

Prominence-Interpretation Theory

Explaining How People Assess Credibility

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Overview: What is Prominence-Interpretation Theory?

Despite decades of research and discussion on credibility, no theory has adequately addressed the issue of how people assess credibility. I now propose a theory called “Prominence-Interpretation Theory.” My intent in developing this theory is to shed light on how people assess the credibility of Web sites, yet the application of this theory goes beyond Web sites, extending to a wide range of credibility assessments.

Prominence-Interpretation Theory posits that two things happen when people assess credibility: a person (1) notices something (Prominence) and (2) makes a judgment about it (Interpretation). If one or the other does not happen, then there is no credibility assessment. The process of noticing prominent elements and interpreting will usually happen more than once when a person evaluates a Web site, with new aspects of the site being noticed and interpreted until the person reaches satisfaction with an overall credibility assessment or reaches a constraint, such as running out of time.

$$\text{Prominence} \quad \times \quad \text{Interpretation} \quad = \quad \text{Credibility Impact}$$

The theory as stated above (and described below) may seem apparent – organized common sense. But I would suggest that much like an answer to a riddle, this approach to credibility assessments seems obvious only after it is revealed. If the literature on credibility and Web credibility is a reliable guide, the pivotal roles Prominence and Interpretation play in credibility assessments—and the relationship between the two components—have not been obvious.

The following paragraphs explain the Prominence-Interpretation Theory in more detail, especially as this theory applies to Web site credibility assessments.

Prominence explained

The first component in the theory is Prominence. What Prominence means is an element’s likelihood of being noticed, of being perceived. It stands to reason that in order for an element on a Web site to affect a person’s credibility assessment of the site, the person must notice the element. If it is not noticed, the element has no impact on credibility assessment of the site. For example, users may not notice that the bottom of a Web page contains a link to the site’s privacy policy. As a result, the link and the privacy policy will have no impact on how the user assesses the credibility of the site. In contrast, other elements on a Web site may be prominent. For example, an image of a nude person

in the center of a Web page is likely to be noticed. It catches a person's attention. This image will then play a role in the credibility assessment of the site.

What affects Prominence?

There are at least five factors that affect Prominence, and there are likely many more. At this point, the factors in order of importance seem to be as follows:

1. **Involvement** of the user (motivation to process & ability to process – ELM relates here)
2. **Content** of the Web site (news, health, sports, etc.; informational vs transactional)
3. **Task** of the user (seeking information, seeking amusement, making a transaction, etc.)
4. **Experience** of the user (with Web, with subject matter, etc.)
5. **Individual differences** (need for cognition, learning style, literacy level, etc.)

As the above ranking shows, in my opinion, the factor that affects Prominence the most is user involvement. For example, when a user goes to a Web site with a high level of motivation (e.g., they need to find an answer to a health problem), that user will notice more things about the Web site. In other words, more Web site features will cross the cognitive threshold of being unnoticed to being noticed.

The factors that affect Prominence include those that describe the **user** (e.g., involvement, experience, and individual differences) as well as factors that describe the **context** (e.g., task) and the **artifact** under examination (e.g., content of the site). There are likely to be other factors not listed above. For example, in the area of context, one additional factor would be time pressure. When someone is working under a time constraint, that person is likely to notice fewer things about a Web site. In the area of **artifact**, the design of the Web page is certain to affect Prominence. These and other factors need further exploration.

There is more to explain and discover about Prominence. I'll expand the ideas at a later date. The paragraphs here should be sufficient to get the concept across.

Interpretation explained

The next component in the theory is Interpretation. What I mean by Interpretation is a person's judgment about an element under examination. In other words, the Interpretation component is the user's evaluation of an element, good or bad; this includes the user inferring motives and competency to the element's source. For example, a user may interpret a broken link on a Web page as a sign that the site has been neglected – or that it was not carefully created in the first place. In either case, the broken link will contribute to a lower credibility perception of the site.

What affects Interpretation?

Various factors affect Interpretation. Below is a preliminary list arranged by what I view to be the most important.

1. **Assumptions** in user's mind (culture, past experiences, heuristics, etc.)
2. **Skill/knowledge** of user (level of competency in subject matter, etc.)
3. **Context** (e.g., environment, norms, expectations)
4. **User goals** (e.g., to find out information, to make a transaction, etc.)

