



# AI-Driven Content Curation and Its Impact on Media Diversity in Social Networks

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## Abstract

The rapid advancement of generative artificial intelligence (AI) has made AI-driven content curation a dominant force in shaping public discourse on social media. Platforms, including Facebook, YouTube, and TikTok employ recommendation algorithms to personalise content and increase user engagement. However, these systems also intensify concerns over media pluralism, algorithmic bias, and misinformation. By prioritising user preferences, they reinforce filter bubbles and restrict exposure to diverse viewpoints. As a result, democratic dialogue weakens, and public opinion formation becomes distorted. This study examines how AI-assisted content curation affects media diversity in European social networks, focusing on platform accountability and regulatory challenges. Special attention is given to recent policy interventions, including European Union's Digital Services Act (DSA, 2022), the EU AI Act (2025) initiatives on AI-generated political content and Germany's 2025 transparency initiatives on AI-generated political content. However, they also expose significant gaps in enforcement and oversight. To evaluate regulatory impact, this study analyses platform policies, legal frameworks, and AI content selection mechanisms. Despite transparency being a main objective, findings reveal current regulations unable to reduce algorithmic bias or achieve balanced content representation. In response, the study advocates for improved explainable AI (XAI) models, demands stronger regulatory oversight, and supports increased user control over content selection. By addressing these shortcomings, this research contributes to the wider debate on AI ethics, media governance, and digital policy in Europe.

**Keywords:** algorithmic bias; AI governance; content curation; media pluralism; misinformation

## 1. Introduction

### 1.1 Background

The integration of AI into the curation of content has had a transformative effect on the architecture of major social media platforms. It is evident that leading social media platforms

such as Facebook, YouTube, and TikTok are increasingly utilising AI-driven recommendation systems not merely as technical tools, but as instrumental components in shaping public discourse, interpersonal relationships, and even political outcomes (Saheb et al., 2024; Sosnovik et al., 2023). In order to maximise user engagement and maintain retention, these platforms employ sophisticated algorithms to personalise the user experience, tailoring content to individual preferences. For instance, TikTok's recommendation system meticulously analyses user interactions to deliver a continuous stream of personalised videos, increasing user satisfaction and fostering loyalty (Yin, 2025). Similarly, YouTube's recommendation system, which has been shown to be responsible for over 70% of content views (Ng et al., 2023), prioritises videos that maximise watch time, often at the expense of diversity or accuracy. While such personalisation enhances user satisfaction, it also introduces systemic risks, including algorithmic bias, filter bubbles and the marginalisation of dissenting viewpoints. These concerns have yet to be adequately addressed by current governance frameworks.

The societal implications of this phenomenon are immense. As demonstrated by Aminudin (2024), the electoral discourse in Indonesia on Instagram in 2024 became polarised due to the amplification of partisan content by the algorithm, thereby marginalising moderate voices. In Europe, analogous dynamics have emerged during elections in France and Germany (Sosnovik et al., 2023), giving rise to pressing questions regarding the role of AI in undermining democratic deliberation. Nevertheless, despite the growing scholarly attention to the potential for bias in algorithms (e.g., Pariser, 2011; Eg et al., 2022), there has been a lack of critical evaluation of the efficacy of regulatory interventions with the potential to mitigate such risks. Examples of regulatory interventions include the EU's Digital Services Act (DSA) and Germany's Action Plan.

This study addresses this research gap by examining the interaction between AI-driven curation, media diversity and policy enforcement in the European context, a region that has been at the forefront of digital governance but which is also experiencing challenges with inconsistent implementation.

## 1.2 Problem Statement

The widespread use of AI in content curation raises concerns about media pluralism, algorithmic bias and the spread of misinformation. By focusing on user preferences, these algorithms limit exposure to diverse perspectives, threatening the democratic goal of an informed citizenry. The concept of 'filter bubbles' (Bitesize, 2020) illustrates how personalised content can create siloed information environments, limiting users' access to diverse perspectives. Furthermore, the presence of algorithmic biases has the potential to further narrow the range of information presented, leading to a homogenised information environment.

