Online Trust Cues: Perceptions and Application

Antonina A. Bauman
Emporia State University

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USA

ABSTRACT

This qualitative study analyzes perceptions of online trust cues as identified by shoppers from three countries: Germany, Russia, and the USA. A novel approach of the repertory grid method is used to study online trust cues in business-to-consumers commercial online transactions. This study resulted in the list of web site elements and features that consumers recognize as trust cues and use to evaluate e-vendor's trustworthiness.

Findings show that out of fourteen categories of online trust cues, identified by online shoppers, three categories of online trust cues are found to be common across three cultures while eleven categories are culture specific.

This exploratory study was done in the natural environment but participants did not buy a product. They only examined web sites to evaluate perceived trustworthiness. Hence, one has to be cautious in drawing final conclusions and applying them from a sample to a general population

Keywords: *online trust, online trust cues, perceptions, e-commerce*

INTRODUCTION

The virtual nature of e-commerce creates both opportunities and risks for online sellers and buyers. Online sellers welcome the opportunity to expand their markets worldwide but face fierce competition. Establishing long-term customer relationships based on trust and loyalty has proved to be a successful business strategy. In attempts to attract and retain global customers, e-vendors signal their trustworthiness through web design elements. These signals are directed to the customers, regardless of the country in which they live. The ability to shop across traditional physical borders, and purchase foreign products from the convenience of home, appeals to a growing number of consumers; however, online buyers are cautious about which online stores they can trust.

This research focuses on the first phase of developing online trust – identification and interpretation of online trust cues as recognized by shoppers from three different countries (Germany, Russia, and the United States). A repertory grid research technique was implemented and, as a result, fourteen categories of online trust cues were identified and compared across three cultures.

The primary purpose of this study is to analyze which web site elements and features customers from three different cultures identify as online trust cues. The study concentrates on business-to-consumer online transactions conducted on commercial web sites. It focuses on finding the answers to the following questions:

- What online trust cues do customers seek in a commercial web site when they form their perception about that web site's trustworthiness?
- To what extent do perceptions of online trust cues differ across cultures?

This paper starts with a brief review of the theoretical background for this research. Then, a description of the repertory grid technique, its origins and its use follow to explain this study's methodology. The main part of the paper presents results of the study and discussion leads to the concluding sections that explain methodological, empirical and practical contribution of this research. Also discussed are limitations and implications for future research.

THEORETICAL BACKGROUND

Online Trust
Technological developments and the increase in e-commerce transactions have extended the notion of trust to the relationship between a human (customer) and the Internet, an artefact created by humans. Numerous studies focused on determining whether online trust exists in a virtual environment and how it could be described (Corritore *et al*., 2003; Grabner-Kraeuter and Kaluscha, 2008; Turilli *et al.,* 2010; Warrington *et al.,* 2000). Gradually, a definition of online trust was formed as "an attitude of confident expectation in an online situation of risk that one's vulnerabilities will not be exploited" (Beldad *et al.,* 2010, p. 860). This definition reflects a consensus among online trust researchers that the nature and basic meaning of online trust is not different from the concept of face-to-face trust (Corritore *et al*., 2003; Jarvenpaa and Rao, 2003; Wang and Emurian, 2005).

Researchers agree that the online trust elements are the same as in traditional trust (Ben-Ner and Halldorsson, 2010; Cook *et al.,* 2009):

- online trust develops between two parties: trustor and trustee (although a trustee is a web site or a vendor who uses the Internet to represent its business),
- online trust occurs in an environment that is highly complex and uncertain,
- a trustor shows vulnerability, when a trustor "hands over the control of the situation" to a trustee to do X and not Y (Cook *et al.*, 2009, p.1).
- a trustor takes a risk by entering the online buying transaction.

The online trust building process is based on the assessment of the other party's perceived trustworthiness which is defined as a set of trustee's qualities that provide the basis for trust (Corritore *et al*., 2003; Jarvenpaa and Rao, 2003; Kiyonari *et al.,* 2006).

Despite similarities between the phenomena of traditional and online trust, the context of the virtual environment in which online trust develops is quite different from the traditional face-to-face environment which makes an online buyer more vulnerable (Bart *et al.,* 2005). Physical stores provide a familiar environment with observable interpersonal interactions, which Kotler (1973) described in sensory terms of sight, sound, scent, and touch that correspond to visual (sight), aural (sound), olfactory (scent), and tactile (touch) dimensions. Online stores, on the other hand, offer an "impersonal anonymous experience" (Zwarum, 2007, p. 198), where visual and aural

dimensions can be transferred from a physical to an online store; however, olfactory and tactile dimensions are impossible to incorporate into a web site (Sharma, 2015).

