

# Developing New Media Credibility Scale: A Multidimensional Perspective

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**Abstract**—The main purposes of this study are to develop a scale that reflects emerging theoretical understandings of new media credibility, based on the evolution of credibility studies in western researches, identification of the determinants of credibility in the media and its components by comparing traditional and new media credibility scales and building accumulative scale to test new media credibility. This approach was built on western researches using conceptualizations of media credibility, which focuses on four principal components: Source (journalist), message (article), medium (newspaper, radio, TV, web, etc.), and organization (owner of the medium), and adding user and cultural context as key components to assess new media credibility in particular. This study's value lies in its contribution to the conceptualization and development of new media credibility through the creation of a theoretical measurement tool. Future studies should explore this scale to test new media credibility, which represents a promising new approach in the efforts to define and measure credibility of all media types.

**Keywords**—Credibility scale, media credibility components, new media credibility scale, scale development.

## I. INTRODUCTION

CREDIBILITY occupies a significant importance in communication research as it represents the lifeblood of journalism and a goal of the news media among professionals, scholars, and public opinion. Without it, news organizations cannot fulfill the democratic duty of properly disseminating the truth to the public [1]. Previous studies have found that public perceptions of media credibility affect how they evaluate a wide range of covered issues and that individual evaluations of media credibility influence the level of their reliance on news media, which determines the amount of people's exposure to the news media, affecting positively the intensity of the media's agenda setting effects upon individuals [2]. Once the Internet joined traditional news media, it became widely supported by many advantages as immediacy, interactivity and above all, ability of transforming every individual into a potential online news disseminator bringing several professional standards challenges concerning new media credibility ranging from inadequate sourcing to misinformation and spreading rumors. While fairness is considered a hallmark of traditional journalism, bias is likely seen as a virtue by new media users because these platforms gain readers that may lack the objectivity [3]. One of the fundamental challenges facing scholars is to explain how participants in online communities use relatively limited information to form impressions of and relationships with

others. Unscrupulous individuals and organizations, for financial or personal gain, may misrepresent their experiences and qualifications in order to gain status within the online community. Therefore, there is a practical need to understand the theoretical basis of how users evaluate the credibility of user-generated content [4] and to determine factors influencing new media credibility.

## II. PURPOSE OF THE RESEARCH

The research aims at developing a new media credibility measurement, as the established credibility measure is outdated in the new context of digital media. Therefore, the main purpose of this study is to develop a measurement for new media credibility. Scholars who developed and enriched the existing media credibility measure test credibility of one specific dimension in specific contexts. There is a research gap of generalized media credibility measure. The rise of interactive new and social media makes the media environment more complicated. Scholars need to develop new measures for new media credibility to understand, qualify and guess people's attitude in new media communication. This study advances credibility theory through developing new measures in the context of digital media as previous endeavors on media credibility have not arrived at an agreement upon its conceptual dimensions. More importantly, not much attention was paid to developing credibility measures in the new context of digital media. The researcher combines the new attributes brought by new media with the traditional measures to establish a new set of credibility measures in the new media environment. Through analyzing the attributes and characteristics of new media as well as the virtual networked world they have created, this study develops generalized measures for different dimensions of new media credibility. Researches findings suggest the importance of credibility in influencing public opinion' attitude toward the media generally and new media in particular. So, we tried developing a valid measurement scale of new media credibility; based on defining the construct "new media credibility" and review past researches concerning media credibility; developing a conceptual model based on the past credibility-related literature; and developing a measurement scale for the construct new media credibility. The proposed model in this paper is based on careful review of credibility literature. An objective of this study was to propose a credibility design framework or a set of ideas, conditions, and assumptions that determine how communicating credibility on a new medium might be approached. The web credibility model, created based on the results of previous researches, provides a

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beginning for this framework. The model describes a complex set of involvement interactions that influence whether a website user exhibits a peripheral or central focus when evaluating credibility.

Given the continued importance of credibility in a new media era and challenges along with the lack of clarity associated with new media credibility components, a need exists to develop a scale focusing specifically on new media credibility, grouping different influential variables and adding a new one considering the particularity of new media. Credibility studies have constructed scales aimed at examining the factors associated with media credibility by addressing only selected variables. The purpose of this study is to create a valid and reliable scale to test new media credibility. Specific goals of the study include how each variable associated with credibility impact the overall credibility and whether they have the same weight. Based on previous researches, this study was built upon the existing literature on media credibility from the 1960s. By using qualitative analysis, credibility components analysis was necessary to gain a complete understanding of the phenomenon. We took the variables previously tested and proven effective, and by using critical analysis, it was possible to discover missing components on previous scales and build a new model.

### III. NEW MODEL, OLD DIMENSIONS

The proposed model is composed of four media credibility constructs including the new media credibility. At least three significant media credibility constructs must be considered when developing and evaluating communication credibility. These include source, message, and channel. This study seeks to specify the conceptualization of the dimensions of new media credibility. The credibility constructs for the study contains the traditional evaluative dimensions from literature (media channel, message, and source), and adding user characteristics and cultural-social context as a new variable missing in academic credibility studies. Although credibility is a complicated construct involving interrelationships among messenger, message, communication channels, and recipients, the most widely used credibility indices seek to measure only one of those attributes at a time. This study used credibility scales widely to simultaneously measure message and messenger, new channel and user credibility, and to add context as a new dimension to evaluate media credibility from a socio-cultural perspective. The proposed model includes components of traditional media credibility which represent the main dimensions of credibility scales. The model examines every determinant via the main three other components, so the result will contain four main variables for each determinant. The source will be tested and divided into four components: Source –source variable, source – message variable, source-channel variable and finally: Source-user variable...etc., they are all interacting within a socio-cultural context which needs more research and studies to determine precisely its construct. The same applies to a message which will be divided into four components: Message –source variable, message – message variable, message-channel variable and finally: message-user

variable...etc.

