

# SIGNS OF TRUST: A SEMIOTIC STUDY OF TRUST FORMATION IN THE WEB

Kristiina Karvonen Jarmo Parkkinen

Department of Computer Science  
Helsinki University of Technology  
P.O.Box 9700 HUT Finland  
Tel. +358 451 60 75

## ABSTRACT

E-commerce has been slowed down due to the fact that consumers find Internet an untrustworthy environment, and are not willing to be guinea pigs of a new service and take unnecessary risks by giving their credit card number to an online service they cannot really trust. Yet, if e-commerce is to thrive, creating consumer trust is a necessity – or else there will be no transactions. Not only money, but also private information about an individual customer has high value online: for service providers, it gives invaluable data about customer, about her behaviour, likes and dislikes. This kind of information is key in understanding what will and what will not sell on the Internet. In wrong hands, however, such intimate information may become a powerful weapon against the intimacy, integrity and privacy of a given individual. Trust is needed from the customers in order to be willing to indulge in taking that risk. This paper discusses the notion of trust from a semiotic point of view, seeking to understand and analyse the signs of trustworthiness that the design of a Web site is sending.

## 1. INTRODUCTION

Making money transactions online is risky business. Even when the service provider is in fact benevolent, this is not enough, for there are also some malicious outsiders that may intervene – the repetitive hacker cases on the Internet have clearly shown us that Internet still remains an insecure place. Giving away private information without serious premeditation clearly still creates a risk to the customer. A lot of work has been done lately to keep hackers out and to ensure the security of online transactions in the near future. Unfortunately, however, making the *technology* work is not enough, but this has to be *communicated* to the consumer in some way as well. The case is especially severe when at current users have grown wary of the online services – and rightly so (Nielsen 1999). To succeed in e-business, the service providers must be able to restore the consumer trust in one way or the other (e.g. Hoffman et.al.1999). They must be able to make their trustworthiness visually manifest somehow.

In the Web, this means that the overall "look" of the Web site of a service provider must give an impression of trustworthiness to the user. Indeed, many studies have shown that "design quality" is one of key ingredients in creating trust in the users towards online services (e.g. Ecommerce Trust Study 1999). Other such ingredients include the use of high-tech features, brand reputation, successful navigation, overall presentation, and user satisfaction in reaching goals. The overall impression of any Web site is, then, created through a multitude of key features. How can we analyse the outcome of these ingredients when put together?

Our answer was to try out a *semiotic* analysis of these Web sites. Semiotics, the study of signs and their use as communicative tools, seemed to us to provide a likely way to grasp the octopus-like character of trust-enhancing complexity with its many tentacles. According to semiotics, seeing is not believing but *interpreting* – a drawing of a tree is interpreted as a picture of a tree, not *seen* as an actual tree (e.g. Nöth 1995; Mirzoeff 1999). These kinds of interpretations are based on agreed rules, mostly unspoken and even unconscious, and vary across different cultures and different times. This means that the interpretation of a given image is likely to change over time, and, like in the case of very old images, such as the cave paintings in Lascaux, France that date more than fifteen thousand years back, the intended meanings of the images may get altogether lost. Visual images succeed or fail to the extent that we can interpret them in a successful way. The same goes for Web imagery – we may interpret it as trustworthy or untrustworthy, for example, based on some key elements in the imagery that contribute to the trustworthiness in some way. We believe that these elements may be found with the help of semiotic tools.

## 2. METHODOLOGY

As a starting point, we chose the 6 most trusted and the 6 least trusted Web sites from a well-known study by Cheskin Research, the E-Commerce Trust Study, and analysed these sites within a semiotic framework. Respondents of the Cheskin study evaluated the trustworthiness of a total of 102 of some of the highest profile sites on the Internet. Overall, the research showed that the most trusted brands are well-known brands, be it on the Web or in other settings. The sites were:

6 most trusted websites

- <http://www.yahoo.com/>

- [http://www.walmart.com/estore/pages/pg\\_g1.jsp](http://www.walmart.com/estore/pages/pg_g1.jsp)
- <http://home.netscape.com/>
- <http://www.go.com/>
- <http://www.blockbuster.com/>
- <http://www.excite.com/>

6 least trusted websites

- <http://www.monsterboard.com/>
- <http://www.spinner.com/index.jhtml>
- <http://www.cyberkids.com/>
- <http://www.thewell.com/>
- <http://www.jennicam.com/>
- <http://carpoint.msn.com/home/New.asp>

A detailed description of the Cheskin study is not outlined here, but instead the outcome of this study is taken at face value. The study can be found at <http://www.sapient.com/cheskin/assets/images/etrust.pdf>

It is interesting but not surprising that the most trusted sites would be well-known sites. Having trust on a site means having an active relation to the site. The user is in constant contact with the site. Trust is needed to take action, whereas distrust may be passive in nature, and mean withdrawal from action: the site is not used, a purchase is not made, the user clicks her way away from the site. This is why it may be easier for users to list names of trusted sites than distrusted sites. The user is, simply, more familiar with the sites that she has decided to trust enough to use. In practice this means that users may have a list of trusted Web sites (e.g. bookmarks in a browser), but they do not in general have a list of distrusted Web sites.

