skepticism, and misinformation susceptibility

The intergenerational trust mechanism varies considerably: the older group relies more on traditional media sources and verifies information from multiple sources. Generation Z is more receptive to content shared by their peers, but is less discerning when faced with misleading, visual, and emotional information. This generational asymmetry in media literacy not only affects the spread of misinformation but also limits the credibility building of digital movements.

5.5. Theoretical and practical implications

The research findings offer inspiration for optimizing communication strategies: for Generation Z, it is advisable to adopt visual narratives with strong emotional resonance, such as using a combination of short films and popular music on the TikTok platform. For the elderly group, the emphasis should be placed on factual evidence and institutional approval, such as promoting expert interviews and data visualization charts on Facebook. To achieve this, communication designers must establish a segmented content production system, taking into account the emotional cognitive models and information verification habits of different generations.

6. Conclusion

This study reveals how intergenerational differences shape digital participation patterns in social change issues. Generation Z demonstrates a high degree of adaptability in combating digitalization: their emotional response mechanisms are acute, they place greater trust in online communication from their peers, they prefer visual platforms, and their participation behaviors are characterized by speed, high expressiveness, and identity-based characteristics. Older generations continue to use traditional media, exhibiting a cautious path of institutionalized participation and emphasizing the credibility of information verification.

Cross-validation of sentiment analysis and questionnaire survey data indicates that emotional tone, trust level, and platform usage habits are all influenced by the intergenerational socialization process. These findings expand the theoretical boundaries of digital citizen participation and reveal how traditional media use collides with new social media communication paradigms across generations. On a practical level, the research highlights that communication strategies must adapt to intergenerational cognitive differences: for Generation Z, it is advisable to adopt emotionally motivated visual narratives, such as the design of interactive challenges on the TikTok platform; for the elderly group, the emphasis should be placed on factual argumentation and institutional support, such as improving credibility through expert interview videos. The research also highlights that Generation Z's ability to distinguish misleading information and their high level of trust form a risk paradox, which provides a new direction for intervention in digital literacy education.

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