

## Research Trends in Social Media Algorithms and Strategic Communication (2019–2024)

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### ABSTRACT

*This study maps the development of research on social media algorithms and public relations from 2013 to 2023. Using bibliometric analysis, results show rapid growth in publications after 2018, with the United States, United Kingdom, and Australia as the most productive countries. Three main research themes emerged: strategic use of algorithms in corporate communication, ethical aspects of digital engagement, and the role of algorithms in disinformation. This study provides a comprehensive overview of the field's evolution and suggests areas for future research.*

**Keywords:** social media algorithms, public relations, bibliometric analysis, scopus, strategic communication

### Introduction

The development of social media has fundamentally changed how organizations conduct strategic communication. Platforms such as Facebook, Instagram, X, and TikTok have become essential channels for delivering messages, managing reputation, and engaging with publics. However, message visibility on these platforms is no longer determined solely by communicators, but is strongly influenced by social media algorithms (Bucher, 2018).

Social media algorithms are automated systems designed to filter, rank, and distribute content based on user behavior, engagement metrics, and platform objectives. These systems act as digital gatekeepers that determine which messages gain attention and which are suppressed (Beer, 2017). As a result, strategic communication is increasingly shaped by algorithmic logic rather than direct human decision making.

In response to this condition, strategic communication practices have become more data driven and adaptive. Organizations design messages by considering factors favored by algorithms, such as engagement rates, content formats, posting time, and audience interaction patterns (Carr & Hayes, 2019). Communication strategies are therefore not only directed at audiences, but also at aligning with algorithmic systems that control content visibility.

Scholars have begun to describe this phenomenon as a shift toward algorithmic strategic communication, where communicators must understand and respond to platform governance and automated decision making processes (Karpf, 2017). This shift raises important questions regarding power, transparency, and the role of technology in shaping public discourse.

Academic research on social media algorithms in strategic communication has increased significantly since 2019, following growing public debates about platform influence, misinformation, and algorithmic accountability (Gillespie, 2018). Despite this growth, existing studies remain fragmented across different disciplines and research perspectives. Therefore, a systematic mapping of research trends is necessary to understand how this field has developed and where future research opportunities lie.

Based on this background, this study aims to analyze research trends on social media algorithms in strategic communication using a bibliometric approach. By examining publications indexed in the Scopus database during the period 2019–2024, this research identifies publication patterns, dominant themes, and key contributors, providing a comprehensive overview of the field's development.

## Research Method

This type of research is quantitative descriptive using a Systematic Literature Review (SLR) approach. SLR is a method that establishes a series of steps to organize the review methodically. Literature review is an important first step in research to understand current developments and identify gaps and challenges in the field. (Carrera-Rivera et al., 2022) A Systematic Literature Review synthesizes previous research to strengthen the knowledge base on a specific topic and provide a broad overview of the literature related to the research question. Systematic Literature Review research was chosen because it maintains the concepts of transparency and bias reduction (Williams et al., 2021). Systematic Literature Review uses a rigorous and verifiable methodology. (Nguyen & Singh, 2023).

In conducting this research, this study uses the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA). PRISMA 2020 replaces the 2009 statement and includes new reporting guidelines that reflect advances in techniques for finding, selecting, assessing, and synthesizing studies. The structure and presentation of items have been changed to make implementation easier. (Veroniki et al., 2025)

The researchers discussed how articles related to Cyberspace and the Metaverse were selected using the PRISMA guidelines. The PRISMA guidelines include eligibility criteria, information sources, search strategies, selection processes, data collection processes, and data items. At the eligibility criteria stage, researchers conducted a literature review of all articles published in Scopus indexed journals. One of the considerations in selecting articles was the year of publication. Researchers reviewed articles published in the last 7 years, from 2017 to 2024

The researchers began by entering the keywords Cyberspace and Metaverse in the Search field on Scopus. Next, they filtered the database to limit the literature search