It is also noteworthy that most online customers are not experts in Web technologies, and are thus not able to evaluate the technical excellence of these sites, nor the lack of it. For most users, the decision to trust or not to trust a Web service is, then, not based on rational evaluations of the actual security provided by that service, but rather that decision is made in an intuitive and spontaneous manner, on the basis of the visual overall impression of that site. Users just do not have enough knowledge nor a proper understanding of how the service works, so what they do is base their initial decision to trust the service based on some visual hints of trustworthiness that the visual design of that site provides. These visual elements are the focus of our semiotic analysis presented here in this paper.

### 3. TRUSTWORTHY DESIGN

Figures 1-6 present screenshots of the 6 most trusted Web sites. There is a lot of text on the page, and only a few pictures. The general impression is rather peaceful and almost “empty” – the margins are rather wide, and there is a lot of empty space around the text areas. The columns are even and well-organised. The metaphoric model for the sites is clearly that of a newspaper.

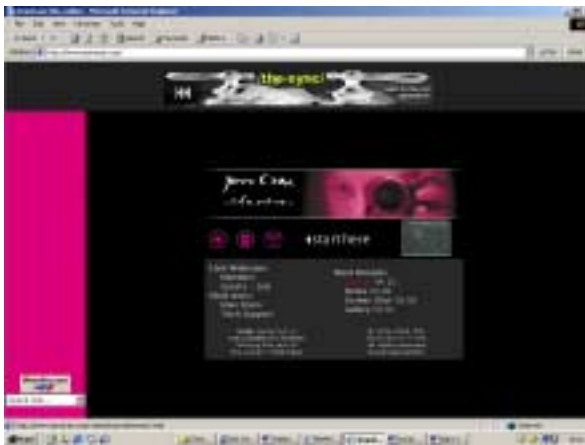




#### 4. UNTRUSTWORTHY DESIGN

Figures 7-12 present the 6 most untrustworthy Web sites. There are a lot cartoon-like and other handdrawn looking images on these pages, and pictures dominate. The overall impression is rather disordered, even chaotic when compared to western-style newspaper layout. The area borders are not clearly defined. In two of the sites the text is included in a single area situated against a darker background, which makes the scene seem to imply the television screen as the metaphorical medium used.





## 5. CONCLUSIONS

Our analysis shows that the trusted Web sites may be successful for many reasons, and semiotics provides some keys to understand the elements behind it. To start with, the trusted Web sites were more text-based than the distrusted sites. It can be stated that their metaphoric interpretation is the traditional newspaper – a medium that traditionally enjoys a rather high level of trust. The distrusted Web sites were more based on the use of imagery, thus breaking down the possibility to signify any resemblance to a “serious” newspaper layout, but rather referring to a visual metaphor of some kind, e.g. television or even a comic book.

In our previous research, we have noticed that trust may be built differently for users having a different amount of usage experience of e-commerce (Karvonen 1999). This means that the meaning of the visual elements on the Web site that will promote trust in the particular user groups (e.g. novice, intermediary, expert) is likely to differ. Novice users tend to treat each Web page of the site as a singular entity, one image, and only what is clearly visible is counted as one of its elements. This kind of viewing can be described as *one-dimensional*. Technically experienced users, or expert users, on the contrary, tend to view the Web site as a series of images, or rather as a series of texts, and treat the whole site as one entity, the meaning of which is not all that is visible only, but the visual elements of the site are also treated as signs of underlying elements, technology, and complexity (Karvonen 2000). For the expert users, the site is then essentially a *multi-dimensional* entity.

Novice users – Web site seen as:	Expert users – Web site seen as:
Image	series of images/texts
One-dimensional	multi-dimensional
Visible	hidden/deduced
Entity	Ensemble of entities

Table 1: Interpretation of a Web site among novice and technical users.

On basis of our analysis of the 6 most and least trusted Websites, we can list the trust-promoting and trust-diminishing elements of these Web sites in *Table 2*.

Trusted	Distrusted
Text-based	Image-based
Empty space as structural element	Empty space as background or as "undefined" space
Strict grouping, visual density	grouping seemingly random
Formal language	Informal language
----	Animations
Structured and linear upper part	Unstructured and nonlinear upper part.
Use of real photos	Use of cartoons

Table 2: Elements of Web design

On basis of our analysis, it seems that the "trusted" elements of the sites were more prominent on the more trusted sites, and less prominent on the less trusted sites. The same is true of the distrusted sites – the distrust elements are at their strongest on the top of the list. There are, then, a lot of sites the design of which is somewhere in the middle, not adhering strongly either to the "trusted design" or the "distrusted design" language. This means that categorising them is not a simple task – no wonder that the customer gets confused.

To promote trust, the site designer should adhere as closely as possible to the presented design rules – it is not enough to follow some and neglect others, for this will not amount to the expected result of trustworthy design. In case of the two sites of the study, the distinction between what is trustworthy and what is not seems indeed to be very small – the Netscape homepage and the msn homepage are very similar to one another, as figures 13 and 14 clearly demonstrate.



Most elements are the same, and the sites seem almost identical. The biggest differences are in that the msn-carpoint site has used a cartoon-like picture of Uncle Sam and its upper part defining line is not as definite as in the Netscape site. The structuring of the latter site is perhaps also somewhat more ordered and newspaper-like. It is likely, however, that actually it is the *contents* of the sites that result in differing opinions about the site: the msn-carpoint site is filled with advertisements, whereas the Netscape-page is more informative in nature. The overall interpretation of a site is, then, always affected, at least to some extent, by the dialogue played between the layout and the content.

## 6. REFERENCES

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