Credibility in the Age of Misinformation: How Internet Users Assess Website Credibility

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Abstract

The goal of this research project is to investigate the process by which people assess the credibility of information on the web. By conducting a literature review and a user study, we identified over 100 credibility signals, physical features on websites that indicate or *signal* whether or not a website is credible.

The user study, used to determine how people prioritize different credibility signals when assessing the credibility of a website, reveals that internet users are heavily influenced by whether websites disclose information about their owners and contributors. Meanwhile, factors like when the website was established are less influential in people’s assessments of web credibility.

Motivation

The rise of misinformation and fake news during the 2016 United States presidential election has forced us to consider how information is propagated on the internet and the role of internet users in the evaluation and dissemination of this information.

Since the task of discerning credible information from non-credible information falls largely on internet users, this research conducted by the Wellesley College CRED Lab focuses on building tools that will help people assess the credibility of sources more accurately and efficiently in order to combat the spread of misinformation on the web.

Methods

Literature Review:

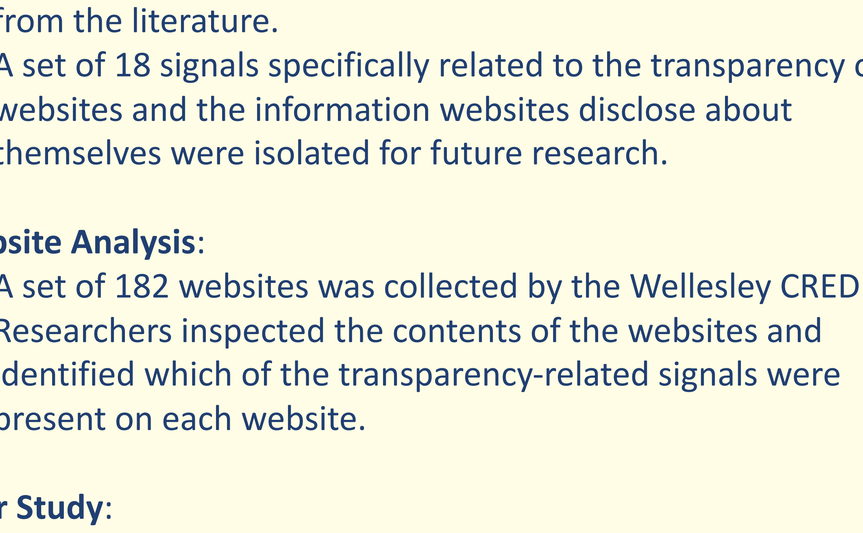
- A collection of 37 journal articles and conference papers were compiled from four databases.
- A total of 109 credibility signals were identified and defined from the literature.
- A set of 18 signals specifically related to the transparency of websites and the information websites disclose about themselves were isolated for future research.

Website Analysis:

- A set of 182 websites was collected by the Wellesley CRED Lab. Researchers inspected the contents of the websites and identified which of the transparency-related signals were present on each website.

User Study:

- A study of size n = 250 was conducted on Amazon Mechanical Turk. 180 of these responses passed the screening question and were included in the analysis.
- Participants in the study were presented with unfamiliar news websites. Then, each participant rated the importance of 9 of the transparency-related credibility signals using a 7-point Likert scale from “not at all important” to “extremely important.



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Disclosure of owner (The website provides the name of the individual, organization, or institution that owns the site.)

Indicate how important the above factor is in your evaluation of the credibility of an unfamiliar news site from "not at all important" to "extremely important." *Select "Not applicable" if the factor is not relevant to a news site.* An explanation for your selection can be provided in the text box on the right (optional).

	Importance								Explanation for Answer
	Not at all Important	Not Very Important	Somewhat unimportant	Neither important not unimportant	Somewhat important	Very important	Extremely Important	Not applicable	Explanation
Disclosure of owner	○	○	○	○	○	○	○	○	

Figure 1: Example question from the user study conducted on Amazon Mechanical Turk

Results

Credibility Signal	Explanation	Frequency
Email address	The website provides at least one email address to contact the people involved with the site.	69.8%
Mission and motive	The website discloses its goals and motivations.	63.2%
Disclosure of owner	The website provides the name of the individual, organization, or institution that owns the site.	61.0%
Disclosure of contributor names	The website discloses the names of the people involved with creating content on the website.	57.7%
Mailing address	The website provides a mailing address to contact the people involved with the site.	56.6%
Phone number	The website provides a phone number to contact the people involved with the site.	54.4%
Images of contributors	Pictures of the people involved with the website are present on the website.	44.5%
Contributor biographies	Pictures of the people involved with the website are present on the website.	44.5%
Date of establishment	The website includes information about when it was established.	28.6%
Sponsor	The website indicates individuals or organizations who provide partial funding for the site.	28.0%
Non-profit status	The website explicitly indicates that it is a non-profit or for-profit website.	19.8%
Identity	The website indicates what religious, political, and ideological groups it identifies with.	18.7%