Aside from the environmental difference (virtual vs. physical), the time that a trustor takes to develop online trust is shorter than the time it takes to develop trust in the face-to-face environment. Luhmann (1979) warns that the process of building trust relationships is done slowly, step by step. In the online transaction, however, a customer has to make a decision to trust or not to trust that web site on the spot as the customer has to pay in advance, and there is also space and time separation between paying for the product and receiving it (Namamian and Kamari, 2012; Riegelsberger and Sasse, 2001; Yoon, 2002). Thus, an online environment makes a buyer more vulnerable to the actions of an e-vendor, and gaining online consumer trust is crucial for e-vendors (Warrington *et al.,* 2000).

Online Trust Cues

To overcome the problem of online transactions as being risky and impersonal (Beldad *et al.*, 2010), e-vendors use online web site features that signal their trustworthiness. Those signals are defined as "trust cues" (Eastlick and Lotz, 2011, p. 238) and serve as "attributes of the entity to be trusted" (Riegelsberger and Sasse, 2001, p.18). Once online shoppers find trust cues, they develop a perception of that vendor's trustworthiness that helps to predict the outcome of dealing with a vendor (Benedicktus *et al.,* 2010; Chen *et al.,* 2010).

Empirical research shows different results for which web site qualities, design elements and company policies serve as trust cues: trustmarks or third party certification (Aiken and Boush, 2006), photos and company's reputation scores among users (Bente *et al.*, 2012), presence of social network sites and corporate blogs on a company's web site (Brengman and Karimov, 2012), third party ratings of a web site and clearly expressed security and privacy policies (Chen and Barnes, 2007), and avatars (Keeling *et al.*, 2010). However, these studies are based on the quantitative approach in which researchers identified various web site trust cues and tested their hypothesis.

However, if customers are intended recipients of trust signals, and customers decide which web site is trustworthy and which web site is not, then customers, as online shoppers and users of web sites, should identify the trust cues. Thus there is a need for a qualitative study of online trust cues which would analyze the customers' perceptions of what web elements trigger consumer online trust.

Interpreting Online Signals and Developing Perceptions

Since perceptions of online store trustworthiness are based on trust cues that are interpreted by an individual's personal process of "sensemaking" (Kaul *et al.,* 2010), analyzing online buyers' perceptions of web site trustworthiness involves studying how each online shopper interprets web site elements and creates a meaning of what he/she sees online.

The personal construct theory, developed by George Kelly in 1955, is an attempt to explain how people create meanings and perceptions about the world. Kelly (1963) views every person as a scientist and implies that people develop their own hypotheses about the world around them and

test those hypotheses just as scientists do while researching a particular topic. Each individual compares and contrasts different aspects of an object, event or a phenomenon. The result is a set of constructs, or characteristics, of an object, event or a phenomenon that builds a subjective model of a world (Siau *et al.,* 2010; Tan and Hunter, 2002).

Kelly (1963) further contends that each construct is bi-polar as people develop meaning by saying not only what an object is but also what an object is not. The system of constructs reflects individual perceptions and defines the way people interact with the world around them (Hassenzahl and Wessler, 2000) and anticipate future events (Tan and Hunter, 2002).

Another theory that explains how online customers perceive and evaluate credibility of a web site is Fogg's (2003) prominence-interpretation theory. "*Credibility* can be defined as *believability*" as it describes a "perceived quality" of an object (Fogg and Tseng, 1999, p. 80, emphasized in the original). Although trust and credibility are not the same phenomenon, credibility is seen as "a cue for trustworthiness" (Corritore *et al*., 2003) as it has two components – trustworthiness and expertise (Fogg and Tseng, 1999). The trustworthiness component refers to "the perceived goodness or morality of the source" (Fogg and Tseng, 1999, p. 80), while the expertise component "captures the perceived knowledge and skill of the source" (Fogg and Tseng, 1999, p. 80). According to Fogg (2003), web site users notice a web site's feature or element that stands out (prominence) and then they interpret what they have noticed (interpretation). This process of noticing and interpreting web features or elements occurs several times during one visit to the web site as new features of the web site are found. The process stops when a person reaches a certain level of satisfaction/dissatisfaction or faces a restriction, for example, runs out of time or loses the Internet connection (Fogg, 2003).

The two theories - Kelly's (1963) personal construct theory and Fogg's (2003) prominence-interpretation theory explain the process of identifying and interpreting online trust cues which involves "translating signals into perceived meaning" (Connelly *et al*., 2011, p. 54). This process is impacted by each individual's interpretation and perception of the world, specifically by an individual's culture, expectations, and context of the situation (Fogg, 2003); therefore, the evaluation of the same store's trustworthiness may be different for different customers.