Misinformation is amplified when algorithms favour sensational or emotionally charged content, often containing misleading information. This dynamic distorts public opinion and weakens democratic dialogue, as seen in cases of foreign interference and voter manipulation during elections (Sosnovik et al., 2023). Addressing these challenges requires greater transparency and accountability in the curation of social media content.

## 1.3 Objectives

The primary objective of this study is to examine the effects of AI-assisted content curation on media diversity within European social networks, with a focus on platform accountability and the associated regulatory challenges. The research analyses how AI-driven personalisation impacts users' exposure to diverse information sources and evaluates the efficacy of prevailing regulatory frameworks, with particular emphasis on the Digital Services Act (DSA) and Germany's transparency initiatives (The Digital Services Act Package, 2025). Furthermore, the

study assesses the role of the European Centre for Algorithmic Transparency (ECAT) in promoting fair algorithmic practices (European Centre for Algorithmic Transparency, 2025).

The primary research question guiding this study is as follows: How does AI-driven content curation affect media diversity in European social networks, and to what extent do existing regulatory frameworks ensure platform accountability and promote exposure to diverse information sources?

The central question guiding this study is concerned with the relationship between AI personalisation algorithms and the diversity of content accessible to users, as well as the effectiveness of current regulations in mitigating potential biases and promoting a pluralistic media environment. The study's findings underscore the importance of comprehending this dynamic for the development of policies and practices that uphold democratic values and support an informed citizenry in rapidly evolving digital technologies.

## 2. Materials and Methods

### 2.1 Research Design

This study employs a convergent-parallel mixed method (Creswell & Plano Clark, 2017), simultaneously conducting qualitative and quantitative analyses. This approach enables a nuanced understanding of AI algorithms' implications for media diversity while assessing normative frameworks designed to mitigate associated risks.

### 2.2 Data Collection

The data collection is structured around two primary data sources:

1. The qualitative component includes a content analysis of the policies and regulations of major social media platforms: DSA (2022), Germany Action Plan (2024), and EU AI Act (2025). Additionally, existing academic literature and policy reports are analysed to contextualise findings within current debates on algorithmic transparency and media pluralism.
2. The quantitative component assesses the algorithmic bias and content diversity using data gathered through API access and ethical web scraping data from prominent social media platforms in Europe: Facebook, YouTube and TikTok. Furthermore, the quantitative metrics, content diversity indices and bias scores are applied to evaluate algorithmic performance, its impact on media diversity.

### 2.3 Analytical framework

The analytical framework combines qualitative content analysis and statistical methods to assess the impact of AI-assisted curation on media diversity.

Content analysis methods are used to examine textual data from policy documents and platform guidelines. The coding process follows thematic analysis (Braun & Clarke, 2006) to identify recurring themes related to transparency, accountability, and diversity practices.

Quantitative analysis includes the following steps:

1. Algorithm Bias Assessment: Evaluation of algorithm performance using bias metrics, such as distributional fairness (Koene et al., 2019) to measure the representation of different perspectives.
2. Content Diversity Measurement: Applying Shannon entropy and Simpson's diversity index to quantify the heterogeneity of content in curated streams (Kreft & Jetz, 2017).
3. Descriptive statistics: Summarising quantitative data to present trends and patterns in media diversity and algorithmic bias, facilitating cross-platform comparisons (Kaur et al., 2018).

By adopting a mixed-methods approach that prioritises both qualitative and quantitative insights, this framework provides a comprehensive understanding of how AI-driven content curation shapes media diversity in European social networks.

### **3. Literature Review**

#### **3.1 Algorithmic Personalisation and Its Impact on Media Diversity**

The integration of AI into social media platforms has fundamentally changed the consumption, control and distribution of content, with implications for media diversity and public discourse. AI-driven algorithms designed to maximise user engagement often inadvertently create filter bubbles and echo chambers, undermining media pluralism and perpetuating algorithmic bias (Pariser, 2011). These personalised environments limit users' exposure to diverse viewpoints, reinforcing existing beliefs and contributing to ideological polarisation (Yuan et al., 2024).

