

The Collective Impacts of Social Cues, Cognitive Heuristics, and Algorithmic Mediation on Users' Credibility Judgments in Social-Media Environments

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Abstract. The rapid change of social media has fundamentally altered the way people access and evaluate information. However, even though Internet does provide a broader view to gather information, it also makes users hard to distinguish reliable information from misinformation. Thus, this study explores why do people tend to trust information they encounter online without verifying it. Through the methods of literature review and case study, the research analyzes the influence of social media, roles of algorithms, and information credibility on users' perception of online information. The paper finds that people tend to trust all the information online not simply because they don't have the ability to distinguish the truth from falsehood, but because social media encourages the users to rely on shortcuts when judging information. The findings could contribute to a deeper understanding of how digital-age social media shapes users' perceptions of judging information credibility.

Keywords: Social Media, Online Information Credibility, Algorithmic recommendation, Information Overload, Social Proof

1. Introduction

As a post receives thousands of likes, comments, and views, or is sent by someone people are familiar with, the information becomes compelling before we ever confirm its validity. In addition, individuals may place trust in online information merely because they encounter it repeatedly across social media platforms. Nevertheless, the abundant availability and volume of information online also create obstacles to distinguishing truth from misleading information. Furthermore, algorithmic recommendations determine what kind of content users are exposed to. Therefore, people's assessments of trustworthiness may rely not only on the credibility or accuracy of information, but also on the social and technological cues around them. Existing studies have analyzed factors such as social proof, confirmation bias, and algorithmic recommendation, but these elements were usually taken into account separately.

This paper aims to investigate the reasons behind people's tendency to believe information that they come across online as well as the ways in which individual cognitive processes, social cues,

and algorithmic environments interact to influence perceptions of the veracity of information. This research attempts to thoroughly explain why online material can be perceived as credible even before its validity is verified through literature review and case-study methodologies.

2. Changing information consumption

2.1. The history from traditional media to modern media

The ways that individuals obtain and use information have completely changed due to the growth of Internet. In the traditional media environments, the main sources for gathering information are mainly televisions, newspapers, and radios. Journalists, editors, and media organizations served as crucial gatekeepers. Gatekeeping, according to Shoemaker, is the process by which the billions of messages that are available in the world get cut down and transformed into the hundreds of messages that reach a given person on a given day [1]. Nonetheless, this condition has been drastically altered by the growth of digital media since material can now be generated without necessarily going through conventional editorial procedures.

Social media has changed the relationship between information publishers and audiences. Instead of receiving information passively, audiences can now play roles as content producers, consumers, and distributors simultaneously. In a matter of seconds, a person can post something, get replies from other users, and share it with their own network. The obstacles to the production and distribution of information have been greatly reduced as a result.

2.2. From audiences to active participants

The evolution of media does bring people with advantages. Individuals who were previously shut out of professional media creation can now take part in public communication. Moreover, interactions can emerge which are fairly elaborate in terms of the richness of communication exchange, but where perceived (and actual) anonymity levels, and levels of perceived privacy, can be high. This feature is not something easily achieved in offline contexts [2].

However, the elimination of traditional gatekeeping also brings hardships for users to differentiate between valid information, advertisements, and even rumors.

2.3. Information overload and shortcut

The abundance of information online created the problem of information overload. Nowadays, the amount of information published every two days is equal to the amount produced between the early days of human civilization and 2003 [3]. Thus, an individual may not be able to adequately digest and assess the volume of information provided.

Since users are unable to realistically verify every piece of information that they encounter online, they may rely on cognitive shortcuts, or heuristics, to choose what merits attention and seems reliable. According to Smith, people reject news from sources they consider biased, even if there is no evidence of bias in the news from that source [4]. For instance, when people encounter a viral social media post, they may not look up for the original source by themselves. Instead, they can believe that the information is credible because it was presented by someone who seems competent, as it has been spread among a large number of people, or because they have come across the same claim multiple times. However, when the signals they rely on don't fairly represent the quality of the information, they might also leave people open to false information.

Therefore, users may make snap decisions based on simplified signals rather than separately verifying each claim's original source, supporting data, and context. This offers a crucial justification for why the evolving information landscape is significant: the issue is not just that there is more false information available online, but that people have also created new methods for determining which information to believe.