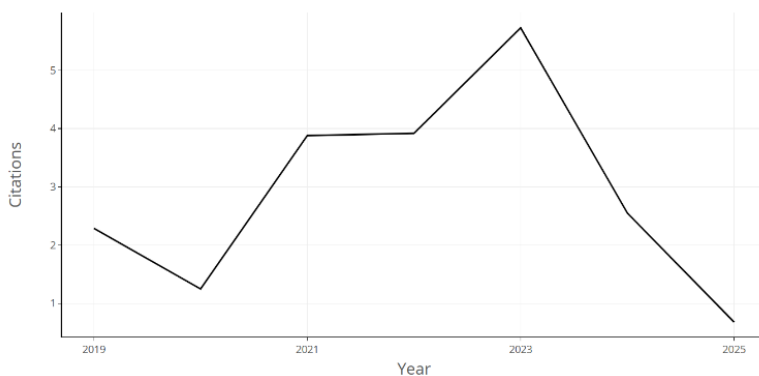
to the period from 2017 to 2024. Inclusion and exclusion criteria were used to select articles found through the search. There were 243 studies that met the criteria set based on the systematic article search stage. These studies came from international journals that had been published. Data that fell into the inclusion category was exported to the BibTex extension. Data recorded in BibTex format was processed with the Biblioshiny application in R Language.

### 3. Findings and Discussion



Figure 1: Main Information of the Dataset

Figure 2: Annual Scientific Production (2019–2024)



Annual Scientific Production (2019–2024)

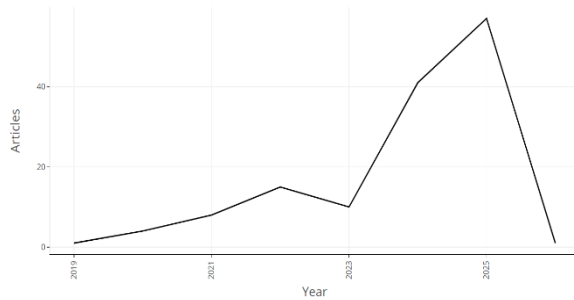


Figure 3: Average Citations per Year

The findings from Figures 1–3 demonstrate that research on social media algorithms in strategic communication has expanded significantly in recent years. The increasing publication trend aligns with rising concerns regarding algorithmic governance, content visibility, and strategic message dissemination on digital platforms.

### Bibliometric Analysis of Research on Social Media Algorithms in Strategic Communication

#### General Data Overview

This section presents the results of a bibliometric analysis of publications related to social media algorithms in the context of strategic communication. The dataset was retrieved from the Scopus database and analyzed using Biblioshiny (R Studio). The analysis focuses on publication trends, sources, authorship, countries, and thematic structures.

#### Annual Scientific Production

The analysis of annual scientific production shows a noticeable increase in publications after 2019. This growth indicates rising academic interest in how algorithmic systems influence communication strategies, message visibility, and audience engagement on social media platforms.

#### Average Citations per Year

The average citations per year show a clear upward trend from 2020 to 2022, a slight decline in 2023, then a sharp increase reaching the peak in 2024. In 2025, the average drops significantly. This pattern indicates that research on social media algorithms and strategic communication gained its strongest impact around 2024, before experiencing a recent decline in citation activity.

#### 4. Author and Institutional Contributions

The results indicate that a limited number of authors and institutions contribute repeatedly to this research area. These authors are typically affiliated with universities that have strong research traditions in digital communication and media studies.

