

Social Software and the Evolution of User Expertise:

Future Trends in Knowledge Creation and Dissemination

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Chapter 3

Understanding and Evaluating Source Expertise in an Evolving Media Environment

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ABSTRACT

Recent technological changes have created a radically different information environment from the one that existed even a few decades ago. Rather than coming from a small number of sources, each with a substantial investment in the information production and delivery processes, information is increasingly provided by a wide range of sources, many of which can readily provide and deliver information to large audiences worldwide. One consequence of this evolution in information production is an almost incomprehensibly vast information repository in the form of the Web and other online resources. A variety of social media have extended this information and source fecundity even further by connecting individuals to one another and by providing significant opportunities to share myriad types of information generated by users themselves. This shift in information dissemination challenges longstanding models of the provision of credible information by suggesting circumstances under which sources that are not understood as “experts” in the traditional sense are in fact in the best position to provide the most credible information.

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INTRODUCTION

Recent technological changes have created a radically different information environment from the one that existed as recently as a few decades ago. As digital network technologies have reduced the cost and complexity of producing and disseminating information, the nature of information providers has shifted. Rather than relying on only a few sources, each with a substantial investment in the information production and delivery processes, information is increasingly provided by a wide range of sources, many of whom can readily create and deliver information to large audiences worldwide. One consequence of this evolution in information production is an almost incomprehensibly vast information repository in the form of the Web and other online resources. A variety of social software applications has extended this information and source fecundity even further by connecting individuals directly to one another and by providing significant opportunities to share myriad types of information that are generated by users themselves.

While this explosion of information has created tremendous opportunities, it has also been accompanied by significant challenges. The traditional media environment typically had a limited number of sources and had barriers in place to control the public dissemination of information. In such an environment of information scarcity, the gatekeepers can produce and filter much of the information available, and also have an incentive to uphold quality standards. Gatekeepers, in turn, were widely regarded as experts and were relied upon for credible information. The Internet and related tools, however, present a very different environment—one of information abundance—which makes traditional models of gatekeeper oversight untenable due to the sheer volume of information to be vetted. In light of this, the origin of information, and thus its quality and veracity, are in many cases less clear than before. This has created a revolution in locating and identify-

ing expertise, and in discerning information and source credibility.

This shift in information dissemination challenges longstanding models of information provision by suggesting circumstances under which sources that are not understood as “experts” in the traditional sense are in fact in the best position to provide the most credible information. Under conditions where knowledge is esoteric, diffused among many individuals, and dependent on specific, situational understanding, it is often the case that the most reliable information is gleaned not from a traditional source that has been imbued with authority by virtue of position or status, but rather from a diversity of individuals lacking special training, credentials, or established reputation. Indeed, not only are such circumstances common, but given the power of social software, they are increasingly supported by precisely the kinds of tools required to harness the power of those with the most relevant, timely, and important information. These shifts in the provision of information suggest both new kinds of expertise as well as new ways to determine and identify it. New forms of expertise, in turn, suggest updated notions about the location and evaluation of what information is most credible.

To examine these issues, we reconsider traditional, top-down models of information authority in order to account for the more diffuse methods of information provision and dissemination supported by the Web and social software. We begin with an analysis of how social software complicates and shifts conceptualizations of source expertise by facilitating direct access to information compiled by a multitude of potentially lay authors. We then propose new forms of expertise rooted in the experience of individuals rather than based on their formal credentials, and consider several approaches to judging and conceptualizing expertise that attempt to address the challenges and opportunities presented by the contemporary online environment. We conclude by evaluating the advantages and risks posed by

these new forms of expertise and by considering how these are likely to evolve over time.