#### A. Source Credibility in a New Era Revised

Source credibility, the most widely studied variable by communication scholars, is considered a multidimensional construct composed of receivers' perceptions of a source's expertise and trustworthiness and goodwill [4, p. 5]. Identifying the source of information in the new media era represents a big problem because information can be published online anonymously or pseudonymously making users unable to evaluate source credibility. A source of a message can equally be "a person, a group, an institution, an organization so it became impossible for the user to determine a single author who is responsible for the information, knowing as 'source layering' phenomena, and makes it increasingly difficult to determine which source is responsible for the credibility of the information. [5] Elements of source credibility were evaluated according to Aristotle's notion of ethos. Three dimensions of source credibility influence the effects of a message: expertise, trustworthiness, and intention toward the "receiver". Teven and McCroskey [6] developed measures to assess perceptions of goodwill. [7] In 1986, two dimensions were added: credibility and social concern. Gaziano and McGrath's dimension of credibility was related to perceptions of trust and honesty as well as accuracy and the ability to separate fact from opinion, confounding between source and message scale, whereas the dimension of social concern addressed care for the audience. The study of source credibility has been also broadened to consider the web translating the traditional interpersonal dimensions of credibility to the new digital environment. According to Metzger et al. [8], website expertise may be judged by the site's reputation, the display of credentials, or the site's informativeness. Trustworthiness may be evaluated by the site's lack of commercial advertising or policy statements. Dynamism may be communicated through the appearance of the website by features such as layout or graphics. However, most studies on web source credibility conflate the distinctive credibility characteristics of the site, message, and source and focus on a general assessment of credibility. [9]

#### 1. Determinants of Digital Source Credibility

The Internet can be considered a source without a specific level of gatekeeping. Therefore, the levels of selecting source are now reduced to three: collective gatekeeping (website and bulletin board), individual gatekeeping (blog and home page), and unknown gatekeeping (Internet) [10]. In online environments, information from one source may vary greatly in credibility. This means that trusting this source involves taking the risk of encountering false information and distrusting it which means missing high-quality, valuable information. Burbules [11] maintains that one of the challenges in evaluating information on the web is that it is difficult to find an independent source of validation of the information provided. [12] Anonymous sources may be perceived, around the globe, as less competent or credible than they would be if they were identified. The use of anonymous

sources triggers suspicion about accuracy, fairness, trustworthiness, believability, and the overall quality of a news story. [13]

## 2. Source Credibility Model Components

The model includes components of traditional media credibility which represent main variables of credibility scales. The model examines every determinant via the three main other components, so the result will contain four main variables for each determinant. For example, source will be tested and divided into four components: Source –source variable, source – message variable, source-channel variable and finally: Source-user variable. They are all interacting within a socio-cultural context which needs more research and studies to determine precisely its construct.

## 3. Source-Source Dimensions

Source type: Researches discovered that viewers perceive stories with official sources as more credible than stories with unofficial or citizen sources [14]. Sources' titles, coupled with the visual cues connected with official or nonofficial status played the largest role in helping the viewer's determine credibility more so than race of the source or perhaps story [15]. Credibility research was mainly conducted in U.S context where official sources were perceived more credible. Journalists believe that official sources add trustworthiness to a story. The citizen sources were viewed as credible, less than officials. The audience feels official sources make a story more believable than sources similar to themselves or their neighbors. [16] The author makes also a difference in judging credibility. Research results indicate that community news audiences more supportive of the roles that professional journalists play compared to the roles that citizen journalists play in terms of delivering news and information, interpreting public issues and problems, and mobilizing ordinary citizens to engage in community activities. [16, p. 726] Previous studies showed that personal sources create a sense of "distributed trust" arising from an online social community. This is also consistent with the "bandwagon heuristic" used in credibility evaluation, whereby people attribute higher credibility to sources that others like when it implies collective endorsement. [17] According to a study, family and friends were always the most credible sources and politicians were the least credible sources on Twitter. [18]

Source Gender: Researches show that there is a significant difference in perceived source credibility between the message attributed to a male and that message attributed to a female. [19] Results about the effect of sex were contradictory. Goldberg et al. [20] concluded that males were perceived as more credible than females regardless of topic. Conflicting results were reported by Michel, who demonstrated that the perceived credibility of males versus females was dependent upon which sex was normative for a specific topic area, which indicates that the source and message interacted to affect perceived credibility. [21] Expertise: It is associated with the source's ability and skill to generate messages, technical and practical competence. Whereas trustworthiness addresses the

level to which an audience believes in its validity. Farr [22] demonstrated that both technical and practical competencies are relevant to the measurement of perceived expertise. Together, they contribute to the reputation of a news organization contributing to transferring credibility assessment from the source to the content. [23] Technical competence is skillfulness; it is achieved through training, reading, formal education. A technically competent expert will often be perceived as being in a different social, power, or authority level than those with whom they interact. Practical competence, or experienced expertise, is developed through direct observation or participation in an event. This type of competence is developed through practice, experience, or trial and error. Studies confirmed that when practical competence was low, technical competence had little effect, but when practical competence was high, the addition of technical competence greatly increased perceived credibility [24]. Source status: Studies reported that audience who perceived the source as higher in status than themselves during a persuasive speech rated that communicator as more credible than those who perceived the communicator as lower in status than themselves. Kelman and Hovland [25] found subjects are much more influenced by a message advocated by a court judge (high credibility source) than one by a criminal (low credibility source). [7, p. 34] People rely also on source's reputation, their status as an "official" authority, or their positions, titles, or roles as factors contributing to credibility evaluations. In a new interactive era, source reputation might be measured by using numbers of fans and followers, Sundar [26] argued that because of the excessive information online, today's youth depend more and more on cues/markers transmitted by technological features to make snap decisions about the credibility and quality of information they consumed. Results indicated that both dimensions of source credibility—competence and trustworthiness—had an inverted "U" curvilinear pattern with the number of followers. As for source "attractiveness" and "dynamism", it becomes less persistent due to new technology, which made communication less physical and lessening the influence and significance of the appearance in a communication process. But the technology also added more new stimuli to assist computer-mediated communication, such as, emoticons and interactive features. Therefore, the appearance of an individual source still mattered when assessing the source's credibility. [18, p. 66]