Online Trust and Culture

As a multidimensional, highly contextualized, and social phenomenon, online trust is affected by various factors (Chang *et al.,* 2013; Gefen *et al*., 2003; Jarvenpaa and Rao, 2003) including a cultural background of online shoppers (Beldad *et al*., 2010; Greenberg *et al.,* 2008). "Culture" in this research refers to the national cultural background of a customer- American, German, Russian, etc. In the area of management studies, the word "culture" is usually associated with the research contributions of Edward Hall, Geert Hofstede, and Fons Trompenaars who defined culture as a social phenomenon with multiple dimensions and elements (language, religion, manners, traditions, and aesthetics, for example) that differentiates one group of people from another (Hall, 1970; Hofstede *et al.*, 2010; Trompenaars, 1994) and impacts their consumer behavior (Bartikowski and Singh, 2014).

Chao and Moon (2005) offered an entirely different perspective on culture in which they suggested that an individual's culture should be viewed as a mosaic with multiple tiles reflecting the different aspects of one's culture. They posited that each individual uses a pattern of different tiles depending on the situation. Chao and Moon (2005) suggested three categories of tiles that an individual can use: demographic, geographic, and associative. Demographic tiles describe a person's age, gender, ethnicity and race. Geographic tiles refer to both the natural and the man-made environment of a place where somebody lives – country, region, city or village, coastal or inland area, and climate. Associative tiles entail an individual's connections or ties with social groups – family, friends, classmates, and co-workers. Based on the situation's requirements, an individual puts forward any one or a combination of tiles that reflect that individual's values. For example, a person might evaluate a situation based on age (demographics) and climate (geographic tile) in one case but use gender (demographic) and work (associative) in another.

As culture guides people's behavior (De Mooij and Hofstede, 2010; Doney *et al*., 1998), the question was raised as to what extent it impacts online trust (Bartikowski and Singh, 2014; Teo and Liu, 2007). However, the results of studies are mixed (Benbasat *et al.,* 2008): some studies showed the impact of a consumer cultural background on developing online trust toward an e-vendor (Cyr, 2013; Sia *et al*., 2009) while others did not (Casalo *et al*., 2011; Teo and Liu, 2007; Yu *et al.,* 2010).

METHOD

Repertory Grid Technique

Kelly (1963) developed a repertory grid method as a research technique based on his theory of personal constructs for use in the clinical psychology. However, its flexibility and ability to elicit individual perceptions were proved to be applicable to other disciplines. The method explores mental pictures of the world construed by individuals. There are three core components of the repertory grid technique (Jankowicz, 2004; Siau *et al.,* 2010):

- A set of elements (people or objects that are evaluated)
- A set of constructs (respondents' perceptions about elements)
- Links between elements and constructs expressed by respondents' evaluation of elements based on the constructs

The first step in applying the repertory grid technique is selecting elements that reflect the research question. Depending on the topic of study, elements could be people, objects, or events (Easterby-Smith *et al*., 1996). Elements could be selected by respondents or identified by a researcher. Allowing respondents to select their own elements reduces researcher bias (Curtis *et al.,* 2008) but adds challenges for analyzing data. Providing a list of websites as elements for the repertory grid to respondents better frames the scope of the research and provides the basis for comparison (Tan and Hunter, 2002).

Constructs are characteristics that both describe and differentiate elements (Easterby-Smith *et.al.*, 1996) and create a respondent's perception of that element. Constructs can be intuitions or feelings that a person uses as guidelines for action (Björklund, 2005). It is up to each individual to decide which characteristic to choose and how to describe it. Constructs are collected based on dyading

or triading (Jankowicz, 2004). Dyading refers to a process of reviewing two elements at a time. A respondent compares any two elements and determines what makes them similar and what makes them different (Marsden and Littler, 2000; Tan and Hunter, 2002). Triading implies consideration of three elements at a time. A respondent reviews three elements and determines how two of them are similar but at the same different from the third element (Crudge and Johnson, 2007; Curtis *et al.,* 2008).

In a grid, graphically presented as a table with columns and rows, elements are listed as titles of the columns and the data related to each element are presented vertically. Constructs are written in rows and the data related to constructs are presented horizontally. After respondents have listed all the constructs, they are asked to evaluate elements based on their list of constructs or characteristics written on the grid form (Curtis *et al.,* 2008; Marsden and Littler, 2000). The rating method of evaluating elements is the most widely used and validated by previous studies (Björklund, 2005; Hertzum and Clemmensen, 2012; Micheli *et al.,* 2012).