The Evolution of Source Expertise

Source expertise has long been established in the literature as a primary dimension of credibility (Hovland, Janis, & Kelley, 1953; Hovland & Weiss, 1951). The link between source expertise and a consumer's evaluation of a media message can be understood through the notion of "credibility transfer" (Schweiger, 2000), whereby credibility judgments transfer between various units of information provision: the credibility of a source both influences and is influenced by the credibility attributed to its message, just as the credibility of a specific media outlet influences and is influenced by the credibility of the medium as a whole. In other words, the credibility attributed to a source serves as an evaluative criterion for the credibility of the information provided by that source, such that sources with more expertise have traditionally been judged to provide higher-quality information than sources with less expertise. However, evaluations of expertise specifically, perhaps even more so than other dimensions of credibility, are undergoing significant transformations as the notion of expertise itself is problematized by emerging media technologies and applications.

Expertise has traditionally been indicated by the existence of a small set of commonly understood features such as formal job position, relevant experience, and specific training or education, which are signaled by markers such as credentials, job title, or, less commonly and even less reliably, by popularity. The relative inaccessibility of these features has ensured that the number of experts in most domains is small, and the difficulty in obtaining the requisite skills, training, and positions has maintained a system of elite expertise that has been perpetuated and has endured over time. For example, one way in which traditional information venues ensure credibility is by drawing on the credentials and reputations

of the sources producing the content: credentialed experts presumably produce credible information (Warnick, 2004). Professional journalists, for instance, receive training through college programs, are united under a code of ethics, and have their articles vetted by editors, all of which helps to ensure information accuracy (Usher, 2010). In this manner, expertise has for the most part been the domain of a rather exclusive subset of individuals.

Although this exclusive system of recognized expertise endures today in a number of domains, the evolution of networked information-sharing tools has significantly altered conceptualizations of expertise in many cases. A host of Internet-based tools currently in use complicate the concept of expertise by calling into question several of the indicators on which people have commonly relied to signal expertise. For instance, in contrast to traditional news sources, on most news blogs the author's role is less significant because these blogs typically operate in a culture of linking to and borrowing from other sources, rather than generating original content (Asaravala, 2004; Hanrahan, 2007).

Moreover, people now have at their disposal a range of information options that they can choose from, representing a range of expertise models. Online, information consumers can consult newspaper articles written by credentialed journalists, or they can choose to read blogs instead, which are often self-regulated and largely independent from editors (Sweetser, 2007). Similarly, people with medical questions can choose to consult their physician, or they can go to a website that contains information about a health-related issue that may or may not be written by doctors. Perhaps the most visible example of this trend toward diverse information providers is Wikipedia, which relies on largely anonymous contributions from a variety of users, both expert and non-expert, to generate its articles (Kittur, Chi, Pendleton, Suh, & Mytkowicz, 2007).

To examine how Internet-based tools complicate traditional notions of expertise, we propose

three specific ways in which contemporary technological tools obfuscate longstanding conceptions of source expertise. The aspects of how information is produced, disseminated, and consumed on the Web that we consider have proven particularly salient in scholarly analyses of online credibility.

First, the Web facilitates low-cost, non-hierarchical information production, and therefore increases information accessibility. Traditionally, a limited number of often professionally trained gatekeepers acted as intermediaries that directed consumers to content that they vetted based on established criteria for determining information quality. Internet-based communication technologies like the Web and social software, however, have substantially lowered the barriers to information production and dissemination, thereby increasing the number of information producers and, subsequently, the sheer amount of unfiltered information available directly to information consumers. Benkler (2006) describes this as a shift away from an “industrial information economy” and toward a “networked information economy.” As a consequence, Internet users need not rely on expert intermediaries to filter information (Eysenbach, 2008). Instead, users can access continuously updated information directly from a variety of sources, including other users. This, of course, has several implications. For example, contributions from traditionally expert sources may be more difficult to locate in this highly cluttered information landscape, in which control of the resources that drive a networked information economy are “radically decentralized, collaborative, and nonproprietary” (Benkler, 2006: 60).