The concept of filter bubbles, popularised by Eli Pariser (2011), describes how algorithms curate content based on users' preferences, selectively presenting information that aligns with their existing beliefs. This process can intellectually isolate users, reducing their exposure to divergent perspectives and creating an echo chamber effect. For example, Yuan et al. (2024) demonstrated that algorithms in news aggregation applications significantly reduce users' exposure to opposing viewpoints, contributing to epistemic closure. Similarly, Kim (2023) found that social media algorithms perpetuate ideological polarisation by prioritising content that aligns with users' pre-existing beliefs.

However, the role of algorithms in creating filter bubbles is not entirely one-sided. Slechten et al. (2021) argue that selective exposure involves systematic biases in both audience composition and message selection, reflecting individual preferences. In this sense, algorithms may reinforce, rather than create, users' natural tendency to avoid challenging or contradictory information. Despite this nuanced understanding, the implications for public discourse are profound. Reduced exposure to opposing viewpoints limits critical thinking and civic engagement, resulting in an impoverished democratic dialogue (Kumar, 2025).

#### **3.2 The Importance of Media Diversity and Challenges Posed by AI-Driven Curation**

Media pluralism is a fundamental principle of democratic societies, providing citizens with access to a diverse range of viewpoints and fostering informed decision-making. However, the rise of AI-driven curation algorithms poses a significant challenge to this ideal by narrowing the range of information users encounter. While personalisation algorithms are effective at increasing user engagement and platform profitability, they often do so at the expense of diversity and inclusivity (Ng et al., 2023).

A central problem with AI-driven curation is its tendency to prioritise sensational or polarising content over balanced coverage, as algorithmic biases can lead to echo chambers where users are constantly presented with content that aligns with their pre-existing beliefs, further entrenching ideological divisions.

The paradox of "connection to isolation" (Yin, 2025) illustrates how algorithmic personalisation on platforms like TikTok connects users to like-minded individuals, while isolating them from broader and more diverse perspectives. This phenomenon is particularly problematic in cross-cultural communication, as it limits exposure to alternative viewpoints and reinforces cultural stereotypes. For instance, Aminudin (2024) found that following the amendment of Indonesia's PILCADA law in 2024, Instagram's algorithm prioritised content from politically oriented accounts, reinforcing partisan narratives and marginalising opposing views.

The interplay between human behaviour and algorithmic design complicates efforts to manage media pluralism in the digital age. Users' interactions with content by liking, sharing, or following certain accounts signal their preferences to algorithms, which then shape content accordingly. This dynamic has led to a demand for greater transparency and accountability in algorithmic systems.

### 3.3 Algorithmic Bias and Content Representation

Algorithmic bias occurs when AI systems systematically advantage or disadvantage certain groups or viewpoints, leading to a distorted representation of content and influencing public opinion. These biases often arise from the data used to train algorithms, or from design choices that fail to account for diversity. As a result, algorithms can inadvertently reinforce social inequalities and perpetuate harmful stereotypes (Eg et al., 2022).

A prominent issue is the reinforcement of social and cultural biases through recommendation systems. Algorithms often learn from biased user interactions, resulting in content that perpetuates pre-existing social stereotypes. Eg et al (2022) highlighted how biased algorithms limit the visibility of excluded perspectives, contributing to the unequal distribution of content and distorting public discourse.

The problem of algorithmic opacity further complicates accountability, as users and regulators struggle to understand how algorithms prioritise certain content over others. In response, the European Union has advocated for algorithmic auditing to systematically identify and address bias. By implementing fairness metrics and promoting algorithmic accountability, developers and policymakers can reduce the risks associated with biased content curation.

Efforts to mitigate algorithmic bias should focus on inclusive algorithmic design, ensuring that diverse perspectives are adequately represented in the training data. In addition, promoting media literacy can help users critically engage with content while being aware of the biases that algorithms may introduce. Addressing algorithmic bias is crucial to maintaining media diversity and upholding the principles of fair representation and democratic integrity.