## 4. Source-Message Dimensions

Topic: Eastin [27] found that a source made a significant difference in message credibility evaluation for a health topic that was unknown to the participants, but not for one that was known. [10, p. 75] Story type: Research results show that viewers perceive hard news stories as more credible than soft news stories. Story type can also dictate source affiliations; with hard news stories more likely to adhere to Sigal's [28] routine-channels focus on officials. Soft news tends to be less routine and more enterprise, and thus, it is more likely that journalists will use fewer elite sources [15, p. 144].

## 5. Source-Channel Dimensions

New media, especially social media platforms, provide a lot of new cues for users in terms of source credibility, such as a verified badge, followers, and followings. Without integrating these new technology affordances into source credibility measure, we cannot attain an accurate understanding of what constructs new media source credibility [18, p. 9]. Studies indicate that people assign different levels of credibility to media institutions than they do to individuals. [29] Users reported significantly greater behavioral intentions toward information attributed to a website than to a blog, a homepage, or the Internet. The effect was partially mediated by the perceived level of editorial gatekeeping and the perceived level of moderator gatekeeping. Participants perceived that information sourced to websites was controlled by editors more so than that from the other selecting sources. Blogs and home pages were considered lacking both editorial gatekeeping and moderator gatekeeping, with uncertainty characterizing the nature of gatekeeping in the Internet condition. [30] Interactivity cue: Great activity engendered great dynamism, which was related to high credibility in traditional source credibility measure. The interactivity afforded by new and social media technology not only enables users to customize their own websites but also supports the interactive activities between sources and their audiences. A study [31] has shown that the recency of updates impacted source credibility on Twitter [18, p. 56]. Steinbruck et al. [32] compared trust ratings from three websites that were identical except for the photo variable, the site with the photo and caption was rated most trustworthy; the site with the photo only was rated second; the site with no photo was determined to be the least trustworthy. Other researchers have also demonstrated that the presence of photos improves trust and credibility. Riegelsberger et al. [33] study showed that the presence of the author's photograph improved credibility with readers of online articles and photos of real bank employees on financial institution's web pages improved trust ratings. [34] When it came to pictures, a study found that a formal picture of an author on a website led people to believe the article more than an article with a more casual picture of the author beside it. [35]

## 6. Source-User Dimensions

In the new media system, the standards people relied on to assess source credibility have been changed. From a user point of view, source credibility can be divided into four types; presumed credibility, reputed credibility, surface credibility, and experienced credibility. Presumed credibility is based on the general assumptions held by a user. Reputed credibility refers to how credible a person thinks a piece of information is, based on the recommendation of a third party. Surface credibility is based on a superficial examination of the information. Experience credibility is based on an individual's experience with an information source over a long period of time. An author may add to the site reputed credibility by having professional titles identifying the individual's area of expertise. When evaluating the reputation of a website's

author individuals use several filters. Individuals may be interested in the credentials that a website author may have. Individuals may also judge the credibility of the website author by determining whether the author is affiliated with any organizations that the individual deems credible. [12, p. 22] Source-user similarity: Early research in persuasion operated under the assumption that communicators that are perceived as similar to their audiences are considered more credible, and thus, more likely to persuade. Other recent communication studies have explored the relationship between racial affiliation and perceived credibility of ethnic group news coverage; suggesting that group identification plays an important role in credibility assessments. [36] Members of a minority group (numerically) are more likely to trust sources that are similar to them. Phinney [37] found that Blacks are more mindful of their distinctiveness than Whites. Also, social judgment theory posits that a source with the high status of the individual reference groups will increase the range of assimilation" with discrepant communication. [7, p. 35] Literature revealed that the perceived strength of social tie between a source and receiver affected people's judgment. Thus, the social tie strength should be an independent attribute of a source, which could be used to rate perceived credibility. [18, p. 65] Metzger et al. [38] found that two primary heuristics, social confirmation and expectancy within contexts, guided users' perceptions of credibility online. Social confirmation holds that the opinions and actions of others can either bolster or negate the credibility of a source. For example, Sundar and Nass [39] found that users liked news stories shared by other users more than those selected by professional news editors, and believed them to be of higher quality. Sundar [40] proposed that this provided evidence of a social consensus effect online. Expectancy within contexts holds that a violation of the contextual norms will result in a negative evaluation of credibility. [4, p. 7] Perceived intention: The degree of trustworthiness of a source is often a matter of the audience's perception of the intentions of that source. If the audience thinks that the communicator (even one of low prestige) does not have a hidden agenda, the message will be more persuasive. If a source establishes that he is objective, non-manipulative, and has nothing to gain by his actions, he has a greater probability of developing a feeling of trust among the receivers of the message. [23, p. 13] A source could be perceived as having the best of intentions, but poor information perceived as an unreliable source. Conversely, a person can be perceived as an expert on a specific topic, but also perceived as having ulterior motives, which reduce perceived credibility [41]. Status: Source credibility can be affected by social status cues, people often believe most successful people to be more credible [41, p. 19]. User Prior Knowledge: Research found that the more prior knowledge, the more issue-relevant thoughts occur, the more elaborative cognition, and then the less influence of peripheral cues (such as source likability) [18, p. 60]. Issue involvement: Chaiken [42] argues that source credibility significantly affects persuasion under conditions of low, but not high, issue involvement. When an issue is low involvement, heuristic

cues such as source credibility exert a strong impact on receivers' attitudes. In contrast, if the issue is high involvement, only message characteristics such as argument quality influences attitudes. Meanwhile, the attitudes of low involved receivers are more strongly affected by the source factors than by the argumentation elements [7, p. 40]. Propensity to trust: Researches show also that when the perceived need for credible information is higher propensity to trust is less influential, as trust is better calibrated to the actual credibility of the information as a result of a more profound evaluation of credibility [43]. As for demographic variables, results showed empirical evidence that readers' socio-demographics influence their level of trust in article content authored by citizen writers [44].