People do not interpret identical Web site features in the same way. Culture plays a role in Interpretation. For example, a news Web site that has a passage from the Bible in a prominent place will affect people differently. Some people will interpret this Bible verse positively and assign the Web site more credibility; others will see interpret it negatively.

It's important to note that even the same person may interpret an element differently in different situations. A key point here is that the context of Interpretation matters – the user context, the task context, the element context, and more. For example, if a person at work is looking for the best airfares online and is in a hurry, she will likely interpret a popup ad quite negatively – because she is in a hurry and doesn't want to be distracted. However, if the same user is relaxing at home and leisurely browsing travel sites for vacation ideas, a popup ad might offer her welcome information. Note how the context and user goals are different in these situations, and the impact of the popup ad on credibility assessments will differ.

This is a preliminary understanding of Interpretation. Future work will expand and refine the factors that affect Interpretation, including giving insight into factors that seem to affect both Prominence and Interpretation.

Repeating the process

The steps of noticing (Prominence) and evaluating (Interpretation) usually will repeat when a person is evaluating the credibility of a Web site. In my view it would be unusual if a person noticed and evaluated one single feature of a Web site and drew a firm conclusion about the sites credibility (perhaps this is most common if people find the first element they notice to be quite bad – like a site that looks horrible). In most cases, a user will quickly and subconsciously notice Web site elements and evaluate them, all the while compiling an overall assessment about the site's credibility.

People repeat the process of Prominence and Interpretation on different elements on a Web page until they are satisfied they have reached a reasonable conclusion or until other constraints stop them – time pressure, lack of skill, lack of interest.

Examples of how the process is repeated or how it ends are fairly easy to imagine. In future versions of this document I will offer examples of this process.

How the different types of credibility fit into this theory

My lab's previous work on Web credibility has identified four types of credibility that relate to Web sites. We've tried various ways to make these four types fit together – how they relate to each other. But we were unsuccessful. The Prominence-Interpretation Theory (finally) has given us a solution.

In brief . . .

- Surface credibility - relates to Prominence
- Reputed credibility - relates to Interpretation (based on assumptions)
- Referred credibility - relates to Interpretation (a type of assumption)

- Earned credibility - relates to credibility assessments over time

How previous research is explained by this theory

All the previous studies I know about on Web credibility can be understood in the context of Prominence-Interpretation Theory

- Nina Kim's Experiment - showed how involvement changed credibility impact
- Web Cred Survey 1999 - a study in Interpretation
- Web Cred Survey 2002 - a study in Interpretation
- Princeton Survey 2002 - in part, a study in Interpretation
- MostCredible.org 2002 - mostly a study in element Prominence

The theory, in fact, solves what seemed a discrepancy in study findings. The 2002 MostCredible study showed “design look” to be the most widely mentioned feature of Web sites when they were evaluated for credibility, while things like contact information and privacy policy almost never showed up. However, in other studies, respondents said contact information and privacy policies were very important to establish a site's credibility. These findings can live together in harmony when viewed from the perspective of Prominence-Interpretation Theory. The Stanford WebCred Surveys and the Princeton Survey were mostly studies about Interpretation. These studies did not have people notice things on Web sites; the people were told what to evaluate. In contrast, the MostCredible study turns out to be mostly about Prominence – what did people notice when evaluating a live site's credibility. To truly understand Web credibility, you must perform studies both on Prominence and Interpretation. Together these studies can give a richer view of how people assess Web site credibility

Some case studies of note that show how P-I Theory works

- Intellihealth.com vs. climatechange.org - notice how the Prominence of affiliation differs
- IBM.com vs. Luakabop - notice how the design look appeals to different audiences, leading to differences in Interpretation

Practical implications

P-I Theory has practical implications. While this needs to be fleshed out in more details, one

What this means for designers . . .

Designers can't make everything noticeable. People are cognitive misers and will only notice as much as then need in order to get their task done, satisfy their goals. Designers must choose what they want their users to notice. Making these good decisions about Prominence is the one key to good design.

About this document

This document is a work in progress. I will update it from time to time. I'm happy to get others' insights about how this theory works or how the ideas can be improved.

Preferred citation

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