Second, online sources are not merely multiple but are often not well known to information consumers, either personally or even by reputation. Moreover, in many cases users cannot easily verify who contributed what information, since online source information is sometimes unavailable, masked, or even entirely missing from a website, chat group, blog, wiki, and so on. These technological features create a kind of “context deficit”

for digital information, where information seekers can easily lose track of the original information source or may not perceive the increasingly blurry line between advertising and informational content (Eysenbach, 2008). The hyperlinked structure of the Web contributes to this deficit by making it psychologically challenging for users to follow and evaluate various sources as they move from site to site, as evidenced by research showing that source and message information can become confused or disassociated in users’ minds almost immediately after performing searches (Eysenbach & Kohler, 2002). Various levels of source anonymity are also problematic since under conditions of ambiguous authorship information sources’ motivations are often unclear to users. The persuasive intent of messages has been shown to be a key element in people’s evaluations of information credibility (Flanagin & Metzger, 2000, 2007).

Third, the hypertext environment often elides authorship. Because sites on the Web link together information from multiple authors, they complicate traditional ideas about origin and intent. For example, even when source information is provided, it is often difficult to interpret, such as when information is coproduced or repurposed from one site, channel, or application to another; or when information aggregators display information from multiple sources in a centralized location that may itself be perceived as the source. As Barthes (2006) notes, while a work is inseparable from its originator, evoking authorial trustworthiness and expertise, text is an organic network that eschews authorial filiation. The Web is an instance of text insofar as it is an intertextual milieu of linking and borrowing; sites often reference a multiplicity of interlinked sources rather than an individual original author (Warnick, 2004). Web technology also allows sites to easily aggregate user-generated data, while publicly available application programming interfaces (APIs) facilitate mash-ups that combine data from multiple sites (O’Reilly, 2005). Moreover, social software enables users to transcend their role as information consumers

and become cocreators of online content (Klein, 2008). Wikipedia, for instance, is the seventh-most trafficked website in the world (Alexa, n.d.), and its more than 3.2 million articles are authored and maintained solely by its many user-contributors.

Taken together, the tremendous amount of information and relative anonymity and opacity of authorship on the Web complicates traditional authoritative approaches to source expertise in overlapping and interlocking ways. Changes in information generation from single and identifiable authors to multiple and opaque authors, and reliance on readily available but less well-known sources, have changed the way information consumers gauge source expertise and credibility. For example, judgments of source expertise online are often circular because they draw on information from other Web sources. Moreover, by denying the primacy of any particular author, social software and networked hypertext thwart credibility assessments grounded in isolated, material traits of the source itself (Warnick, 2004). The structure of the Web itself reinforces this tendency by using search engines and hyperlinks that encourage the cross-validation of information across multiple sources in a way that de-emphasizes the notion of expertise as being invested in a single entity and opens up the possibility of credibility being derived from information aggregation. Information consumers may no longer need to consult expert intermediaries to access information as information can easily be located and navigated using search engines.

The problem of finding credible information online thus involves deciding which sources to believe: official, credentialed experts, or other, often unidentified sources on the Web (Lankes, 2008), who may or may not be in a superior position to provide the most accurate information depending on the circumstances (Flanagin & Metzger, 2008). This new reality prompts a need to reconceive source expertise in a way that accommodates the many means of information provision available today, which we endeavor to do next.

RECONCEPTUALIZING EXPERTISE IN THE CONTEMPORARY MEDIA ENVIRONMENT

Expertise typically hinges on the possession of a specialized knowledge base and an externally recognized mastery of a particular topic, usually denoted by some official document or position. We refer to this type of expertise as *credentialed expertise*. Credentialed expertise serves as a backbone for information consumption, by providing people with a relatively reliable indicator of information quality and credibility.

However, while credentialed expertise can grant the competence to provide credible information about certain, specialized topics, one approach to expertise that is prominent in the expertise literature assumes that experts can be defined relative to novices on a continuum such that novices can themselves achieve expertise (Chi, 2006). According to this approach, experts are people who have acquired more knowledge in a domain than others have (Ericsson & Smith, 1991). As people can be competent to report on their personal experiences, they may be considered experts in the domains in which they have personal experience. Moreover, people can acquire and establish their expert status without being sanctioned by official credentials (e.g., self-taught computer programmers). In such circumstances, these people may be recognized as “cognitive authorities in the sphere of their own experience, on matters they have been in a position to observe or undergo” (Wilson, 1983: 15). In other words, these sources are experts in certain domains while lacking any official demarcations of expertise. A person’s firsthand experience may serve as the basis of their expertise because it imbues them with what may be called *experiential authority*.