### *B. Message Dimensions in a New Media Context*

The message represents an important, semi-neglecting, dimension in credibility studies. Digital theorists rate it more important than the source in the current new media environment. In earlier research, it was noted that even a highly-credible source could have no added effect on persuasion if the message was fully accepted on its merits. [45] The quality of web content forms an important dimension of the credibility of online information and message credibility. For example, if a website's content indicates that it has not been updated recently, this could result in a user perceiving the information available on the website as less credible. [5, p38] Information overload from these new technologies means insufficient bandwidth for storing information about both the source and the message. People could be considering the message without thinking about the source, and vice versa [46]. The information provided in newer, online channels often suffers from a relative lack of professional gatekeepers to monitor content, and thus, lacks some of the traditional markers used to determine source credibility. The gatekeeping function, online, shifted from producers of content to consumers of the content. This leaves consumers responsible for making decisions about the perceived credibility of information they consume online. [47] The researchers proposed a multidimensional scale to test the trust in information. In the proposed model, trust in information is influenced by trusting its source, which is in turn influenced by trusting the medium of this source. Moreover, trust in the medium is influenced by the user characteristics and socio-cultural context as well. Researches show that evaluations of the credibility of news media depend on factors such as perceived norms of fairness, accuracy, and bias. The literature suggests that people perform a complicated mental calculus when assessing the credibility of news. They consider not only the message and the source of the information but also the way in which the information is presented. Thus, perceived credibility can be broadly defined as the assessment of believability and trustworthiness of a message based on a multitude of factors involved in communication, such as message source, message content, and the medium through which the message is presented. [48] Digital messages are often repeated by multiple sources (by

retweeting or reposting) or across multiple outlets (reposting a Facebook post on a personal blog). Therefore, readers do not always know the original source of the information. [46, p. 2] In the proposed model, evaluating message credibility is based on semantic and technical cues in the information and evaluating source expertise in the topic, finally user engagement with the story, and then characteristics will filter user perceptions and credibility.

#### 1. Message-Message Dimensions

Study results show that when a message is unambiguous or provides information both supporting and opposing a conclusion, the processing of message content tends to have a significant influence on message evaluation, whereas the processing of source cues tends to have little influence on message acceptance. However, when information is ambiguous, people rely less on the processing of message content to evaluate a message and more on source credibility cues to judge the message validity. [49] Gunther [50] confirmed that people would view a certain story or channel as less credible when the issue being covered is of high controversy, research results showed that the high controversy videos were viewed as less credible than the low controversy videos, regardless of the source. [51]

Positive and negative stories may make differences. Fico, Richardson, and Edwards reported that news stories that favor one side of an issue over the other tend to be rated as biased, which in turn had a negative impact on the credibility attributed to the news outlet publishing told stories. Likewise, stories deemed poorly written and uninteresting are also perceived as less credible [48, p. 455]. A summary of credibility research identified the dimensions of message credibility that include message structure, language intensity (often defined as the use of opinion), the inclusion of evidence, and message attractiveness [52]. Studies indicate that the use of emotional language may have more impact than the perceived character of the source, threatening language may be a major influence on readers' reactions [53]. Language intensity: Findings suggest that adding opinion to a news story weakens the author's perceived expertise [54]. Evidence: Researches indicated that the absence, the presence, and the quality of evidence in a message are key predictors of perceived message believability. People were more likely to agree with a message that contained supporting arguments, but the introduction of evidence is not always sufficient to cause a change in belief. Luchok & McCroskey [55] showed that introducing faulty evidence in a message will lead to the lower perceived credibility for the source of that message. [56] Zillman [57] reported that quotes in a message are evaluated as more credible and of higher quality than paraphrases in a message. Sunder [58] added that this characteristic appears to be transferred to online stories since people evaluate quoted stories more highly and perceive quote-laden stories to be better in quality. Disclaiming language is not perceived as positive as non-disclaiming language and that users of disclaiming language are not perceived to be as attractive as users of non-disclaiming language [59]. Rules of grammar,

readability, uniqueness, context and plagiarism filtering are likewise critical in ensuring a high level of message quality [60]. Journalists also are taught to make as few mistakes as possible, under the assumption that audiences are less likely to believe messages and messengers that make easily caught errors. Meier [61] found that errors in a newspaper story clearly hurt that story's believability, but did little to hurt the credibility of the newspaper. But Slater [62] noted that what a person thinks about the believability of a message will influence what that person thinks about future messages from that messenger. Factual errors damage a newspaper's reputation and may seriously harm people mentioned in the stories. [56, p. 109] Journalists also are taught to make news messages as interesting as possible. Audience prefers a story filled with anecdotes and examples over harder-to-read stories filled with numbers and data analysis. Word choice, the content of the message, humor, and equivocation affect the perceived credibility of message sources. Carbone [63] reported that a source that used diverse vocabulary was rated more credible than a source that did not use diverse vocabulary. Results [64] showed that low lexical diversity was associated with lower perceived credibility and that high lexical diversity was associated with higher perceived credibility. Reinsch [65] concluded that the communicator who used an extended metaphor and simile while explaining a political campaign was rated higher on perceived credibility than the source who did not use these devices. Taylor [66] found that a speaker who used humor decreased his perceived credibility. [67] Professional writing quality (complete, concise, consistent, and well-presented) contributes significantly to perceptions of message credibility, as does a sense of fairness. [46, p. 16] A final predictor of message believability is the amount of personalization in a message. King and Tester [68] showed that tailoring information to users can be a successful strategy to persuade an audience. Personalizing a message can be difficult for mass media communicators. Print-based news organizations are using online approaches to "personalizing" the entire news product by allowing online news consumers to select all or some of the stories they want to push to their screens. The industry calls it "The Daily Me". [56, p. 107] Also, information type represents an important factor in the assessment of Internet information credibility. Users assess credibility differently for commercial, entertainment, news, and reference (factual, non-news) information. [69] In hard news stories people cared more about whether the information was correct than they did in the stories that tended to be more feature-like. [70] Neutral news was scored as more credible than both good news and bad news, bad news was the least credible message content. [70, p. 71]