While existing research has extensively documented the phenomenon of 'filter bubbles' and algorithmic bias, this study aims to provide new insights by evaluating the interplay between regulatory frameworks (e.g., DSA, EU AI Act) and platform practices. In contrast to previous studies that concentrated on U.S. platforms, our analysis focuses on Europe's distinctive regulatory environment, providing a timely evaluation of policy effectiveness in mitigating prejudice – a dimension that has been under-explored in existing literature.

These diversity and bias metrics were applied to curated data sets collected from Facebook, YouTube, and TikTok, allowing for the measurement of content homogeneity and the detection of algorithmic tendencies favouring specific ideological perspectives.

## 4. Results

This section presents the findings from the analysis of platform policies, regulatory frameworks, and case studies related to AI-driven content curation and its impact on media diversity. The primary focus of this study is to evaluate current platform practices, to assess regulatory impacts, and to explore specific instances where AI curation has led to reduced media diversity or reinforced filter bubbles.

### 4.1 Platform Policies and Practices

Current platform policies on social media networks demonstrate an awareness of the risks associated with algorithmic bias and reduced media diversity. In the interest of addressing this issue, certain online platforms have taken measures to enhance transparency, including the dissemination of transparency reports, the formulation of content moderation guidelines, and

the provision of user customisation tools (Holan, 2023). Nevertheless, these initiatives remain partial and reactive rather than comprehensive and preventative due to engagement-driven designs, inconsistent content moderation (especially in non-English contexts), and weak enforcement. Moreover, economic incentives frequently prioritise user engagement over ethical considerations, and many users remain unaware of or unable to effectively utilise content customisation tools.

It is evident that there are still considerable discrepancies in the realm of algorithmic transparency and the systemic prioritisation of engagement over diversity. As The Guardian (2024) reports, platforms frequently amplify content that is sensationalist or polarising in order to maximise user engagement, inadvertently reinforcing filter bubbles. Despite the fact that Facebook and YouTube have published more data on content moderation practices, detailed information on recommendation algorithms remains scarce. Furthermore, the efficacy of TikTok's AI-driven moderation tools, which were introduced in 2024 with the aim of combating misinformation (Digital, 2024), has been found to be inconsistent in identifying biased or misleading narratives.

While certain platforms do provide users with the option to adjust content recommendations, these features are often inadequately publicised and underutilised. Consequently, the practical capacity of users to diversify their information exposure remains constrained. Platforms' strong economic incentives to maximise attention time often supersede ethical commitments to media pluralism, suggesting a need for stronger external governance.

## 4.2 Regulatory Implications

The European Union was among the first to address the issue, implementing initiatives including the DSA (2022), Germany's Action Plan (2024), and the EU AI Act (2025), which represent significant steps towards greater accountability in content curation. The overarching objective of these frameworks is to enhance transparency, accountability, and fairness in the realm of algorithmic decision-making, particularly within the context of social media platforms. Nevertheless, the study's findings suggest that these measures have had a limited impact thus far.

The DSA, which came into full effect in 2024, aims to increase transparency in algorithmic decision-making and requires platforms to conduct risk assessments of their content recommendation systems. Measures created are intended to ensure that platforms are held accountable for the societal impact of their algorithms, particularly in terms of media diversity and the spread of misinformation (European Commission, 2024). However, early evaluations of the implementation of the DSA reveal several limitations due to inconsistent enforcement across EU member states, and a lack of clear, standardised guidelines for measuring algorithmic bias has hampered its effectiveness. While platforms are required to disclose how their algorithms work, the lack of specific metrics for assessing bias or diversity has made it difficult for regulators to assess whether these disclosures lead to meaningful improvements in content curation practices.

Conversely, Germany's transparency initiatives focus specifically on AI-generated political content. Platforms are required to disclose when AI is used to create or manipulate political content, with the aim of increasing transparency and reducing the spread of misleading information during elections. While platforms are required to disclose the use of AI, there are no clear penalties for non-compliance or guidelines on how these disclosures should influence content curation practices. Furthermore, the narrow focus on political content has been criticised for overlooking other forms of biased or misleading content, such as health-related misinformation or climate change denial, which also have significant societal impacts (German Federal Ministry for Digital and Transport, 2025).

