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**Online Trust Cues: Universal or Culture-Specific?
A Cross-Cultural Study of the Role of Consumers'
Background Culture in Developing Online Trust**

by

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Abstract

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.

Online consumers enter online exchanges when they develop initial trust based on their perceptions of e-vendors' signals or cues of the company's ability, benevolence, and integrity. The majority of existing cross-cultural studies of online trust and online trust cues use quantitative research methods. Their findings on the impact of consumers' cultural background on developing online trust appear to be inconsistent as some studies find no impact of culture on developing online trust, while others provide evidence of the opposite. There is still another group of researchers who propose the existence of a common virtual culture that is adhered to by customers around the world regardless of their cultural background. This presents an opportunity for a study with a qualitative approach that would explore the cultural influence on customers' perceptions of online trust cues and help to better understand what makes customers trust one web site and not another.

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.

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.

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Chapter 1 Introduction

Background Information

The Internet has become an indispensable tool for international business. Web sites, developed by companies and individuals, are used for different types of online activities: communications, search for information, education, and value exchanges are just a few examples.

The competitive business environment is changing very fast, and to stay ahead or equal to the competition, companies look for long-term relationships with customers and flexible business solutions (Warrington, Abgrab and Caldwell 2000). E-commerce offers one of those solutions. Electronic value transactions are known as e-commerce, which usually refers to the buying and selling of products (tangible or intangible) over the Internet (Li et al. 2012; Mukherjee and Nath 2007). Based on the type of seller and buyer, e-commerce can occur between two businesses (business-to-business or B2B, where manufacturers interact with their suppliers and distributors, for example), between a business and an individual consumer (business-to-consumer or B2C, where a company sells its products online to the end users of that product), or between two individuals (consumer-to-consumer or C2C, where one individual sells to another individual via an online auction like E-Bay web site).

The Internet does not recognize physical borders between countries, and gives buyers access to online sellers from all continents. Being so far and yet so close, how does one know if a seller is trustworthy? With the ease of creating a commercial website, and relatively affordable cost (£3000 British pounds or \$5000 US dollars per year, as of December 2012, for developing an online store that can sell up to 60 items online), the number of online stores has skyrocketed. Don Davis, the editor of the Internet Retailer magazine, estimated that 25 million online retailers sell products over the Internet (Davis 2012). Each retailer tries to attract customers and entice them to complete a purchase. How does a buyer know which retailer to trust and which retailer not to trust?

The issue of online trust in e-commerce has been raised by many researchers since the early days of online shopping. At first, when the Internet was a new

technology that served as a foundation for a new business model, it caused consumer concerns over information privacy and security in the virtual environment (Hoffman, Novak and Peralta 1999; Palmer, Bailey and Faraj 2000). The novelty of technology raised not only the issue of privacy and security, but also concerns about the lack of a reliable structure, and multiple risks associated with an online exchange. All these issues were used to explain the lack of trust in e-commerce (Jarvenpaa and Tiller 2001).

One might think that over the last twenty years, improvements in technology, standardization of procedures, and secure processes of handling online payments have reduced the overall level of online risk and made online transactions more appealing to customers; however, sales numbers provide a different picture. In March 2010, Forrester Research predicted an 11% annual growth rate for online retail in Western Europe for the following five years, and 10% growth for the U.S. (Schonfeld 2010). Despite the impressive growth figures mentioned above, the ratio of online sales to traditional retail sales remains relatively small as compared to overall consumer spending. For example, US Census reports show that the e-commerce component of total retail sales volume in 2013 was 6%; in 2012, 5.4%; in 2011, 4.8% and in 2010, was 4.4% (US Census Bureau News 2012, 2013, 2014). According to the European Commission, the share of e-commerce in the European Union was 14% in 2012 and 15% in 2011 (European Commission 2013). Although European numbers are higher than the USA numbers, e-commerce sales volumes have not yet reached their full potential.

Economic reports on e-commerce sales show a steady growth in online retail over the last four years (European Commission 2013; US Census Bureau News 2012, 2013, 2014); however, it is not as significant as might be expected. Both practitioners and researchers ask the question of why the sales numbers are so low. They are finding out that one of the answers is that consumers do not trust e-commerce. Among the challenges 'for creating enabling legal environment for e-commerce' discussed at the World Trade Organization workshop on e-commerce in 2013 in Geneva, lack of trust in e-commerce was listed as the number one challenge (Fredricksson 2013, p.19). Researchers are also finding

out that consumers' lack of online trust remains the biggest obstacle to e-commerce development (Antoniou and Batten 2011; Hsu 2006).