Study Participants

Since the focus of this research is on perceptions of online customers, the study participants need to be drawn from the population of online shoppers. The entire population of online shoppers is not known and cannot be identified; hence, statistical probability sampling cannot be used. Rather, a purposive sample, which is a non-probability sampling technique that selects study participants based on a researcher's judgment, was chosen (Saunders, 2012). Groups of respondents from different cultures were identified that meet two requirements: have the authority to make an online purchase and belong to different cultures. As for the size of the sample, it was found that in studies based on the repertory grid technique, no new constructs could be solicited after the tenth respondent completed the grid (Hassenzahl and Trautmann, 2001; Crudge and Johnson, 2007); however, Fassin, Van Rossem, and Buelens (2010) noted that "When using the RGT, a sample of 15–25 interviewees within a population is deemed adequate to generate sufficient constructs to approximate the universe of meaning surrounding a given situation" (Fassin *et al*., 2010, p. 430). Students from USA, Germany and Russia were asked to participate in this study of online trust. The participants from each country have been raised in that country, speak the language of that country as their native language, and still reside there. On this basis, respondents could be considered valid representatives of their culture (Cyr and Head, 2013; Hertzum and Clemmensen, 2012). Since online shopping is based on individual preferences, for which no work experience is required, students present a valid theoretical sampling (Chang *et al.*, 2013; McKnight *et al.,* 2002). All the participants spoke English as either their native or as a second language and were given a choice of providing the constructs in either language.

Data Collection

While the researcher collected grids from the US participants, local interviewers in two locations - Germany and Russia - were asked to assist with data collection. To ensure that the procedure was properly followed, local interviewers received a set of instructions, followed by phone and online training. Interviewers practiced the method by filling in repertory grids themselves to get a better idea of how the method works. This procedure of data collection had been previously validated by Hertzum and Clemmensen (2012).

Table 1: Example of a Repertory Grid.

Characteristic describing online trust and why it is important for you (7 points)	Contrasting quality (1 point)	Alibris http://www.alibris.co.uk/	Amazon http://www.amazon.com	BAM! Books-A-Million http://www.booksamillion.com	Biblio http://www.biblio.com	Bookspot http://www.bookspot.com	Powell's Books http://www.powells.com
Strictly clear return policy	*Confusing and long description of the return policy*	3	5	3	6	2	3
Customer feedback. The website uses my favorite colors (it is important for me)	*Websites didn't have a "happy" colors it was too dark and sad*	5	2	6	3	2	4
support/help desk contact data. I need sometimes help and this is important for me	*it was very difficult to find the support number*	3	6	4	5	3	4
Popularity is important because so I can trust this website	*I didn't know about some technical achievements I can trust them*	2	7	4	2	2	2
range of articles/categories too many articles are not good for quality or price	*too many articles of different too dealer. It was very difficult to find the article that I want*	6	6	6	6	6	6

Characteristic describing online trust and why it is important for you (7 points)	Contrasting quality (1 point)	Alibris http://www.alibris.co.uk/	Amazon http://www.amazon.com	BAM! Books-A-Million http://www.booksamillion.com	Biblio http://www.biblio.com/	Bookspot http://www.bookspot.com/	Powell's Books http://www.powells.com/
Clear terms of payment that must clear, so I can pay the right way	*that was good on all websites she some clear terms of payment*	6	6	6	6	1	6
time of delivery/period the delivery must short	*is the delivery time too long. I wouldn't buy anymore on this site*	4	7	3	5	4	6
languages/reference (Thai) I can only German and I need german language	*on some websites I can't find this button to choose my language*	3	4	4	3	3	4
prices the prices may be ... for a article	*the price of all websites are in the ... okay*	5	5	5	5	5	5
easy navigation I will find articles fast	*that was good on all websites*	6	6	6	6	6	6

What is your gender? X Male ___Female

What is your age group? ___17-19 X 20-25 ___26-30 ___31-34 ___35-39 ___40+

What culture do you associate yourself with? (Thai, German, French, British, Chinese, etc)? _German_

Book web sites as elements have been selected for the following reasons:

- Books are identified as one of the most commonly purchased online products (Moore, 2012).
- Purchasing a book or textbook online is a familiar activity that puts students as respondents in a natural situation and makes them an appropriate sample representative of online consumers (Njite & Parsa, 2005).
- As gender neutral and "low price and low touch" products (Gefen *et al.*, 2003; Chen and Barnes, 2007) books are found to be an acceptable product to use for the study of online trust (Chang *et al.*, 2013; Fisher and Chu, 2009).

Following Tan, Tung, and Xu's (2009) approach to choosing elements, five web sites were randomly selected from the top ten as identified by the Top Ten Reviews (http://online-bookstores-review.toptenreviews.com): Alibris, Amazon, BAM! Books-a-Million, Biblio, and Powell's Books. One web site was selected out of the range of the top ten: BookSpot. These six web sites represent a combination of vendors with different degrees of name recognition and ranking.