3. Trust in online information

3.1. Information credibility

By analyzing Alrubaian's paper, credibility is synonymous with believability. Credibility beliefs stem from evaluating the attributes of an attitude object, resulting in perceptive knowledge that guides feelings and actions [5]. Nevertheless, the correctness of online information is not always correlated with information credibility. Information can be assessed by users based on the exterior features of the source or communication environment as well as the content itself. Information seems believable depending on a number of factors, including presentation, familiarity, perceived expertise, and trustworthiness. This distinction has become particularly salient within the digital-age context, as users frequently encounter material without knowing its original source or possessing the expertise required to independently evaluate its authenticity. Hence, instead of carefully considering the facts supporting a claim, people can rely on readily apparent cues.

3.2. Social proof

Social proof provides a crucial explanation for how the shortcuts happened on social media. The psychological phenomenon of social proof suggests that people will be influenced by others in their surroundings. Furthermore, social proof is most evident when a person perceives the people in their surroundings to be similar to them even though they are not sure of the accuracy and certainty [6]. Through likes, comments, views, and follow numbers, social media platforms make social proof much more visible. As a result, a post with thousands of likes and shares could seem more legitimate than one that is identical but receives less interaction.

Nonetheless, the accuracy of the information and the popularity can not be measured by the same standard. As a visual engagement can create an impression that a claim has been socially evaluated, the metrics can be treated as credibility cues even if they do not provide any direct evidence of the accuracy of the information. The connection between professionalization and popularity is complicated by social media. Videos with a polished appearance, self-assured phrasing, technical jargon, or allusions to scientific ideas can provide credibility to content. This distinguishes between real expertise and apparent authority. Even while these traits may not always indicate that the material is correct, users may interpret popularity or polished presentation as proof of knowledge.

3.3. Confirmation bias

In recent years, confirmation bias stands for people's tendency to search for information that supports their beliefs and ignore or distort data contradicting them [7].

As it turns out, people do not approach information obtained online as neutral observers. Information interpretation can be influenced by pre-existing political, social, cultural, or personal ideas. An online claim may seem instantly credible if it confirms what a user already believes. On the contrary, material that challenges pre-existing beliefs might be viewed more skeptically. For

instance, a user may be more inclined to follow accounts that back up a certain claim if they already believe it. The user's online environment may then become more replete with information that supports their preexisting opinions.

3.4. Interaction between social proof and confirmation bias

Social proof and confirmation bias may also encourage mutual support. A user may first encounter content that confirms a presumption. If the user finds that many other people seem to agree with the same facts, the claim may then receive additional social validation. This leads to a process of reinforcement wherein societal validation and personal agreement reinforce each other. Users may see other people's agreement as further proof that their preexisting idea is true rather than independently confirming the facts.

3.5. Interaction between information overload and cognitive phenomenon

As people lack time to critically assess every piece of material they encounter online every day, cognitive shortcuts become a useful reaction to time and attention constraints. Consequently, online users work in a setting where a lot of information is available, information spreads quickly, attention is scarce, and social feedback is readily apparent. It makes sense to rely on shortcuts in these situations, yet doing so can make one more susceptible to false information.

Therefore, information credibility, cognitive shortcuts, social proof, and confirmation bias all work together to shape online trust. These elements do not function separately from the technological mechanisms that people employ to get information. Thus, how algorithmic suggestion can further influence users' information surroundings is examined in the following section.

4. The role of algorithms

4.1. Algorithmic recommendation

Algorithms shape the information environment and visibility, making cognitive biases and social proof more easily triggered. The algorithms that power social media are referred to as recommender systems. Most of the social media platforms are powered by these algorithms, and have demonstrated entirely algorithm-driven capabilities [8]. Digital platforms employ algorithmic systems to tailor material based on users' past behaviors and anticipated interests. User preferences can be inferred from actions like clicking, liking, commenting, sharing, and watching content. These signals can subsequently be used by algorithms to suggest related content.

Therefore, as algorithms impact the information environment around users without directly pointing out what they believe, the platforms may not explicitly inform users of the truth; instead, they would influence the content that users may encounter.

4.2. Exposure in information environments

On the one side, algorithms serve as an unseen infrastructure for internet users who either intentionally or inadvertently obey their commands [9]. When a person frequently interacts with a certain kind of content, they might be exposed to more of that kind of content. Therefore, individuals may come across information that is highly tailored to their interests and past actions.