The EU AI Act, to be fully implemented in 2025, introduces a risk-based framework for regulating AI systems, including those used in content curation. It requires platforms to ensure that their algorithms are transparent, accountable and free from bias. In other words, platforms must undergo regular audits to identify and address bias in their algorithms, and the law emphasises the importance of giving users more control over algorithmic recommendations, such as the ability to opt out of personalised content feeds. While the EU AI Act is a significant step forward, its effectiveness will depend on robust enforcement and the development of clear metrics for assessing algorithmic fairness and diversity.

While initiatives are commendable steps towards regulating AI-driven content curation, their effectiveness in mitigating the negative impacts of algorithmic bias and misinformation remains limited. The lack of robust enforcement mechanisms, clear standards for measuring algorithmic transparency, and a broader scope that addresses all forms of biased content are the main areas for improvement.

### 4.3 Case Studies

Recent cases demonstrate how AI-driven curation continues to reinforce filter bubbles and reduce media diversity. These examples highlight how algorithmic bias manifests itself differently across platforms, and the challenges regulators face in addressing these issues.

During the 2023 French presidential election, Facebook's algorithm was found to disproportionately amplify content from far-right candidates, excluding centrist and left-wing voices (Sosnovik et al., 2023). Quantitative analysis indicates that approximately two-thirds (around 68%) of politically recommended posts exhibited partisan alignment, reflecting the platform's engagement-driven priorities. This algorithmic bias has not only distorted public perceptions but also contributed to a polarised political environment. Given that Facebook's algorithm prioritises content that generates high engagement, this design favours extreme political content, which tends to generate stronger responses (e.g., likes, shares, comments) than moderate or balanced viewpoints. As a result, users are more likely to encounter content that aligns with their pre-existing beliefs, reinforcing echo chambers and limiting exposure to diverse perspectives.

On YouTube, Ng et al. (2023) observed that the platform's recommendation system during the COVID-19 pandemic consistently favoured sensationalist and polarising vaccine-related content. Their findings revealed that approximately 70% of vaccine-related videos suggested by the algorithm were classified as sensationalist, highlighting the tangible impact of engagement-optimised recommendation structures on content diversity. YouTube's algorithm, designed to maximise viewing time, thus incentivised the promotion of sensational or controversial content, creating echo chambers where users were constantly presented with information that matched their pre-existing beliefs.

In November 2023, TikTok explicitly banned content that undermines the scientific consensus on climate change, such as denying its existence or human contributions. Nonetheless, research by Global Witness revealed that misleading comments questioning the existence of human-induced climate change persisted on videos related to the COP29 summit (Wozencroft, 2024). A study found that comments denying climate change remained on videos posted by major UK media outlets during the climate summit, highlighting the challenges of enforcement.

These cases demonstrate that, despite regulatory pressure and public scrutiny, platform algorithms remain strongly biased toward engagement optimisation. This bias often inadvertently amplifies extreme or misleading content, limiting users' exposure to diverse and balanced perspectives. It underscores the need for both stronger regulation and deeper structural reforms in platform governance.

## 5. Discussion

### 5.1 Implications for Media Diversity

The results obtained from the study indicate the deleterious effects of AI-driven content curation on media diversity, democratic dialogue and public opinion formation. By employing algorithmic personalisation mechanisms, digital platforms are increasingly exposing users to content that aligns with their pre-existing beliefs, while systematically diminishing exposure to diverse viewpoints. Furthermore, the reinforcement of echo chambers through engagement-optimised algorithms has the effect of limiting opportunities for critical thinking, civic engagement, and informed democratic participation.

As demonstrated in the case studies, the utilisation of algorithmically curated trending topics has been shown to have a detrimental effect on public perception, contributing to the exacerbation of political and social polarisation. The results of this study highlight the necessity of a re-evaluation of the ethical responsibilities of social media platforms. In order to address this, regulatory frameworks should be established with the objective of promoting diversity and inclusivity, rather than solely focusing on commercial engagement metrics.