Each study participant received a blank repertory grid matrix with a list of six book web sites. The first two columns of the grid were used to fill in the constructs or characteristics of web sites that describe trust cues as recognized by customers. The first column was for the emerging construct (the characteristic that a respondent notices about a web site) and the second column was for a contrasting characteristic. A respondent wrote a construct while comparing and contrasting two web sites, and then evaluated all web sites on the Likert scale of 1-7 with the seven points assigned to the emergent construct and one point assigned to its contrasting pole.

Seventy respondents from three countries returned grids containing a total of 433 constructs. Since the objective of this research was to compare customers' perceptions of trust cues across three cultural groups, constructs from the individual repertory grids were combined to create a collective, or group grid (Tan and Hunter, 2002). For example, all constructs submitted by German respondents were placed together in one record. Three files – one for each cultural group – were then analyzed.

DATA RESULTS, ANALYSIS AND DISCUSSION

Preparation for the data content analysis involved two steps: core categorization and a reliability check. The core categorization process was completed by the researcher and two independent reviewers. Once all the constructs were assigned to categories, a reliability check for each sample was performed to ensure agreement between three people (Goffin & Koners, 2011; Jankowicz, 2004; Micheli *et al.*, 2012).

Due to the explorative nature of this research, only the qualitative type of analysis focusing on the content of constructs was undertaken. It included the distribution of constructs in categories (Curtis *et al.,* 2008; Goffin *et al.*, 2006), frequency of construct usage (Boyle, 2005; Goffin & Koners, 2011), and importance of constructs (Tomico *et al.,* 2009). These three types of analysis were used to triangulate the exploratory findings of this study.

Distribution of constructs in categories

The first type of analysis focused on the distribution of constructs in categories (Curtis *et al*., 2008; Goffin *et al*., 2006). Table 1, Table 2, and Table 3 below show the number of constructs by category.

The "Design" category included constructs related to the overall layout of a web page, flash animation, and aesthetic appeal of a web site's design (the use of colors, font styles, and pictures). This category holds the leading position for all three groups of respondents. This fact supports Fogg's (2003) prominence/interpretation theory, and the findings of the Fogg *et al*. (2003) research on how online customers evaluate a web site.

The "Sales" category had constructs related to the process of buying books online: product assortment (different literature genres), book types (hard copies, electronic books, newly published books as well as used books and textbook rentals), prices, discounts, and shipping. Since the purpose of online shopping is to purchase an item, it was expected that the 'Sales' category of constructs would be among the top listed by respondents. A comparison of the data in the three tables showed that the Russian sample had the greatest number of constructs related to sales as compared to the German and American groups.

The "Easy to Use" category reflected functionality of a web site, its user-friendly navigation, a customer's ability to easily find a product, and to make a purchase. It included, for example, an autocomplete advanced search box, and accessibility and visibility of a shopping cart. More than 56% of the constructs elicited from the American respondents appeared in this category compared to 47% in German and 70% in Russian samples.

Table 2. Constructs' categories and frequency in the USA sample.

Category	Category definitions	Number of constructs	% of the total number of constructs
Design	Layout, colors, fonts, images, and tools used on a web site	36	25.71%
Sales	Pricing, promotions, and variety of books that are competitive within the industry	27	19.29%
Ease of use	User-friendly layout that allows a customer to find a product and complete a transaction easily	23	16.43%
Reputation	Public opinion about a company and quality of its products and services	11	7.86%
Guarantees	Company stands behind its policies that reduce shopping risks: product guarantees, return policies, and after-sales assistance	10	7.14%
Security	Secure exchange of personal and financial data	8	5.71%
Customer support	Availability of and access to customer services	6	4.29%

Customer feedback	Web site's ability to solicit and display customer opinions about their experiences dealing with the company	5	3.57%
Physical location	Company's physical presence	3	2.14%
Services	Additional services that a web site provides to customers free of charge to make shopping experience more pleasant	3	2.14%
Scalable	Sized to fit computer/pad/pod screens	2	1.43%
Customization	Ability to create an account and receive individual recommendations	2	1.43%
Company information	The web site displays company's goals, history, address, phone numbers, e-mail address	2	1.43%
Social media	Easy accessible links to social networks from the web site	2	1.43%
Total		140	100.00%

Table 3: Constructs' categories and frequency in the German sample.