Figure 2: A list of 12 transparency-related credibility signals and the frequency with which they appeared on the 182 websites from the “Website Analysis” stage

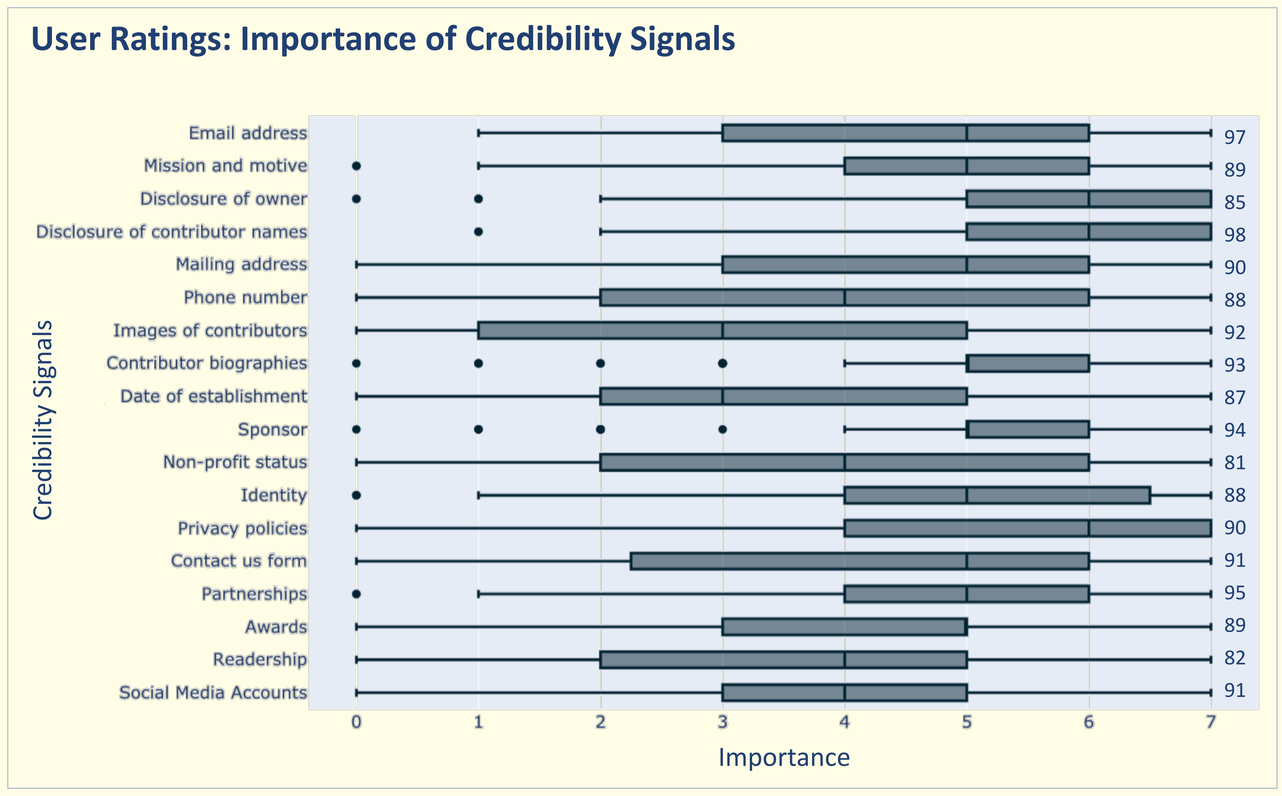

Figure 3: Results from the Amazon Mechanical Turk survey demonstrating how participants valued the different credibility signals when assessing unfamiliar news websites.

Conclusions and Future Research

Conclusions:

- Internet users find the disclosure of the owners and contributors of the website particularly influential in assessing website credibility.
- The process of evaluating the credibility of websites is largely subjective.

Future Research:

- Conduct a study that isolates each individual credibility signal and investigates how internet user’s actual behaviors when assessing website credibility compare with those verbally described by internet users.

Acknowledgements and References

Wellesley CRED Lab: Alius D., Yang F., Yang J., Devine C., Lurie E.
Funding Sources: Mustafaraj NSF CAREER (2018-2023) IIS 1751087
References: https://bit.ly/2KiPiBZ