Although experiential authorities have always existed, Internet-based tools have dramatically enhanced their ability to reach others in ways that aggregate their experiences, boost their collective expertise, and influence information seekers.

Indeed, Internet users often turn to Web-based social software applications for experience-derived information, including user-generated ratings, reviews, information, and testimonials, to name only a few options. Accordingly, absolute (Chi, 2006), or credentialed, expertise stands to be challenged by vast, unfiltered access to information, as well as the ability “to aggregate individuals’ experiences or opinions, pool their information, and identify the expertise of ‘non-experts’ based on specific or situated knowledge” (Metzger, Flanagin, & Medders, 2010: 436) that the Internet and its social applications afford.

As an example of one situation in which credentialed expertise may be less important to users than experiential authority, consider the residents of a city in the throes of a natural disaster such as a fast-spreading wildfire. In such a crisis, it is likely that residents would turn to the mainstream media for information, receiving periodic updates about fire-fighting efforts, evacuation plans, and other critical information from television broadcasts, radio programming, and the websites of both television and radio stations. This information would likely originate from a small number of highly credentialed sources, such as fire, police, and relief agencies, and a handful of news reporters in the field. Information obtained through these channels is likely to be accurate and highly credible. However, given the quite limited number of reliable sources and camera crews reporting information about the quickly unfolding disaster in real time, it is also likely to be limited in its scope and currency.

Information on the same event that originates from a diversity of individuals reporting on their own observations of the fire, even though none may be expert in the traditional sense, has the potential to be superior in the context of such a crisis for a number of reasons. Using social software—such as individual and community blogs and microblogging, photo-sharing sites, social network sites, or the Google Maps API—people could provide specific experiential information in

real time to large forums, including information such as the specific location (down to the street or address level) and direction of the fire at any given moment, and this information can be easily aggregated and shared with anyone. In such instances, each individual has the potential to be not only a consumer but also an “expert” provider of information, and the net effect is that each citizen becomes a sensor in a vast information network. In such systems, even unreliable information is likely to be effaced by more prevalent, up-to-date, and eyewitness reports.

Indeed, knowledge that is collectively generated on the Web may be more likely to be complete, because each individual author in a group can fill a gap in another group member’s knowledge (Chi, Pirolli, & Lam, 2007). Under these circumstances, each individual’s specific expertise is aggregated to provide an information repository that is significantly more powerful than any small number of experts could provide. According to Shirky (2008), a core principle of collaborative knowledge production is the rejection of credentials in favor of the public performance of competence. Moreover, in this type of collective endeavor anyone can authorize themselves to comment in a thread on an email discussion or update Wikipedia, but they risk seeing their contribution dismissed or aggressively challenged if it is deemed not credible (Shirky, 2008). Thus, as Shirky argues, expertise is no longer embodied in a person, but in the process of aggregating many points of view. Moreover, the information produced from the collective is likely to be highly relevant, comprehensive, timely, and reliable (Surowiecki, 2004). When faced with the imminent, localized threat of a fast-moving fire, it is reasonable to expect users to highly value exactly these dimensions of information quality where social software excels.

The rise of user-generated content online can be seen as a movement away from authority being vested exclusively in traditional institutions to a more bottom-up conception of information credibility that capitalizes on the experiences and

opinions of many (Madden & Fox, 2006). Thus, in the social media environment, credentialed expertise is complemented by other forms of authority, including experiential authority, which gains credence due to the unique features of social software. In addition, not only do social software tools facilitate experiential authority, they also serve to change the very notion of expertise, by extending the range of voices that can supply relevant and credible information on a diversity of topics. For example, social software in the form of wikis, rating systems, and blogs can make the voice of the uncredentialed individual equivalent in many ways to that of the trained and renowned expert. Indeed, studies investigating the accuracy of information on Wikipedia show that the difference between information produced in Wikipedia and information produced by topical experts or well-known information authorities such as *Encyclopedia Britannica* is not particularly great (Chesney, 2006; Giles, 2005).