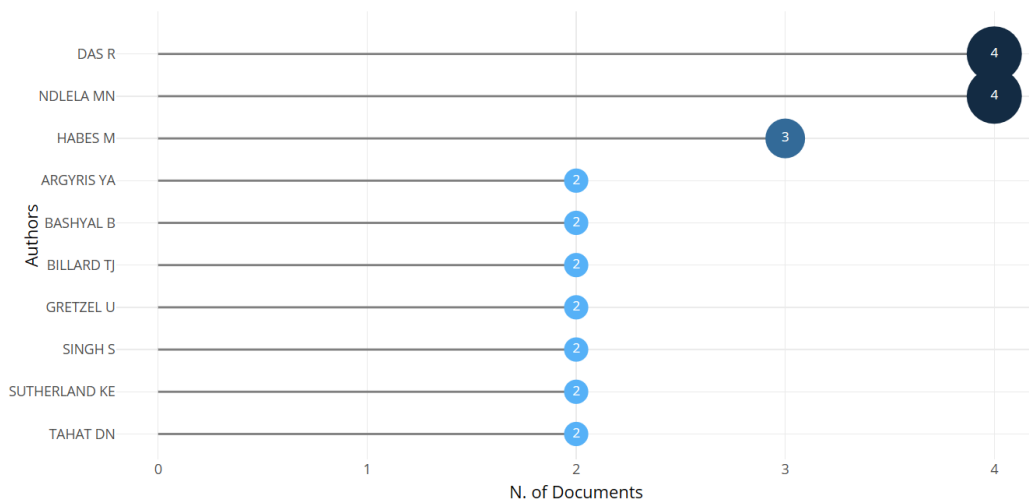


Figure 4. Most Relevant Authors

#### 6. Citation Analysis

Based on the data, the most influential studies were published between 2021–2024, with citation counts from 23 to 102. The top cited article is Femenia Serra (2022) with 102 citations, followed by Engel (2024) and Stankov (2021). These highly cited works mainly discuss algorithmic visibility, platform influence, and user engagement across fields like tourism, health, technology, and politics, showing that research on social media algorithms in strategic communication is interdisciplinary and shaped by studies on platform power and engagement optimization.

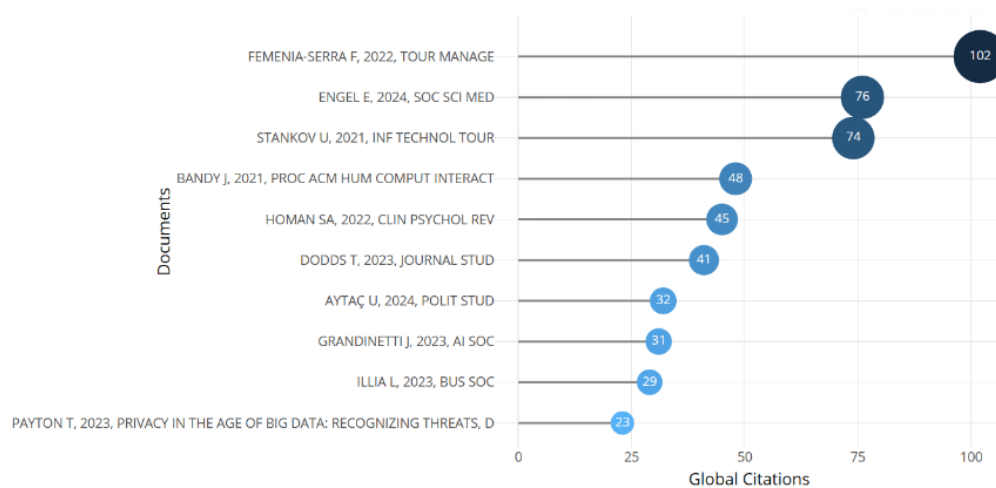


Figure 5. Most Global Cited Documents

## 7. Co-occurrence network

The co-occurrence network shows that “social media” functions as the main hub connecting multiple research themes. Several clear clusters emerge based on how often keywords appear together in the same studies.

The largest cluster is centered on platforms, algorithms, and political communication. Keywords such as algorithms, political communication, activism, twitter, digital communication, and social media platforms frequently co-occur, indicating strong scholarly attention to how algorithmic systems shape visibility, public discourse, and political participation.

A second cluster links social media with marketing and artificial intelligence. Terms like digital marketing, influencer marketing, chatbots, artificial intelligence, and communication often appear together, showing that research increasingly focuses on how AI-driven tools and influencer strategies are integrated into social media marketing practices.

