

270. THE PROBLEM OF THE “FILTER BUBBLE” IN RECOMMENDATION SYSTEMS AND ITS ECONOMIC CONSEQUENCES

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The article analyzes the phenomenon of the “filter bubble” in social networks, where AI algorithms, aiming to retain user attention, limit the diversity of content. This phenomenon exacerbates political polarization, shapes consumer habits, and influences the formation of adolescent identity through homogenized information.

In the era of social media and short video dominance, artificial intelligence algorithms have become the primary mechanisms shaping digital content exposure. Their primary function is to maximize user engagement through continuous personalization of content feeds. However, this personalization carries a significant downside: the phenomenon known as the “filter bubble,” a term coined by Eli Pariser, which describes a state of intellectual isolation that occurs when website algorithms, such as those used in search engines, news feeds, and social networks, selectively predict what information a user is likely to engage with based on past behavior [1].

Discussions concerning the societal implications of digital technologies frequently overlook a fundamental paradox. While the internet ostensibly affords users both agency and the ability to independently select content, this autonomy is exercised through inherently subjective criteria. As a result, audiences selectively appropriate from the available content landscape in accordance with their individual predispositions [1]. This paradox is further accentuated by algorithmic recommender systems, which, while facilitating access to content aligned with user preferences, simultaneously intensify concerns regarding data privacy. In jurisdictions characterized by limited press freedom, such systems may also engender conditions conducive to political or social polarization [2]. Within the economic domain, such mechanisms serve to consolidate the market power of dominant digital platforms. By monopolizing user attention, these platforms impose substantial barriers to entry for nascent competitors, ultimately resulting in the concentration of economic rents among a small number of technology corporations. Thus, the filter bubble is not merely a cultural or social issue but also the structural force that reinforces monopolistic tendencies in the digital economy.

An increasing number of studies indicate that digital platforms do not merely reflect existing social divisions but actively amplify them. Among the most compelling empirical evidence is the study by Garimella & Weber, which examined the behavior of American Twitter users. Their findings reveal a notable pattern: over time, users increasingly gravitate toward ideologically homogeneous figures and content, with political polarization becoming progressively more severe as time spent on the platform increases [1]. This trend carries significant economic consequences. Polarization erodes trust in institutions, complicates market regulation, increases volatility, and creates uncertainty that undermines long-term investment and economic growth.

This convergence of technological capability and psychological vulnerability has a particularly pronounced impact on adolescents. The operational logic of modern AI systems is predicated on the large-scale collection and analysis of personal data. For teenagers, this results in the creation of highly detailed behavioral profiles that track their every interaction. However, the concern extends beyond mere data privacy; the application of this data creates a powerful feedback loop. In line with Information Integration Theory, the constant stream of algorithmically curated, homogeneous content synthesized from this data does not merely reflect a teenager's existing interests but actively shapes them [3]. Over time, this process systematically influences their attitudes, preferences, and behavioral decisions, effectively constructing a digital environment that reinforces specific viewpoints and consumption patterns, often without the user's full awareness.

Ultimately, the phenomenon of the filter bubble is not simply a technological issue of algorithms, but a challenge to critical thinking. Within a limited and homogeneous information environment, this process may reduce the ability to engage in dialogue and assess reality objectively. Recognizing this mechanism and making a conscious effort to seek out alternative points of view is becoming not only a useful skill but also an essential competence in the digital age.

References:

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