## 2. Message-User Dimensions

Issue saliency plays a role in what a receiver believes about the message and messenger. Psychologists call this the "prior belief effect," which states that it is cognitively difficult for people to suspend previously held beliefs in order to independently decide whether a message is credible. People

are less likely to work hard to disagree with the messages they agree with, but oppositional messages are subject to "disconfirmation bias," which means people will search their memories to recall information they already have that can refute the oppositional statement [56, p. 110]. Story engagement: Providing additional information in the form of hyperlinks and writer information serves to engage the reader more in the story because it gives additional information [71] so easily accessing different sources and messages related to the topic.

## C. New Media Channel Credibility Scale

The internet has become a popular source of information, particularly for young adults who have grown up with the World Wide Web. Due to its structure as a free and open source of information, lacking regulation, individuals should be able to sort through a multitude of information varying largely in quality and accuracy [72]. Studies of credibility in computer-mediated contexts have demonstrated that credibility can be influenced by both visual and textual factors, including design look, site structure, and usefulness of information [73]. Studying credibility perception in an online context shows that users make choices about websites as a first step to online information seeking. In this sense, a website is considered as the first-level source playing the role of proxy for the information. [5, p. 37] After that, a perceptual process occurs to decide choices and controlling surfing web behavior. Using earlier practical experience with a particular website may serve as a cue for the credibility of the current information. If someone has numerous positive experiences with information from a particular website, this user may choose to trust new information from that source without actively evaluating its credibility. The opposite is also true: when one has negative experiences with a source, one may choose to avoid new information from this source without even looking at it at the semantic or surface level. [43, p. 568] The Internet's ability to facilitate user anonymity poses problems for determining source credibility, as it is relatively easy for web users to misrepresent themselves. [74] So it is necessary to determine factors that are unique to the online environment credibility and channel specificity. Burbules [75] suggests five characteristics of the online context that might influence website credibility assessment. These are 1) the vast scope of the content, 2) the self-referencing nature of the content, 3) the frequency of content changes, 4) the lack of defined credibility markers in the online environment, and 5) the ability to have multiple link sources (one news article could be linked to from both a high and low credibility web site). [76]

### 1. Channel-Channel Dimensions

Credibility is determined by the interaction of three factors: source, message, and receiver. Although message and receiver characteristics have received significant amounts of attention, much less attention has been given to the medium used to transmit the message. On the World Wide Web, source and message credibility refers to a number of factors, such as

professionalism of its overall image, the perceived trustworthiness of the source, and/or the perceived trustworthiness of the information itself. Studies show that website users express the importance of privacy policies, quality service, contact information, search function, and ease of use as factors that increase a web site's credibility. They also list advertisements, the lack of updated material, broken links, and typographical errors as factors that decrease a site's credibility. Often, the overall visual design of websites is considered a key factor in attracting and keeping visitors on the site. Jacob Nielsen [77] also noted that websites could communicate credibility through visual design itself. Others, however, see visual image as a secondary factor that affects credibility and persuasion in a general context. [78] Design quality could not compensate for low credibility. [79] According to Fogg [80], website credibility assessment is a process that requires two steps: 1) the user notices website elements, and 2) the user judges the element(s) noticed. It might be reasoned that if the elements that represent credibility to web users are unnoticed, those elements have no impact on the assessment. [76, p. 4] There is a variety of criteria that experts counsel individuals to employ in order to assess the credibility of information retrieved from online sources and avoid information of dubious quality. These include currency of information, expertise and identification of source, availability of contact information, ability for information exchange or interactivity, statement of purpose of the site as an indicator of bias, evidenced-based content and attribution of evidence source, and links to external site information. Results particularly supported the importance of response time and user involvement attributes in interactive website development. In addition, people appeared to think more critically about static web content than about web forum content. [56, p. 114] Navigability refers to ease in finding information. Navigation can be done through menus, links, search engines, and so on. Web sites that are easier to navigate are perceived as more credible. Functionality refers to the operations that people are allowed to do within the website such as search for past content (archives) and search for information within the website (search engine). Providing this functionality on a website increases its credibility. Download speed: When people perceive that a website takes a long time to download, the credibility of the website diminishes. [81] The suffixes of the URL address serve also as cues to assess the credibility of a website. Web site addresses with suffixes ".com" have less credibility than Web sites with suffixes ".gov", ".edu", and ".org". Awards displayed on the website are other markers that people use to judge the competence of a website. Also, the presence of contact information, such as address and phone number on a website, helps establish the legitimacy of the organization. [81, p. 7] Media competition: Studies comparing media credibility found that there is a big shift toward new media, especially from new generation. With the widespread availability of online news sources, the opinions audiences hold regarding the credibility of traditional media may have been altered. [82] Channel credibility is related to media "richness," that considers how