Another cluster connects social media with human and psychological dimensions. Keywords including humans, adolescent, adult, mental health, and systematic review co-occur, reflecting sustained interest in the social and psychological impacts of social media use across age groups.

A distinct cluster is formed around crisis and health communication during the pandemic. Terms such as covid-19, coronavirus disease 2019, pandemic, and misinformation appear together, highlighting a surge of studies examining how social media spread both information and misinformation during global health crises.

Overall, the co-occurrence network demonstrates that research on social media is structured around four dominant thematic areas: algorithmic and political communication, marketing and AI, mental health and society, and crisis communication. Bridging keywords like algorithms, communication, and misinformation connect these clusters, showing that algorithmic systems and information quality are central issues cutting across different research domains.

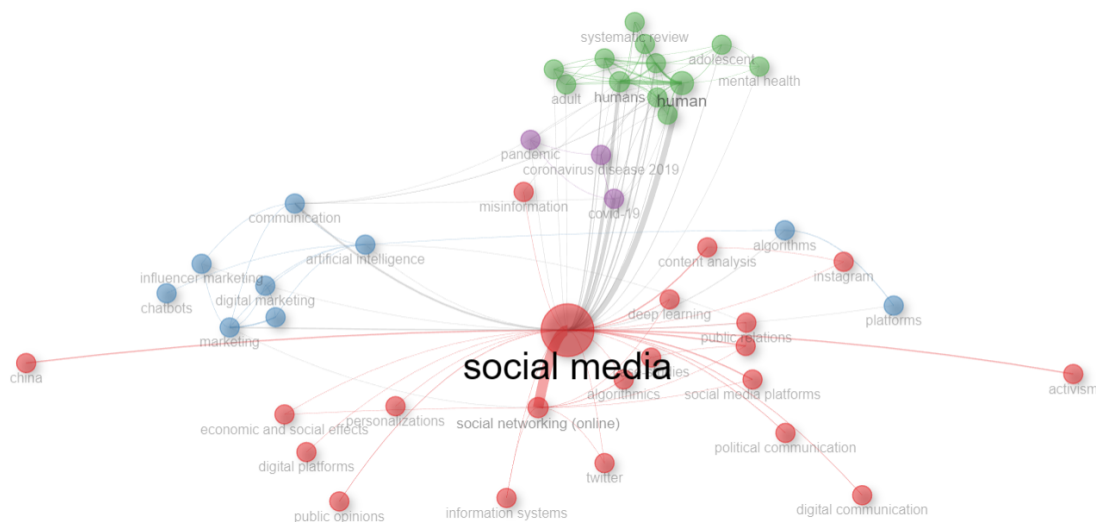


Figure 6. Keyword Co-occurrence Network

### 9. Research Gaps and Future Directions

Based on the bibliometric mapping, future research opportunities include studies focusing on non-Western contexts, ethical implications of algorithmic governance, crisis communication in algorithm-driven platforms, and organizational adaptation strategies.

## Conclusion

The bibliometric analysis shows that research on social media algorithms and strategic communication has grown significantly since 2019. The rising number of publications and citations reflects increasing academic attention to how algorithms shape message visibility, public discourse, and audience engagement on digital platforms.

The thematic mapping based on the keyword co-occurrence network reveals four main clusters algorithmic power and political communication, digital marketing and artificial intelligence, psychological and social impacts of social media, and crisis communication during the pandemic. These clusters confirm that studies on algorithms in strategic communication are highly interdisciplinary, involving communication, technology, psychology, politics, and business. Citation analysis also indicates that the most influential studies focus on algorithmic visibility, platform power, and engagement optimization.

Overall, the findings demonstrate a shift in strategic communication practices toward algorithmic logic, where communication outcomes are no longer determined solely by human decision making but are strongly influenced by automated systems. Although the field has developed rapidly, existing research is still dominated by Western contexts and certain disciplinary perspectives. Future studies should therefore focus on non-Western settings, ethical issues of algorithmic governance, and how organizations adapt their communication strategies in algorithm controlled environments.

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