Category	Category definition	Number of constructs	% of the total number of constructs
Design	Layout, colors, fonts, images, and tools used on a web site	35	18.62%
Sales	Pricing, promotions, and variety of books that are competitive within the industry	30	15.96%
Ease of use	User-friendly layout that allows a customer to find a product and complete a transaction easily	27	14.36%
Services	Additional services that a web site provides to customers free of charge to make shopping experience more pleasant	15	7.98%
Reputation	Public opinion about a company and quality of its products and services	13	6.92%
Customer support	Availability of and access to customer services	13	6.92%
Language	A web site uses of a customer's native language or offers a translating tool	12	6.38%
Guarantees	Company stands behind its policies that reduce shopping risks: product guarantees, return policies, and after-sales assistance	12	6.38%
Customer feedback	Web site's ability to solicit and display customer opinions about their experiences dealing with the company	10	5.32%

Delivery	Delivery options to the customer's physical address	8	4.26%
Ease of payment	Several payment options available for customers which makes it easier to select the most convenient for customers method of payment	7	3.72%
Security	Secure exchange of personal and financial data	4	2.13%
Company information	The web site displays company's goals, history, address, phone numbers, e-mail address	1	0.53%
Social network	Easy accessible links to social networks from the web site	1	0.53%
	Total	188	100.00%

Table 4: Constructs' categories and frequency in the Russian sample.

Category	Category definition	Number of constructs	% of the total number of constructs
Design	Layout, colors, fonts, images, and tools used on a web site	29	27.62%
Sales	Pricing, promotions and variety of books that are competitive within the industry	27	25.71%
Ease of use	User-friendly layout that allows a customer to find a product and complete a transaction easily	19	18.10%
Customer feedback	Web site's ability to solicit and display customer opinions about their experiences dealing with the company	8	7.62%
Guarantees	Company stands behind its policies that reduce shopping risks: product guarantees, return policies, after-sales assistance	4	3.81%
Social network	Easy accessible links to social networks from the web site	4	3.81%
Delivery	Shipping information about delivery options, times, and prices	3	2.86%
Company information	The web site displays company's goals, history, address, phone numbers, e-mail address	2	1.90%

Customer support	Availability of and access to customer services, help with technical or product related issues	2	1.90%
Reputation	Public opinion about a company and quality of its products and services	2	1.90%
Physical Location	Company's physical presence	2	1.90%
Customization	Ability of a company to tailor web site's features to the needs of an individual customer, ability to create an account and receive individual recommendations	1	0.95%
Language	The web site uses a buyer's native language - either via a separate web site or offers a translation tool	1	0.95%
Transparency	Public display of a web site's purposes	1	0.95%
Total		105	100.00%

There were also categories that were not listed in all three samples. For example, content analysis of categories revealed that the "Security" category does not appear in the Russian sample.

The "Language" category is not listed in the USA sample as all the web sites were in English; therefore the American customers did not experience any problems understanding the content of the web site. Although both German and Russian shoppers spoke conversational English as a second language, and could grasp the basic offers, they commented on the fact that those web sites should provide an option of several languages. Reading the return policy and reviewing the delivery and payment options presented a challenge for some of the participants. For example, statements like "Selection of languages (so that I can understand the content better)" (German construct CB03), and "No Russian language support" (Russian construct MI01), appeared in the German and Russian samples, but nothing similar appeared in the USA sample.

The German respondents brought up issues of the ease and variety of payment methods along with delivery options and shipping time. Those two categories ("Delivery" and "Ease of Payment") do not appear in the USA sample. The issue of delivery came up in the Russian sample also, but to a lesser extent. Method of payment was not mentioned at all by the Russian respondents. The comment "The cost of shipping to Russia is either higher than a book's price or books are not delivered to Russia" (Russian construct TK04), summarizes the concern that Russian customers have regarding shipping. Two other Russian respondents also mentioned shipping rates and delivery information in their constructs MI02 and NI01. As the Russian postal system and delivery was noted as slow and unreliable by previous researchers of Russian e-commerce (Hawk, 2002), these comments were somewhat expected. Overall, consumers' concerns about product shipping and delivery, and a physical location of a store, were more significant for the Russian group. As previous research of the specifics of Russian e-commerce noted, the product delivery is slow and the postal system is unreliable there (Hawk, 2002), these comments were somewhat expected. Physical location of a store closer to a customer's home might mean faster and more reliable

delivery for Russians. Since German participants did not mention a store's physical presence in a specific location, this study only partially supports research findings of Fisher and Chu (2008) who found that "websites of local companies are perceived to be inherently more trustworthy than those associated with overseas vendors" (p. 557).

Frequency of Constructs

Once all the constructs were grouped into categories, they were analyzed in terms of their frequency – how many respondents used the same, or nearly the same, construct (Boyle, 2005; Goffin and Koners, 2011). This frequency count helps to identify trends that might emerge from a group of respondents especially when trends across several groups are compared (Tan and Hunter, 2002). The number of similar or identical constructs used by participants in each sample was calculated as a percentage of all participants in that group. For example, nine out of twenty two American respondents listed "The web site is easy to navigate" as a construct. That construct was used by 9/22=0.4090 or 40.9% of all American participants. Table 4 shows the result of the frequency count across three samples.