communication channels vary in their ability to fit a task. The Internet has created a new surge in credibility research, it has the attributes of all of the other news media channels: It can handle text, images, audio, and visual simultaneously. Also, limitless web has helped puncture the broadcast constraints of time and newspaper constraints of space. "Publishing" on the web is exceedingly cheap compared to the costs of printing and physical delivery. It is not surprising, then, that news broadcasters and newspapers have developed websites that duplicate and complement their traditional operations. Early researches on web credibility showed that newspaper stories were perceived as more believable online than stories published by non-journalistic websites. Later, studies showed that "politically interested" online users judged online media to be more credible than traditional media— but both were seen as "somewhat credible". [56, p. 116]. The inclusion of comment boards, ratings, social share, and recommendations are influential factors that increase the number of users to news media sites and amount of time spent interacting with site sections. Feeling a psychological sense of connectedness with other visitors that share common factors leads to increased brand loyalty and decreased user defection to competitor sites. [60, p. 44] Transparency: the greater channel transparency will lead to greater credibility, [56, p206] Fogg found that a website that opens itself to direct contact from web users' shows confidence that its information and services are fair, unbiased, and honest. Fie specifically noted that websites can boost their perceived believability by including phone numbers, addresses, and other identifying information about site owners. [56, p. 129] Related to the messenger attribute of "dynamism" is the assumption that people may be more likely to believe websites that are easy to navigate, load quickly, and appear to have been professionally coded and designed. Canadian researchers [83] found that users take about 50 milliseconds to make their first decision about the quality of a website, a decision based on looks. Results found that using more than one presentation form in blog content made college students more likely to trust the information. College students had the lowest trust when the text was the only the presentation form. The use of links to other sites, the use of videos, the use of photographs, and the use of audios made college students more likely to trust the information on blogs. For known organizations, links to or from unknown organizations hurt the known organizations' trusts, from that organization to a known organization, or links to the unknown organization from a known organization, had a positive impact on trust. [84] Verification: Individuals are more concerned with implicit verification since that would verify the information by using several sources. [12, p. 132] The user experience is positively related to the degree of verification employed that less experienced users are even less likely to verify information. Those who might benefit most from verifying online information are doing so the least. Consequently, as new users discover the internet as a source of information, they may not invoke the tools that would help them achieving high Internet literacy. [69, p. 531]

## 2. Channel-User Dimensions

That trust in the Internet is primarily influenced by experience. Such experience with the Web means that users have interacted with various online sources. The experiences in these interactions are accumulated into trust in the Internet as a whole. Trust in a medium can serve as a baseline to evaluate the credibility of this website, as well as the information on it. The Internet has been shown to be more credible (political information) and less credible health information than traditional media. [43, p. 568] A study also showed that the more time a person spends with a medium, the higher the perceived believability of that medium. The literature of credibility research has taken a painstaking look at demographic variables that can be seen as predictors of perceived credibility. People with higher socioeconomic status are more likely to believe newspapers than television. Another predictor is age. The more educated and older, the more likely they believe newspapers than television for news. Younger people are more likely to believe the news reports they read or watch on television, and on the Internet. Gender also may play a role in what a person believes, at least online when there are few other clues that people heuristically use to make believability decisions. When researchers built a website whose only difference was the gender of the site author, men rated both sites higher in credibility than women. [56, p. 125]

**Involvement:** People who are highly involved in the topic are less likely to believe mass media and messages on that topic. [56, p. 121] Although media skepticism leads people to shun mainstream news outlets in favor of non-mainstream ones, evaluations of competence, timeliness, and dynamism of news outlets influence perceptions of their credibility [48, p455]. Another study provides an example of the “hostile media” effect described by Vallone, Ross, and Lepper [85]. While many people across the political spectrum believe that the news media is biased, most believe that the media are biased against them. The effect seems stronger with Republicans than with Democrats, and the effect is “positively related to ideologically like-minded individuals” and suggests the power of social networks. [56, p. 123] **Interactivity:** Twitter and Facebook are currently two of the most dominant social networking sites that continue to gain popularity by users in all age groups. Social media spheres are becoming spaces for audiences to share, discuss, and contribute to the news. [14, p. 14] There was a significant positive relationship found in the perceived credibility of the stories, and engagement in the stories. Findings suggest that including pictures of writers on websites is important. We live in a visual society and high importance is placed on personal appearance. Therefore, it should not be surprising that such high importance was placed on the picture of the writer—even more importance than on the information about the writer—when forming credibility judgments [84, p. 102]. **User activity:** Students who had blogs and who read other people's blogs were slightly more likely to trust the information on blogs than those who did not have blogs and who did not read other people's blogs [86]. People who subscribe to a news messenger are more likely to perceive that

the messenger (and its messages) is more credible than people who do not subscribe. Previous researches [87] argue that credibility is a reason why people buy news products created by news messengers. [56, p. 116] On the other hand, it is possible the credibility ratings are more a result of the users “lack of critical thinking, instead of” familiarity with the Internet. A lack of critical thinking could explain the close credibility ratings between the three mediums. [88]

## 3. Channel-Source Dimensions

People trust more static sites than dynamic. Gatekeeping play an essential role in credibility assessment because the prominent difference between a website and a blog or a homepage is that information sourced from a blog and a homepage is basically controlled by individual gatekeepers, whereas information on a website is controlled by collective gatekeepers. [10, p. 82]

### *D. User Credibility Scale in New Media Era*

Fogg and Tseng [89] proposed three models for evaluating computer credibility: binary, threshold, and spectral evaluation. In binary evaluation, users perceive the product as either credible or not credible—there's no middle ground. In threshold evaluation, if the user perceives that a product falls below a certain threshold it is not credible and if it falls above a certain threshold it is credible, if it falls in between it is perceived as somewhat credible. In spectral evaluation, there are no black or white categories, only shades of gray. This usually happens when the user has a high interest in the information he/she is pursuing and is also very familiar with the subject. The users' use of the above models depends upon the type of information seeking situation users find themselves in. The threshold model is the most common. [84, p. 25] Inch and Warnick [90] argued that a speaker's credibility does not result from intrinsic characteristics of the speaker, but it results from the recipient's impressions and beliefs about the source when the speech is spoken so as to make us think the source is credible. [91] Accordingly, the user role becomes more critical, especially in a new media ecosystem.