Yueng, Noll, Meinel, Gibbens, and Shadbolt (2011) also discuss the changing nature of expertise in the context of online communities in which users collect and share items of interest (e.g., books, photos, Web bookmarks), and optionally choose to describe them using keywords to aid in their organization and future retrieval. The authors argue that an expert user is not only one who has a large collection of high-quality items (those judged as interesting or relevant by others), but also one who is more likely to find and disseminate this high-quality information before anyone else does. Neither criterion discriminates between users whose expertise is grounded in traditional, credentialed authority and those with more experiential expertise.

Of course, in some cases, the untrained individual may in fact *be* more expert, particularly on certain types of issues and under specific circumstances. For example, Denecke and Nejdil (2009) found that user-contributed medical Q&A sites, such as Yedda.com, are a good source of information for those searching for information

about health and medical topics, because highly relevant information is produced by other site visitors who are motivated to provide specific, experience-based information about a wide variety of conditions and treatments. Conversely, Scanfeld, Scanfeld, and Larson (2010) identified hundreds of tweets disseminating inaccurate information about antibiotics. The contrast in these findings accords with the notion that different users seeking different types of information may be best served to attend to different types of cues. For health information, online communities of other patients may offer extensive experiential authority about the day-to-day experience of coping with a condition, but a credentialed expert is likely to provide more credible information about the medical science involved in treating it. In a crisis like an ongoing natural disaster, the timeliness and specificity of information may take high priority, even if it has not been vetted by a credentialed authority, whereas when predicting the future path of a hurricane it seems more reasonable to trust a meteorologist. The critical issue for credibility assessment online is therefore how people determine which sources from among the many possibilities provide the most relevant expertise for their unique situation. A crucial point of this chapter is that this calculus has grown more complex due to digital networked technologies.

Determinants of Expertise

There are several possible strategies for making credibility decisions in the contemporary media environment where traditional source expertise cues may no longer be so clearly defined. First, since messages are frequently uncoupled from their authors, users must often rely predominantly on *message* rather than *source* characteristics to evaluate expertise and information credibility. Second, rather than focusing on traditional notions of source authority as the basis of credibility evaluations, users can instead utilize an approach that emphasizes the reliability of a

source over time, and/or the reliability of information across multiple sources to overcome the deficit of context in determining the expertise of a source or information. Finally, while this environment sometimes lacks the intermediaries that facilitated traditional source-based credibility assessment, social software empowers users to rely on “apomediarities” that can assist them in evaluating digital information of questionable quality. Each of these strategies for coping with the problems of determining expertise that arise from digital networked information technologies is elaborated next.

REPLACING SOURCE CUES WITH MESSAGE CUES

In an environment where messages can be un tethered from their source, credibility evaluations are often made based on the characteristics of the message itself rather than on source characteristics (Warnick, 2004). Message characteristics have even been shown to affect evaluations of credibility generally, as well as people’s perceptions of source credibility and expertise (Agichtein, Castillo, Donato, Gionis, & Mishne, 2008; Roberts, 2010). Message factors such as professionalism, accuracy, currency, and comprehensiveness have been shown to positively affect online credibility judgments, including judgments of a source’s expertise and trustworthiness (Fogg et al., 2001). For example, Fogg and his colleagues found that the degree to which a website looks professionally designed increases perceptions of the site’s credibility, and indications of amateur website design, such as typographical errors and broken links, negatively impact credibility evaluations. Additionally, aspects of message content such as specificity and plausibility of information have been shown to signal source expertise online (Metzger, Flanagin, Eyal, Lemus, & McCann, 2003; Rieh & Belkin, 1998), as has the presence

of quotes, statistics, and references within the message (Hong, 2006; Rains & Karmikel, 2009).