The top five constructs used by American respondents emphasized the structure of a web site's layout, its color appeal, reviews by other customers, an opportunity to contact a company representative, and a company's guarantee to accept a returned product. A different trend is noticeable among the German respondents. Although they place the same importance on the ease of navigating the web site as American customers do, German respondents emphasize the structure of the web page. Another unexpected frequent construct emerging from the German sample was the type of payment accepted by an online company. A variety of types of payments – credit card, debit card, PayPal, and money transfer, for example – bring an online store closer to the physical store where there are more options to pay.

Importance of Constructs

The third type of construct content analysis used in this study evaluated the importance of constructs as suggested by Tomico *et al.* (2009). They stated that the relative importance of constructs is shown by the order in which they are listed. The constructs that appear first are considered more important to the individual then constructs listed at the end of the grid. This proposal is in line with the prominence-interpretation theory (Fogg, 2003). Each construct that was listed as the first, or top, construct by a respondent was noted, and a list of all top constructs was compiled for each sample. The analysis of top constructs for each sample helped to confirm initial findings from the categorization and frequency analysis.

Table 5:   Comparison of the constructs used by 25% or more respondents.

American respondents	German respondents	Russian respondents

Construct	Frequency (% of respondents who used this construct)	Construct	Frequency (% of respondents who used this construct)	Construct	Frequency (% of respondents who used this construct)
The web site is easy to navigate throughout	40.90%	Easy navigation	57.69%	Amount of advertisement on a web site	36.36%
Customer reviews	40.90%	Clearly structured layout	57.69%	Web site colors	36.36%
Website colors	31.82%	Contact data for customer support	50.00%	Search engine	31.81%
Company contact information	31.82%	"Languages used by a web site	46.15%	Customer reviews	31.81%
Convenient and clear return policy	27.27%	Variety of product categories	46.15%		
		Clear return policy	42.31%		
		Customers' reviews	38.46%		
		Affordable pricing	34.62%		
		Recognized brand name	34.62%		
		Delivery times	30.77%		
		Colors	30.77%		
		Several payment options	26.92%		

The same three categories – "Design", "Sales", and "Ease of Use" - dominated the list across all three countries. The most important category of constructs for all countries was the "Design" category. The number of constructs in the "Ease of Use" category listed by German respondents

was higher than the number of constructs in the "Sales" category; however, the order of relative priority indicated that the "Sales" category is more important for those respondents. The same observation about German focus on functionality, or ease of use, also holds true in this analysis: constructs from the customer support, ease of payment, guarantees, and language categories made it to the top list. The list of important constructs for the Russian sample added guarantees, language, and social media, while the "Reputation" and "Security" categories appeared on the top list for American respondents.

This type of the analysis helped to show that there is a difference between which constructs were mentioned first, as in the respondents' perception they are more important, versus those constructs that were listed frequently but further down in priority. It confirmed that cues related to "Design", "Sales", and "Ease of Use" are recognized by online shoppers across all three countries.as the most prominent signals of trustworthiness.

DISCUSSION

Three types of the content analysis of the elicited data were based on the construct categories identified by the researcher and two independent reviewers. Comparison of categories between the three samples resulted in separating categories found across all three countries from country-specific categories, and led to some interesting observations. As a result of the content analysis of construct distribution between categories, three categories – "Design", "Sales", and "Ease of Use" - accounted for the highest number of constructs. This result was supported by two other types of analysis conducted in this study - the frequency of constructs' distribution and the importance of constructs analysis. This finding is significant for two reasons: first, it offers the basis for proposing that a universal set of online trust cues reflecting design, sales, and ease of a web site's use may exist in consumers' minds regardless their cultural affiliation. Second, it supports previous findings (Fogg, 2003; George et al., 2016; Lowry, 2014; Sharma, 2015) that online consumers use online appearance of a vendor's website to evaluate both the vendor and the website.

This study shows that the "Security" category does not appear to be a significant factor, particularly for the group of Russian customers. Only one Russian respondent out of 22 in the group used a construct that mentioned security and, that was included with privacy, return policy, and money back guarantees as one concept. Security also scored low with the German respondents as only four participants mentioned security related constructs, as did eight respondents from the USA sample. The lack of the constructs in the "Security" category, especially in the Russian sample, could have three possible explanations:

- Russians have been relatively recently introduced to online shopping and not all of them understand risks of virtual shopping (Hawk, 2002).
- Online customers assume that a company doing business online is responsible for providing secure transactions. This explanation is in line with Urban, Amyx, and Lorenzon (2009) who suggested that privacy and security were critical during the early years of the Internet but since e-commerce is maturing, consumers expect companies to do more about security of operations. Furnell, Tsaganidi, and Phippen (2008) also concluded that the majority of the Internet users, especially novices, believe that companies that offer online products are responsible for computer security.