### 1. User-Source Dimensions

Source may be influenced by factors related to the user. A study [92] claimed that “people who find data inconsistent with their beliefs tend to perceive sources as less credible”. [14, p. 11]

### 2. User-User Dimensions

Judgments of news credibility are in fact affected by surrounding opinion commentary. Results confirmed that news credibility was influenced by the context in which the story is read. On both Facebook and Twitter, users have the ability to write comments on posts. In addition, on online news websites, users have the ability to comment on news stories and create discussions. Due to surrounding commentary on social networking sites or news stories, users may form judgments in regard to the story or its credibility which may influence their own personal opinions. Differences in opinion posted by others may affect an individual's feeling



in regard to credibility of the news source or news stories. [14, p. 12]

**Media reliance:** Previous studies showed that the credibility of a medium is positively related to how often individuals use it. However, Rimmer and Weaver [93] pointed out that reliance was a stronger predictor of credibility than general use measures because how credible one perceives a medium is more linked to individuals' attitudes toward the medium than the simple frequency of media use. Recent studies have found that reliance on blogs appeared to be a strong predictor of blog credibility. The findings suggest that blog users judged blogs as credible not because of information were necessarily perceived as fair, but because it was in-depth. Blogs seem to be alternative sources in which users can find personal, opinionated and thoughtful analysis of current issues or events often not covered by the traditional news media. [94] It is unclear whether it is using the medium that increases perceptions of credibility or whether it is existing perceptions of credibility that inspire greater usage. It is quite possible that perceptions of credibility and usage are mutually reinforcing, results of previous research suggest that individuals tend to use the media that they perceive to be the most credible. [95]

**Perceived opinion climate:** People evaluate news messages consistently in the direction of the perceived public opinion, and these results can be explained by the bandwagon type of the comparison process. Others' comments were found to be powerful enough to influence the evaluation of the news message, and this impact occurred when the comments were used for the cue of public opinion perception. People tend to use others' comments on online news messages as a representative cue for their estimation of the general public's news acceptance, which affects their own evaluations of the messages. Such users' comments can function as a cue for perceiving what the majority public opinions are, even though they are often not representative voices of the majority public. When people lack statistical data or other empirical information in everyday situations, they are dependent on the opinions provided by their fellow citizens. They reason that, if many other people say that a certain viewpoint is valid, then it is probably correct and judging an issue based on public opinion is considered rational behavior. [96]

Earlier studies of Internet credibility found some influences of demographics on the perceived credibility of online sources. Flanagan and Metzger [97] found that men tended to judge online sources as more credible than women, and Johnson and Kaye [98] also found that young, less-educated females rated the Internet as credible. However, as Internet users have become demographically mainstream, the influence of demographics has declined. [99] Some argue that contrary to expectations, none of the demographical variables significantly predicted the credibility of online news media. [94, p. 299] Some variables are more influential than other, years of education correlated positively with the accuracy of cognitive trust perceptions and negatively with gullibility errors. [100] Age is a significant predictor of source credibility and message persuasiveness as well. Previous research on the relationship between source credibility and age has varied. Eastin [101]

found that the reader's age was negatively correlated with the perceived credibility of online newspapers. Similar studies have also found that the older the participant is, the less likely they are to view the source as credible. However, Freeman & Spyridakis's [102] study examining the credibility of online health information found a positive relationship between age and perceived author credibility; therefore, showing that the older participants had higher ratings on the article and the authors' expertise than younger participants. [73, p. 81]

Results indicate that people under the age of 25 are not as critical of independent, online journalists as the older generation. The younger generation might become more educated and more thoughtful about their media choices through natural maturation. [88, p. 50]

With regard to the Internet, Johnson and Kaye [103] found that young, less educated females considered online sources as the most credible. As more people were increasingly becoming part of the web population, however, demographic variables were found to have less effect on online credibility in the US. [92, p. 290]

Despite the fact that the number of studies exploring the correlation between media trust and other factors is not high, their findings are inconsistent. While Jones [104] found that women trust the media more than men, Gronke and Cook [105] reported that men tend to trust the media more than women. In contrast to both studies, in Bennett et al.'s [106] study, gender was not a significant predictor of trust in the media. Similarly, education was a negative predictor of trust in the media in some studies and a positive predictor in others [107], [108]. Considering the design of the site, Fogg et al. [109] found that younger people were more critical if a site's content was amateurish. They also found that older people reacted more positively to a website that had markers of expertise and trustworthiness. [84, p. 44]

**Prior knowledge:** Users relied mostly on the consistency of information with their prior knowledge; content that violated prior knowledge was considered non-credible. [110]