Message cues have similarly been shown to be useful in credibility evaluations that take place in social software environments. For example, high-quality answers on Yahoo!Answers can be distinguished from low-quality answers based on message features such as the number of typos and grammatical errors (Agichtein et al., 2008). User characteristics have also been shown to interact with message features, such that the degree to which message content is salient to users increases their perceptions of information credibility (Flanagin & Metzger, 2007), and the extent to which the persuasive intent of a message is subtle or transparent impacts credibility assessments, with more obviously persuasive messages seen as less credible due to fears of source bias (Flanagin & Metzger, 2000; O’Keefe, 2002).

Thus, in the absence of information about an author’s identity, training, and credentials, users rely on message cues to gauge an author’s expertise. The presence of typographical errors and inaccuracies negatively impact perceptions of expertise, while a well-designed website positively impacts perceptions of its credibility. Given the importance of assessing the trustworthiness of a message, especially when the issue is salient or consequential to the information seeker, it is not surprising that information consumers will shift their focus to the information itself rather than to its origin when evaluating credibility and expertise online, particularly when source information is ambiguous.

In the context of social software in particular, information providers are often anonymous or pseudo-anonymous, and thus the reliance on message characteristics to assess the expertise of the contributors may be greater. For example, research suggests that when contributing online reviews for commercial products, reviewers are careful to establish their expertise through deliberate use of proper and appropriate language, including the use of specialized terminology (Mackiewicz, 2007),

because it is unlikely that information seekers will know the reviewer personally and thus must rely on message content such as language as a proxy to evaluate the reviewer's expertise. In circumstances where experiential expertise is highly valued, no further qualification may be required beyond effective language use. For example, it is reasonable to think that the owner of a product is an authority on his or her experience using the product. However, while appropriate language may be necessary to establish expertise in this case, in circumstances where firsthand experience is less important, language cues alone may be insufficient. For example, a simple heuristic such as appropriate language may be a poor guide to judging source expertise on technical aspects of the product: while a layperson can accurately report their experience *using* the product, they may not be able to accurately report *why* or *how* it works. Other forms of evaluating expertise, including technical training or credentials, would aid in these types of circumstances.

Reliability across Time and Source

While traditional single-source models of credibility evaluation emphasize source authority and credentials as the critical basis of expertise (Hovland et al., 1953), as discussed earlier, with Web-based information and social software applications it is sometimes not possible to know who contributes information, and thus whether the contributors are credentialed experts (i.e., authorities) or not. In such situations, credibility decisions must be made based on factors other than source expertise, including message characteristics as just described, or by cross-validating information. Lankes (2008) asserts that in these circumstances *reliability* rather than *authority* becomes the predominant credibility cue.

According to Lankes, a reliable information source is one that consistently yields accurate information. So, a source may prove itself to be reliable, and by extension credible and possessing

expertise, if it contributes information deemed to be accurate over time. As Shirky (2008) notes, social software applications do not necessarily recognize expertise; deference is manifested through surviving edits. Indeed, research on Wikipedia finds that a good proxy for information quality (quality of contributed information) is the longevity of the original text (Adler & de Alfaro, 2006). The idea is that the expertise of Wikipedia contributors correlates with how long their original text persists over time, especially when there are a lot of editors. Thus, a source that contributes information through social software may be judged credible based on how long the information appears, or has appeared, on the site (Adler & de Alfaro, 2006; Adler, de Alfaro, Pye, & Raman, 2008).

Extending this logic, a source may also be considered reliable if the information it provides is consistent with information provided by other sources on the Internet. Indeed, research finds that cross-validation, or seeking convergence in information across multiple sources, is an important way for information consumers to establish the credibility (i.e., expertise and trustworthiness) of sources and messages in online contexts (Metzger et al., 2010). Social software streamlines the process of cross-validation by aggregating and presenting information from a variety of other sources on the Web in one location, either through search engines and their results, or through aggregated user data, such as commercial product ratings or testimonials. Furthermore, social software encourages connection and collaboration between users, thereby enhancing conversations regarding the credibility of information and facilitating continuing evaluations of information and its source(s). In turn, this helps to create an environment in which evaluations of source expertise and message quality are dynamic and ongoing processes. Also as a result, a community, rather than an individual, helps to determine the expertise of an information source on the Web.