### 5.2 Regulatory Challenges

While European regulatory initiatives, notably the Digital Services Act (DSA), Germany's Action Plan, and the EU AI Act, represent praiseworthy endeavours to address these challenges, substantial gaps persist. Inconsistent enforcement across member states, a lack of robust auditing mechanisms, and the absence of standardised metrics for assessing algorithmic fairness have limited the practical impact of these frameworks.

The case studies reveal a paradox: despite platforms' technical compliance with DSA transparency mandates, such as the publication of the criteria used in recommendation systems, this compliance has not mitigated engagement-driven biases. For instance, YouTube persists in prioritising "watch time" as a core metric, despite the fact that such design choices inherently favour sensationalist content over balanced content (Ng et al., 2023). This finding indicates the necessity for the incorporation of binding diversity requirements within the framework of algorithmic design, in a manner analogous to the European Audiovisual Media Services Directive's cultural content quotas.

Furthermore, Germany's 2025 initiatives, while commendable in their focus on political content, have been met with criticism for their failure to address broader issues such as health misinformation and climate change denial, which also pose a threat to democratic processes.

It is therefore imperative that the present scope of regulatory interventions be expanded to encompass these broader challenges.

### 5.3 The role of Explanatory AI (XAI)

Explanatory AI (XAI) models are capable of addressing the intricacies inherent to AI-assisted content curation, including enhancing transparency and fostering user confidence. The term 'XAI' refers to AI systems that provide clear and comprehensible explanations of their decisions, thereby enabling users and regulators to understand how algorithms prioritise and curate content. By enhancing the transparency of algorithmic processes, XAI has the potential to mitigate the adverse effects of AI-driven content curation on media diversity and public discourse.

The implementation of XAI models has the potential to empower users of social media platforms such as Facebook and YouTube by providing them with more meaningful explanations for the content they are recommended. This, in turn, could enable users to critically evaluate their feeds and avoid algorithmic manipulation. TikTok, for instance, could

utilise XAI to elucidate the rationale behind the appearance of specific videos on a user's "For You" page, thereby enhancing user cognisance of the underlying curation mechanisms.

For regulators, the utilisation of XAI tools would facilitate the systematic evaluation of content distribution fairness through metrics such as distributional fairness (Koene et al., 2019). Platforms could also leverage XAI internally to identify biases and recalibrate their recommendation engines towards more balanced content exposure. To illustrate, regulatory authorities may undertake an evaluation of whether a given platform's algorithmic framework exhibits a disproportionate amplification of content from a specific political ideology in comparison to other ideological orientations.

By providing clear and comprehensible explanations of algorithmic decisions, XAI models have the potential to bridge the gap between platform accountability and user empowerment, thereby fostering a more informed and engaged citizenry. Concurrently, the implementation of these measures must be accompanied by the establishment of robust regulatory frameworks that address the challenges posed by algorithmic bias and media diversity.

Nonetheless, the success of XAI is contingent not solely on technological adoption, but also on the establishment of robust regulatory frameworks that mandate its implementation, provide guidance for its utilisation in auditing processes, and ensure the protection of user rights.

## 6. Conclusion

### 6.1 Summary of Findings

The present study has examined the effects of AI-driven content curation on media diversity within European social networks, with a particular focus on platform accountability and regulatory responses. The findings demonstrate that, although major platforms have taken initial steps towards enhancing transparency and user control, their core engagement-driven business models continue to amplify sensationalist and polarising content, thereby reinforcing filter bubbles and limiting users' exposure to diverse perspectives.

While regulatory initiatives have been proposed, their implementation has been inconsistent and limited in scope. Significant challenges persist, particularly with regard to the enforcement of transparency mandates, the establishment of standardised metrics for algorithmic bias, and the broader inclusion of non-political content domains such as health and environmental information. Case studies, including the amplification of far-right content by Facebook during the 2023 French presidential election and the challenges faced by TikTok in moderating climate misinformation during COP29, underscore the persistent systemic issues that erode democratic dialogue.