Repeated exposure is one of the most notable mechanism; people are more likely to experience long-lasting media effects when they are frequently exposed to the same or similar media messages

over time [10]. When users repeatedly encounter the same type of content, the claim would be increasing familiar to them. As a result, this kind of familiarity would influence their perceptions toward the information, even though repeated exposure would not increase the accuracy of information at all.

4.3. Algorithms with social proof and confirmation bias

A user's initial belief is not always purely triggered by algorithms. Rather, it might be supported by exposing the user to information that supports it repeatedly. Social proof can also interact with algorithms. High-engagement content could be more visible to other users, which may bring deeper impacts. Popular content may become even more prominent as a result of this feedback cycle. In an engagement-driven setting, content that shows significant emotional or social reactions might be given more attention.

As a result, algorithms shouldn't be blamed for all online false information. Their power is to influence what users see and how frequently they see it. Information with questionable accuracy may become more recognizable and socially recognized when algorithmic suggestion combines with social evidence, confirmation bias, and repeated exposure.

5. Case study

5.1. Information credibility and social proof

In March 2023, social media users are praising the 86-year-old head of the Catholic Church's "style" in a picture of him wearing a white puffer jacket allegedly from the upscale fashion brand Balenciaga [11]. However, the image was created by Midjourney, which is a generative AI program. With just a few language prompts, lifelike graphics can be produced thanks to the quick advancement of artificial intelligence. Consequently, there is growing concern about the spread of visual deception produced by AI [12]. Thus, the realistic appearance of Pope Francis made the misinformation credible. Since the audiences have the opportunity to see the visual images by themselves, there is a high chance for them to doubt the accuracy and credibility of the information.

The image's prominence was also aided by social proof. Users could see that most people were interacting with the image as it was shared and debated on social media. Likes, shares, and comments are examples of social media metrics that can serve as social cues, affecting how users assess the veracity of material. Also, knowledge may appear to be broadly accepted if it is shared frequently. Thus, users can see social attention as oblique proof of the veracity of the content.

5.2. Repeated exposure and algorithms

Algorithmic suggestion can potentially be related to this issue. Social media companies employ user interaction to tailor content and decide what content is most likely to show up in users' feeds. As the image gained popularity, people would come across it frequently through various accounts, posts, and conversations. Familiarity of information can affect assessments of the veracity of information. As a result, consumers can progressively progress from merely identifying the image to believing the information to be reliable. Nonetheless, the repetition only makes knowledge feel more familiar; it does not increase its accuracy.

5.3. Case analysis

Hence, the case illustrates that people may trust material they meet online because of its visual presentation, social popularity, and frequent exposure rather than because they have thoroughly verified it. More generally, the story demonstrates social influence, the technological environment of social media, and individual cognitive shortcuts interact to shape online trust. The image of Pope Francis shows how these elements might work together to make a fake piece of information seem plausible. Thus, in the era of AI-generated content, "seeing is believing" has become ineffective, and the interaction indicators on social platforms are replacing traditional authoritative sources and becoming the primary source of credibility.

6. Conclusion

This study investigates why people tend to trust information found online. The results imply that algorithms as accelerators, social influence, cognitive shortcuts, and shifts in information consumption all have an impact on online trust. People may rely on information credibility, social proof, and confirmation bias instead of checking every claim online. By customizing users' information environments and exposing them to comparable content on a regular basis, algorithms can further strengthen this process. The AI-generated image of Pope Francis serves as an example of how the factors can lend credibility to false material. As a result, the relationship between users, society, and technology shapes online trust.

The explanatory framework of this study is mainly applicable to information-orientated social media platforms and may not generalize to professional communities, closed messaging groups, or search engine environments. Several limitations should be acknowledged. First, the results might not be applicable to other online settings like search engines or news websites. Second, the study only used one case study, which restricts how broadly the results may be applied. Lastly, individual differences among users cannot be thoroughly addressed because this research mostly relies on existing literature rather than primary data.

Future studies could examine how elements like the metrics and repeated exposure affect the credibility of content using questionnaires or experiments. Additionally, researchers might analyze other social media platforms to see if their suggestion systems have different outcomes. As generative AI advances, additional research should examine whether humans are able to distinguish between real and artificial intelligence-generated content, as well as whether media and AI literacy can aid users in making more critical assessments of online content.

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