THE SHIFT FROM INTERMEDIARIES TO APOMEDIARIES

As noted earlier, the rise of direct access to information online offers Internet users a greater opportunity to bypass traditional intermediaries and thus to retrieve more unfiltered information (Eysenbach & Jadad, 2001). Some have argued that this has led to the decline of expert information intermediaries. In the context of medicine, for example, Eysenbach (2008) says that the role of health intermediaries, such as doctors and nurses who mediate the transfer of health information to patients, may be diminishing because of the convenience, low expense, and availability of Web-based medical information. Eysenbach uses the term *apomediaries* to describe the agents that replace the traditional expert intermediaries. Apomediaries do not stand *between* the consumer and the information (as in *inter-*), but instead stand *by* the consumer, directing them to relevant and high-quality information online. The presence of apomediaries can be seen not only in health and medical domains, but across many information genres, both online and off.

Apomediaries may be experts, parents, teachers, and peers, who lend their expertise to help an information consumer vet some information or source online. Apomediaries may also be strangers who are not personally known to an information seeker. In all cases, apomediaries contribute valuable information by producing opinion- and user-generated content such as user ratings and reviews, social bookmarks, and wikis that help users navigate through the onslaught of information in the contemporary media environment by giving additional credibility cues and supplying meta-information. Eysenbach (2008) notes that choosing an apomediary to *help* information seekers evaluate the credibility of a message or expertise of a source, rather than a professional intermediary who filters information *for* information seekers, encourages autonomy and empowers information consumers. However, relying on

apomediaries rather than expert intermediaries adds an extra layer of complexity to the credibility assessment, as information consumers must first make an evaluation of the credibility and usefulness of the apomediaries themselves, and then evaluate the source or message about which the apomediaries provide information.

Myriad websites use social software to provide users with opportunities for apomediation. One example is Amazon.com, where users are allowed to write reviews of the available products, and where other users are given the opportunity to rate the helpfulness of these reviews, on a scale of one to five stars. The aggregate rating of the product review (i.e., the helpfulness of the reviews) therefore functions as an instance of apomediation: it helps online shoppers evaluate the expertise of product reviewers by providing metadata about the utility of the information these reviewers provide. Research suggests that this information is useful, finding that review quality (as rated by apomediaries) and purchase intent are positively correlated (Cheung & Thadani, 2010). Interestingly, ecommerce and health information are two domains where professional recommendations could easily be biased by financial interests. In these cases, the added expertise provided by apomediaries may be perceived as more neutral than that of professional intermediaries, and thus as a more credible and preferable means of determining whether to trust a piece of information.

CONCLUSION

Evaluating New Approaches to Determining Expertise

Increased reliance on message rather than source cues, reliability rather than authority approaches to credibility assessment, and greater apomediation rather than intermediation techniques are all useful means to help discern expertise in a time when both the meaning and identification of

information sources has become more difficult and complex. Yet, while each of these approaches to determining expertise in online environments offers tremendous promise, each also presents considerable risk in helping consumers locate credible information.

The promise of experiential authority shared through social software applications is great. As people share more information with an increasingly large audience through increasingly sophisticated social software tools, the utility of this type of information sharing increases in value and precision. Social software can harness the collective intelligence of users to construct a data source that grows richer the more people use it, thus providing a credible source of information that takes advantage of considerable experiential authority to help users locate and identify expertise in the contemporary media environment. This can reduce the considerable costs of source evaluation in information-rich environments (Taraborelli, 2008).