- Security of transactions might not be a determinant of online trust (Bart *et al.,* 2005).

Although constructs related to the "Customer Feedback" category were found in all three groups, differentiation between customer feedback on a web site and providing links to social networks was more prominent in the group of Russian respondents. Using social networks such as "V Kontakte" ("In Contact") to get their friends' feedback was an emerging theme in the Russian sample. This trend is in line with the cultural aspect of Russian online consumer behavior as noted by the Nielsen research group (2013) and the PwC Global Annual Online Shopper report (2013): 60% of Russian consumers use their friends' recommendations when making a decision to purchase an item.

The comparison of categories formed by constructs elicited from customers, showed that although there is a common prevailing trend among online shoppers to evaluate a web site's trustworthiness based on the design, ease of use and sales, there is also an undercurrent cultural perspective that affects a consumer's decision to trust a virtual retailer.

Participants in the study developed constructs that reflect cognitive, emotional and behavioral trust dimensions (Wang and Emurian, 2005) along with interpersonal and institutional aspects of trust. The theory of "cultural tiles" (Chao & Moon, 2005) helped to link those aspects. For example, demographic tiles identified by Chao and Moon (2005) prompted respondents to name a common language, while geographic tiles were used when shoppers noted the physical location of a store. These two constructs reflect a company's benevolence (Altinay *et al.,* 2014). An online store's return policies and an offer for free trial of a product (excerpts from the book in this study) reflect a company's goodwill and assurance of product quality. Participants referred to associative tiles (Chao & Moon, 2005) when they noticed and mentioned a company's links to social media and social networks to check if their friends use the same web site for shopping.

Since a company's reputation is built by customers' experiences with that company, constructs related to customers' reviews and the company's name recognition reflect the company's integrity. An online store's ability to deliver as promised was evaluated based on how an online store (as an institution) uses current technology to ensure privacy, security, payment for and delivery of a product. Based on the above discussion, this study supports the findings of Altinay *et al.* (2014), whose research showed that trust is "sustained by all three categories of cultural tiles" (Altinay *et al.,* 2014, p. 16).

CONTRIBUTION

This study provides a three-fold contribution as the results of this work add to methodology and epistemology as well as have practical implications:

(1) This study is, to date, the only research that utilizes the repertory grid method for collecting data online and analyzing consumers' perceptions of online trust cues
(2) This study contributes to the academic literature on online trust signals as it provides insight into the types of cues that are identified by customers from three different cultures

(3) This study provides practical recommendations for e-vendors on what trust signals could be incorporated into the design of commercial web sites to appeal to global customers.

STUDY LIMITATIONS AND FUTURE RESEARCH

As in any academic research, there are a few limitations to this work that should be noted. However, based on those shortcomings, directions for future research are suggested.

This exploratory study was done in a natural environment when respondents, as online shoppers, browsed commercial web sites from their homes, but respondents did not actually shop online and did not submit their personal information to the online vendors. They only examined web sites to evaluate perceived trustworthiness. This research situation is close to the natural behavior occurring when online shoppers browse websites before making a purchase, but it seems to be incomplete as respondents did not buy anything (Aiken and Boush, 2006). Although previous research shows a relationship between intent and behavior, a gap may exist which requires further investigation. Also, as no purchase was made, this type of research situation may impact generalizability (Cyr, 2013).

Since the study participants were students, the age range of respondents was predominantly 18 - 25. One has to be cautious in drawing final conclusions and applying them from a sample to a general population. A similar study conducted outside the university setting could provide a more representative sample of the population with respect to this issue.

This study used web sites selling books online for exploring the effect of cultural background on a customer's identification and interpretation of online trust cues. Although books are found to be appropriate products for online trust research (Chen and Barnes, 2007; Fisher and Chu, 2009; Gefen *et al*., 2003) they belong to a group of products with a moderate to average level of risk (Fisher and Chu, 2009). Since purchasing a book is more of a routine and low-involvement procedure for students, on the one hand, it makes this study more authentic but on the other hand, a product with a higher level of customer involvement might cause a different type of behavior and a different attitude towards web site evaluation (Pennanen, 2009). A study utilizing a product with a higher risk level, i.e. a more expensive product, which requires higher involvement, might show different results as customers might exercise more caution in purchasing those items online.

ABOUT THE AUTHOR

Antonina A. Bauman
Emporia State University
abauman@emporia.edu
USA

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