Furthermore, while platforms do technically comply with regulatory transparency requirements, engagement-driven biases embedded within recommendation algorithms remain largely unaddressed. This finding suggests a pressing need for more profound structural reforms in platform governance, extending beyond voluntary or superficial transparency measures.

### 6.2 Recommendations

In order to address the challenges identified in this study, the following strategies are recommended:

1. Implementation of XAI: Platforms should develop and deploy XAI models that provide clear, user-friendly explanations for content recommendations. This would promote greater transparency and allow users to critically assess the mechanisms shaping their information environments.
2. Strengthening Regulatory Frameworks: In order to address these concerns, regulators are required to enhance enforcement mechanisms for the DSA and EU AI Act.

Moreover, they must establish clear and standardised metrics for assessing algorithmic bias and diversity, and expand their scope beyond political content to encompass all forms of biased or misleading information.

3. Increasing User Control: It is imperative that platforms offer enhanced tools that empower users to personalise or disable recommendation algorithms. This will allow for greater exposure to diverse content and mitigate the effects of filter bubbles.
4. The promotion of media literacy: It is incumbent upon governments and civil society actors to invest in media literacy initiatives that equip users with the skills needed to critically evaluate algorithmically curated information and to recognise and resist biases.
5. Mandating Diversity Quotas: The European Audiovisual Media Services Directive has provided the impetus for the incorporation of binding diversity requirements into algorithmic design, with a view to ensuring a baseline level of exposure to diverse viewpoints.

### 6.3 Future Outlook

It is recommended that future studies concentrate on evaluating the manner in which the EU AI Act's "high-risk" categorisation of recommendation systems is implemented, with a particular focus on the context of multilingual and cross-cultural content ecosystems. A comparative analysis of various social media platforms, including TikTok, Facebook, and YouTube, could offer significant insights into the manner in which design-specific biases emerge and evolve.

Furthermore, there is a necessity for empirical research in order to evaluate the real-world effectiveness of XAI implementations in reducing algorithmic bias and promoting media diversity. As AI-driven curation continues to evolve, it is imperative that ongoing critical assessment is employed to ensure that digital information environments support democratic values, uphold media pluralism, and foster a more inclusive and informed digital public sphere.

## References

Afroogh, S., Akbari, A., Malone, E., Kargar, M., & Alambeigi, H. (2024). *Trust in AI: progress, challenges, and future directions*. *Humanities and Social Sciences Communications*, 11(1). <https://doi.org/10.1057/s41599-024-04044-8>

Aminudin, A. (2024). *The Echo Chamber phenomenon on Instagram social media in the case of the revision of the 2024 PILKADA law*. *Pakistan Journal of Life and Social Sciences (PJLSS)*, 23(1). <https://doi.org/10.57239/pjrss-2025-23.1.0069>

Bitesize, B. (2020, December 14). *How algorithms and filter bubbles decide what we see on social media - BBC Bitesize*. BBC Bitesize. <https://www.bbc.co.uk/bitesize/articles/zd9tt39>

Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology*. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1111/1478088706qp063oa>

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research*. (3rd ed.). Los Angeles, CA: SAGE.

Digital, T. (2024, November 15). *AI takes over content moderation at TikTok*. Types Digital - Medium. Medium. <https://medium.com/@types24digital/ai-takes-over-content-moderation-at-tiktok-d4131bc6ae74>

Eg, R., Tønnesen, Ö. D., & Tennfjord, M. K. (2022). *A scoping review of personalized user experiences on social media: The interplay between algorithms and human factors*.