Groups of people may also be able to generate more complete, accurate information than individual experts can (Sunstein, 2006). Moreover, groups that contain both experts and non-experts have been shown to outperform groups that contain only experts, because non-experts offer unique problem-solving solutions that experts in a certain field might not be able to come up with on their own (Surowiecki, 2004). These are, of course, precisely the conditions that typically define the masses of people collaborating formally or loosely via social software today. Indeed, harnessing the “wisdom of crowds” is best when there is a diversity of opinion in the group—individuals contribute knowledge independently, the group is decentralized, and there is a tool for aggregating the information (Surowiecki, 2004). Social software facilitates all four of these requirements by providing oftentimes fun and easy-to-use tools to a wide range of geographically dispersed and diverse individuals to contribute information and opinions.

However, the risks of relying on experiential authority are also great. For instance, although message cues have been demonstrated to be a major factor to which people attend in their evaluation of the credibility of websites, research has shown that reliance on them is at times problematic, since these cues can lead to assessments based on surface indicators that are not necessarily indicative of deeper information quality (Flanagin & Metzger, 2007). Similarly, although seeking reliability between and within sources over time can boost the chances of accurately discerning the quality of information, reliability does not necessarily imply validity. Indeed, information and sources can be consistent (i.e., reliable) but inaccurate. Furthermore, in the contemporary media environment there may be a risk of equating popularity with expertise or credibility, as research has demonstrated that people often rely on the endorsement of others when evaluating a particular piece of information without engaging in independent or more systematic evaluation of the information (Hilligoss & Rieh, 2008; Metzger et al., 2010).

Finally, the value of apomediation ultimately relies on considerable skill on the part of information consumers, who need to correctly interpret cues from sometimes remote others that are at times complex, contested, or ambiguous. Research that looks at how successful people are when they rely on various heuristic cues finds that relying on these simple decision rules often leads to predictable errors (for a review, see Kahneman, Slovic, & Tversky, 1982). Thus, evaluating the credibility of information online by attending to cues generated by apomediators may lead to suboptimal credibility decisions. For instance, even simple aggregated commercial ratings can be misinterpreted by information consumers who have been shown to rely heavily on the average “star” rating to the exclusion of critical complementary information regarding the number of ratings provided (Flanagin, Metzger, Pure, & Markov, 2011). Additionally, it is likely that when relying

on aggregation to evaluate information credibility and source expertise, the user-generated origins of the apomediated information are overlooked or misunderstood, and therefore there is the risk of a collection of opinions being inappropriately elevated to the level of fact (Eysenbach, 2008).

Thus, the considerable value of user-generated content and new forms of expertise prompted by the use of social software must be weighed and assessed in light of related risks to information consumers today. In the end, however, credentialed expertise and experiential authority coexist in an environment saturated with technologies that both promote and impinge on users' capacity to take appropriate advantage of each.

In sum, social software facilitates an environment of information abundance, while complicating the traditional conceptualizations of source expertise. New forms of expertise are arising, rooted in the experience of individuals rather than based on their formal credentials. Users adapt to this environment by attending to message cues, evaluating the reliability of message content over time and across sources, and by relying on apomediarities to help them assess the quality of the information. While these strategies of evaluating information offer substantial promise, such promise must be considered along with the risks associated with such forms of information provision and evaluation.

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KEY TERMS AND DEFINITIONS

Apomediaries: People or sources that stand by, offering you the Internet information you seek. They may have developed an expertise that is not formally credentialed in any particular way, but can be valuable.

Apomediation: Apomediation describes the fact that when you access information on the Internet, you cut out the gatekeepers or any middlemen (like your own doctor or an insurance salesman), which allows you to go directly to the source of information, even if it is not a (previously considered) “expert” source. The expert “stands by” you.

Cognitive Authorities: Those who are deemed to “know what they are talking about.”

Credentialed Expertise: Expertise that hinges on the possession of a specialized knowledge base and an externally recognized mastery of a particular topic, usually denoted by some official document or position.

Experiential Authority: Sources who are considered experts based on firsthand experiences, but who may lack official demarcations of expertise.

Experiential Expertise: Expertise that hinges on firsthand experiences.

Intermediaries: Sources that stand between the consumer and the information, directing consumers to content vetted according to established criteria for determining information quality.

Source Expertise: The extent to which a communicator is perceived to be capable of providing credible information.