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Understanding Web Credibility: A Synthesis of the Research Literature*

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Abstract

As more of our communication, commerce, and personal data goes online, credibility becomes an increasingly important issue. How do we determine if our e-commerce sites, our healthcare sites, or our online communication partners are credible? This paper examines the research literature in the area of web credibility. This review starts by examining the cognitive foundations of credibility. Other sections of the paper

* Portions of this paper were presented at the Symposium on Internet Credibility and the User, held in Seattle in April, 2005. No proceedings of the symposium were officially published.

examine not only the general credibility of web sites, but also online communication, such as e-mail, instant messaging, and online communities. Training and education, as well as future issues (such as CAPTCHAs and phishing), will be addressed. The implications for multiple populations (users, web developers, browser designers, and librarians) will be discussed.

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1

Introduction

The diversity of Internet communication and content is celebrated as one of its strengths. We receive e-mails from friends, family, colleagues, and strangers. We read web pages from schools, non-profit organizations, corporations, and governmental agencies. We take part in online communities, where we share and communicate about our hobbies, our religion, our problems, and our health. When we receive all of this information, we rarely wonder about how credible this information is. However, the credibility of web-based information is a very important issue. When you receive an e-mail, how do you know that it's actually from the person or organization listed as the sender? When you check out a web page, how do you know that the content on the web page is valid? How do you know that the organization is who they are presenting themselves to be? How do you know that the information being provided within the online community is accurate and from a recognized authority? While this might not make a difference if you are in an online community for fans of the new baseball team from Washington, DC, this will make a big difference if you are online to learn more about a rare form of cancer that you are facing. This paper will focus on the issues related to web credibility.

While the main focus of this paper will be on the credibility of web sites, the credibility of e-mails and online communities will also be discussed.

Information comes in many different forms on the Internet and Web. We get information from web pages, through e-mails, and from posted messages in online communities. While the specific interfaces for these information sources might be different, these are all forms of information. Credibility of this information is therefore an important concern. What is credibility? Credible information can be defined as believable information, information that can be relied upon as being accurate and correct [35]. Trust, a closely related concept, can be defined as the belief that a person (or information) is reliable and dependable [35]. Credibility is also closely related to concepts such as quality, authority, as well as persuasion. For instance, when making decisions, individuals may employ credibility as an additional filter to select items from a pool of information that have been judged as of being high quality [79].

How do people determine the credibility of information? There are many different judgments that are used. Some judgments are made consciously after much consideration, while other judgments are made intuitively by the user. For instance, if a user is very familiar with the subject content, he or she might be able to determine the level of credibility simply on how well the information matches up what they already know to be credible [35]. Other than that, users judge the credibility based on appearance. For instance, in the physical world, there are expectations regarding professional dress for certain professions. You would not interact with a mortgage loan officer who wears shorts and a t-shirt, as this person would not appear to be credible. In a similar vein, design features of interfaces can help project the idea of credibility (more information on this will be included in later sections of the paper). In the physical world, certifications can help project credibility. You only want to go to a board-certified doctor. You only want to have your taxes done by a certified public accountant. Web sites also have certifications that can help project credibility.

Credibility of web-based information is an increasing concern. There are multiple reasons for this. The amount and scope of informa-

tion being delivered through the Internet and Web is expanding. Most business communication now takes place through e-mails. When political scandals break, e-mails are usually the form of documentation that are in the news. Our interaction with businesses or individuals through face-to-face contact or telephone calls is now limited. For instance, many companies are now forcing consumers to use web sites as their primary form of communication with the company, charging extra if the individual even wants to speak with a person. For example, Northwest Airlines charges extra if you want to speak to an individual and make a reservation through their call center. Southwest Airlines, and many other companies, offer special discounts available only on their web site. Some banks now charge extra if you want to use a teller. Transactions are only free if they are done over the web or at an ATM machine. Because we no longer have these face-to-face experiences, the interactions are either human–human (mediated by a computer), or human–computer. The ability to determine the credibility of these interactions is therefore paramount. This is especially true as the severity and importance of the task increases. As transactions increase from purchasing a t-shirt to purchasing a car, purchasing a home, or choosing which medical information to follow, the importance of establishing credibility also increases.

Unfortunately, it is highly challenging to accurately and efficiently judge the credibility of web-based information. Due to the unique features of the web, it does not have a validated filtering mechanism to insure the quality of the information, such as the case of the peer review process in the academia field. In addition, compared to information presented in traditionally published materials, information online may not be traced back to a reliable source. The two factors combined make it quite difficult for the general public to judge the credibility of web-based information.

This paper provides an overview of the topic of web credibility. First, the paper discusses the cognitive foundations of credibility. Then, user diversity (including older users, younger users, and users with impairments) will be discussed in the context of credibility. The main focus of the paper is on the topic of credibility within three different applications

areas: web pages, one–one communication (such as e-mail and IM), and many–many communication (such as online communities). The impact of education and training on evaluating credibility is then discussed. Some of the future threats to credibility are addressed in the following sections. The end of the paper summarizes implications for various stakeholders. It is hoped that this paper will provide a thorough reading for individuals interested in the topic of credibility.

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