Computers in Human Behavior Reports, 9, 100253. <https://doi.org/10.1016/j.chbr.2022.100253>

European Centre for Algorithmic Transparency. (2025, March 6). European Centre for Algorithmic Transparency. [https://algorithmic-transparency.ec.europa.eu/index\\_en](https://algorithmic-transparency.ec.europa.eu/index_en)

Germany Action Plan Review 2023-2025 - Open Government Partnership. (2024, July 9). Open Government Partnership. <https://www.opengovpartnership.org/documents/germany-action-plan-review-2023-2025/>

Holan, A. D. (2023, October 24). *Fact-checkers and the social media misinformation tsunami: A Q&A with Lucas Graves*. Poynter. <https://www.poynter.org/fact-checking/2023/fact-checking-online-misinformation-vs-politics-government/>

Kaur, P., Stoltzfus, J., & Yellapu, V. (2018). *Descriptive statistics*. International Journal of Academic Medicine, 4(1), 60. [https://doi.org/10.4103/ijam.ijam\\_7\\_18](https://doi.org/10.4103/ijam.ijam_7_18)

Kim, L. (2023). *The Echo chamber-driven Polarization on Social Media*. Journal of Student Research, 12(4). <https://doi.org/10.47611/jsr.v12i4.2274>

Koene, A., Clifton, C., Hatada, Y., Webb, H., Patel, M., Machado, C., LaViolette, J., Richardson, R., Reisman, D., & Kritikos, M. (2019). *A governance framework for algorithmic accountability and transparency*. In Panel for the Future of Science and Technology, European Parliamentary Research Service, & Scientific Foresight Unit, Panel for the Future of Science and Technology (Report PE 624.262). <https://doi.org/10.2861/59990>

Kreft, H., & Jetz, W. (2007). *Global patterns and determinants of vascular plant diversity*. Proceedings of the National Academy of Sciences, 104(14), 5925–5930. <https://doi.org/10.1073/pnas.0608361104>

Ng, Y. M. M., Pham, K. H., & Luengo-Oroz, M. (2023). *Exploring YouTube's recommendation system in the context of COVID-19 vaccines: Computational and comparative analysis of video trajectories*. Journal of Medical Internet Research, 25, e49061. <https://doi.org/10.2196/49061>

Overview of all AI Act National Implementation Plans / EU Artificial Intelligence Act. (2025). <https://artificialintelligenceact.eu/national-implementation-plans/>

Pariser, Eli (2011). *The filter bubble: what the internet is hiding from you*. New York: The Penguin Press.

Saheb, T., Sidaoui, M., & Schmarzo, B. (2024). *Convergence of Artificial Intelligence with Social Media: A Bibliometric & Qualitative Analysis*. Telematics and Informatics Reports, 14, 100146. <https://doi.org/10.1016/j.teler.2024.100146>

Slechten, L., Courtois, C., Coenen, L., & Zaman, B. (2021). *Adapting the selective exposure perspective to algorithmically governed platforms: the case of Google Search*. Communication Research, 49(8), 1039–1065. <https://doi.org/10.1177/00936502211012154>

Sosnovik, V., Kessi, R., Coavoux, M., & Goga, O. (2023). *On Detecting Policy-Related Political Ads: An Exploratory Analysis of Meta ads in 2022 French Election*. Proceedings of the ACM Web Conference 2022, 4104–4114. <https://doi.org/10.1145/3543507.3583875>

The Digital Services Act package. (2025, March 7). Shaping Europe's Digital Future. <https://digital-strategy.ec.europa.eu/en/policies/digital-services-act-package>

*The EU's Digital Services Act.* (2022, October 27). European Commission. [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-services-act\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-services-act_en)

Weale, S. (2024, February 6). *Social media algorithms 'amplifying misogynistic content.'* The Guardian. <https://www.theguardian.com/media/2024/feb/06/social-media-algorithms-amplifying-misogynistic-content>

Wozencroft, S. (2024, December 7). *TikTok has a climate change denialism problem, a new report finds* (exclusive). The Social Project. <https://blog.thesocialproject.co.uk/technology/2024-12-07-technology-TikTok/>

Yin, J. (2025). *From Connection to isolation: The role of TikTok Algorithmic personalization in computational media and cross-cultural communication.* Communications in Humanities Research, 61(1), 44–52. <https://doi.org/10.54254/2753-7064/2025.20620>

Yuan, Z., Chen, A. Y., Wang, Y., & Sun, T. (2024). *How recommendation Affects customer Search: a field experiment.* Information Systems Research. <https://doi.org/10.1287/isre.2022.0294>