**Media skeptics** are less likely to trust the mainstream news media because they are suspicious of common journalistic practices. It is not simply that media skeptics are more critical of all media; rather, they are more critical of mainstream news than they are of alternative news outlets. This conclusion implies that media skeptics may find refuge in citizen journalism, seeking out alternative sources of information in reply to their critical stance toward the mainstream news media [48, p. 465]. Individual characteristics related to politics, namely political involvement and attitude toward politics, were found to be significant antecedents of online credibility ratings [111]. Ideological differences did influence people's perception of believability in a specific news media outlet, with demographic variables controlled, political ideology significantly predicted believability perception of individual news outlets [112]. Previous studies suggest that involvement with politics is the most powerful predictor of people's perception of news credibility. [113] Particular beliefs could also bias individual's comprehension and memory for text, particularly if they know little about the topics being described, as evidence shows that low- knowledge readers are

likely to selectively recall text content that is consistent with their views [112, p. 357]. Studies demonstrated that similarity between a source and his receiver affects the receiver's perception of the source [114]. Meyer, Marchionni, and Thorson [115] showed that coorientation, or perceived similarity between the audience, the author, and each other's attitudes, predicted expertise and source credibility ratings for news stories written in typical "objective" or balanced formats. Oyedemi [116] found some evidence for a link between perceived attitude consistency with media brand and credibility ratings of both the brand and its messages. [117] Furthermore, individuals who routinely obtain news from partisan sources are more likely to selectively seek out sources that they know to be consistent with their beliefs, which tends to increase the extremity of their views. Thus, an overreliance on the consistency of information content with one's beliefs, in contrast to prior knowledge, could result in distorted evaluations of credibility.

#### IV. CULTURAL CONTEXT

One weak point in the credibility literature is the lack of testing cultural context effects in credibility research in spite of its fundamental role as a mediator in media effects. Some research previously noted supports this contextuality phenomenon and seems to imply that the actual factors used for assessing credibility will vary given different contexts. [118] Socio-cultural context represents an important determinant in shaping media credibility across nations. Unfortunately, almost all of studies originate in the U.S. context, which reflects regime and climate where people use special criteria in judging media credibility and these criteria vary widely from country to another. For example, U.S people use to trust more official sources than a citizen or alternative sources, which contradict with people living in underdeveloped countries, where media skepticism prevail, and official have a very negative image because of their dictatorship behavior, corruption and lack of expertise. Public opinion in Authoritarian regimes perceives media credibility in a different way in comparison with a democratic country. For example, the role played by new media in so-called Arab spring countries, reflects a high dependency and credibility in these means comparing with western countries, the USA especially, where it does not have the same credibility, and research confirms that traditional media credibility is higher than new digital one. In other words, people in the western free media system tend to perceive traditional media as more credible, while other people may turn to the Internet for more credible and balanced sources because they do not trust the government-controlled traditional media [94, p. 286]. The most cross-cultural credibility study is the World Internet project by UCLA [119], which compared 10 nations on how reliable and accurate they perceived the Internet shows that Internet scores were higher for more repressive regimes, indicating that people in those countries do not trust their national media and use the Internet to seek out more reliable sources outside their country [120]. Regarding media credibility generally, there is a big difference between

democratic and non-democratic countries. For example, Chinese believe that their government's censorship of a medium actually lends greater credibility to that medium. This view is consistent with the philosophy of Chinese leadership which maintains that it is the government's paternalistic responsibility to serve as a watchdog to ensure that media information is accurate and serves the public's best interest. Of course, this conceptualization runs directly counter to Western democratic models which view the media as the watchdogs over the government. In Chinese, however, censoring is synonymous with checking and confirming. They perceived censoring as a safeguard rather than a threat to media credibility [95, p. 65]. However, there is global agreement around some determinants of media credibility, some message characteristics, such as the use of anonymous sources, represent a credibility cue across cultures [13, p. 656]. As for economic status, studies results confirm the fact that the associations between media trust and economic development and democracy became insignificant when controlling for postmaterialism implies that people's trust in the media is lower in prosperous and democratic societies, because the postmaterialistic culture in such societies makes them more critical of media institutions [121]. Within society, at the national level, research indicates that young web users, in particular, consider the Internet equal to or even more credible than the traditional media. Flanagin and Metzger [122] found that college students, compared to the general population, rate information online as more credible, although they were less likely to verify the information they find online. Similarly, Kang [123] found that young people generally hold positive attitudes toward online news. [67, p. 16] Difference persists in routine versus crisis period; the reporting bias becomes more salient in the minds of publics in times of crisis because organizational responses to a negative event increase public scrutiny [124]. In crisis and disaster situations the accuracy, scope, credibility and timeliness of media information depend on relationships between journalists and emergency managers. In the chaos of an unfolding disaster, this relationship relies heavily on trust [125]. The sex of the communicator has also been related to the perceived Credibility, influenced by cultural context. Males were perceived as more credible than females during a persuasive message [126]. Whittaker and Meade [127] collected data in Brazil, Jordan, Rhodesia, India, and Hong Kong. They found that when a political message was oral, males were rated as more credible than females in Brazil, India, and Hong Kong. The survey research of Richmond and McCroskey [128] revealed that males were preferred over females as opinion leaders on the topic of political events. However, females were chosen as opinion leaders on the topics of Fashion and movies [67, p. 16]. Also, results show that the dimensions of subjects' perceptions of media characteristics bearing on the construct of credibility will differ significantly from a public context to an interpersonal context. [121, p. 21]

#### V. LIMITATIONS AND RECOMMENDATIONS

The paper contributes to media credibility research by

giving a broad theoretical approach to evaluate new media credibility. Future research must test empirically the proposed model. The paper suggests that a more accurate measure of credibility should include measures for context credibility as well as for different variables forming new media credibility. One of the keys to online news credibility, and media generally, lies in the study of context effects. Only a few studies have used psycho-sociological context, and almost all of these studies originate in the U.S. context, which deprives us from examining important factors, especially political one, such as propaganda usage influences. American studies concentrate more on a topic such as health and economic, it neglects important topics which represent a core challenge for media credibility, such as human rights, minority rights, discrimination, corruption, international struggle...etc. We must also consider audience technology literacy within a cultural context and technological gap between societies. Research results suggest that negative information has a stronger effect on consumers than positive information, [129] so we need more in -depth studies to examine other factors such as message repetition role in building credibility and argument order within the message. It may be worth looking at how a user's perceptions of credibility change over time. Also, further studies might include factors that destroy credibility as well as those factors that build it.

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