

# Breaking the bubble: A case study on the echo chamber effect in Instagram

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## Abstract

The echo chamber effect on social media platforms, particularly Instagram, significantly influences users' perception by creating environments where similar views are repeatedly reinforced. This case study explores the dynamics of the echo chamber effect on Instagram, focussing on the role of algorithmic filtering, user behaviour, and content personalisation. By analysing the platform's mechanisms – such as personalised feeds, the Explore page, and targeted content – this study reveals how Instagram's algorithm amplifies selective exposure and confirmation bias, leading to increased polarisation and reduced exposure to diverse viewpoints. The study examines psychological and social factors, including selective exposure theory, social identity, and emotional resonance, which intensify the echo chamber effect on a highly visual platform like Instagram. Findings suggest that this phenomenon can fragment social networks, create polarised communities, and contribute to the spread of misinformation. Strategies to mitigate these effects, including algorithmic transparency, diverse content exposure, and user-driven interactions, are discussed as potential methods for breaking echo chambers and promoting a more balanced informational ecosystem.

## Keywords

Echo chamber effect, Instagram, algorithmic filtering, social media, selective exposure, confirmation bias, group polarisation, misinformation, social fragmentation, visual engagement

## Introduction

The echo chamber effect on Instagram, akin to other social media platforms, delineates a phenomenon wherein users are consistently exposed to analogous views, beliefs, or opinions, hence reinforcing their pre-existing attitudes and constraining exposure to different viewpoints. This effect can significantly influence users' perspectives, especially regarding political matters, social issues, or personal convictions. The echo chamber effect arises on platforms such as Instagram mostly owing to algorithmic filtering and user engagement patterns. Algorithms favour content that corresponds with a user's previous interactions – such as postings they have liked, shared, or commented on – thereby enhancing the probability of people encountering analogous information. Algorithmic curation significantly contributes to the echo chamber effect, as Instagram's algorithms, intended to enhance interaction, often unintentionally restrict content diversity. The platform's Explore page, customised feed, and targeted adverts are designed to present users with content that aligns with their existing interests, so limiting their exposure to diverse perspectives (Cinelli et al., 2021). Selective exposure theory

posits that individuals are predisposed to interact with information that corresponds with their established ideas and preferences (Garrett, 2009). This hypothesis is intensified on Instagram because of its visual and interactive characteristics, enabling users to swiftly 'like' or engage with photos, so establishing a feedback loop that affects the algorithm's recommendations.

## Instagram's echo chamber effect

Research on the echo chamber effect across social media platforms, such as Instagram, indicates that users frequently interact within homogeneous networks, creating conditions where similar ideas are amplified and divergent perspectives

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