One of the most common reasons given by customers for why they do not trust e-vendors is that buyers are worried about secure transactions. Since e-vendors ask consumers to provide sensitive information (such as a credit card number and a physical address for product delivery), buyers are not sure how this information is transmitted and stored (Joinson et al. 2010). For example, the results of the Lieberman Research Group (USA) survey conducted in February 2011 showed that 51% of the 1,008 USA phone survey participants were concerned about security of online shopping, a number which is up from 37% in a similar survey conducted in the second half of 2010 (Moore 2011).

The increase in the level of concern about security could be explained by the increased number of new mobile devices (smartphones, iPads, and tablets) with mobile shopping applications that became available for shoppers (Moore 2011). Gartner, Inc., one of the largest information technology research and advisory companies, reported that sales of smartphones increased by 47% in the third quarter of 2012 compared to the sales in the third quarter of 2011, and reached the number of 427.7 million units sold worldwide (Gartner 2012a). The number of iPads and other tablets is expected to reach 118.9 million units in 2012, a hefty 98% increase from 2011 sales of 60 million units (Gartner 2012b). These numbers reflect only sales to individuals, not companies. On the one hand, there are more opportunities to shop online but on the other hand, more chances for opportunistic behaviour on the part of sellers or those who want to take advantage of the technology.

An interesting observation, however, was made by Fogg (2003) who showed that although consumers do say that privacy and security of the transaction is their main concern, buyers do not show that concern by their online behaviour. The same view was expressed by Hsu (2006, p. 570) who said that 'privacy concerns do not parallel privacy practices'. There seems to be a gap between what consumers say about their privacy and what they do online. A possible explanation of this gap is that customers share private information when they trust a company in how this information is going to be handled. This highlights

the importance of a relationship between a seller and a buyer as buyers seem to overcome their concern for privacy if they deal with vendors whom they feel they can trust (Joinson et al. 2010). This also shows that in the area of e-commerce, 'trust is more than privacy and security' (Urban, Amyx and Lorenzon 2009, p. 181).

Although there are quite a few definitions of trust used in the academic literature, this research defines trust as suggested by Mayer, Davis, and Schoorman (1995, p. 712, emphasized in the original): '[Trust is] *the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor or control that other party.*' This definition is applicable to online trust as has been validated by previous studies (Becerra and Korgaonkar 2011; Chen and Dibb 2010; Lee and Turban 2001)

Traditionally, the definition of trust implied a type of relationship between two or more people. 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. One possible consequence of such an extension is a change in factors affecting trust as it applies to online consumer behaviour. A vast body of research into different aspects of online trust development helps to identify major categories of factors affecting online trust: Information and Communication Technology (Hoffman, Novak and Peralta 1999; Culnan 2000; Gefen, Karahanna and Straub 2003), company reputation (Lee and Turban 2001; Salam et al. 2005; Teo and Liu 2007), ethics (Kracher and Corritore 2004; Roman 2007), web quality (Flavian, Guinaliu and Gurrea 2006; Snelders, Morel and Havermans 2011), as well as the personal traits and cultural background of customers (Karvonen, Cardholm and Karlsson 2000; McKnight, Choudhury and Kacmar 2002a; Yu, King and Yoon 2010; San-Martin and Camarero 2012).

Among the factors listed above, the most complex one is found to be the cultural background of customers. In the virtual environment of e-commerce, the dynamic and multi-dimensional phenomenon, culture, meets another dynamic and multi-dimensional phenomenon, online trust, which creates a complex

relationship (Bartikowski and Singh 2014; Doney, Cannon and Mullen 1998). Since e-commerce does not know physical borders between countries and, thus, has a global nature, questions about how culture affects establishing online trust due to differences in social norms and values were raised by researchers (Teo and Liu 2007).

Culture has been understood as a social phenomenon with multiple elements (language, religion, manners, traditions, and aesthetics, for example) that differentiate one group of people from another (Hall 1970, 1990; Hofstede, Hofstede and Minkov 2010; Trompenaars 1994). Various studies have been conducted in different subject areas focusing on one cultural element or another. In terms of e-commerce, culture has been studied with the purpose of determining how to satisfy the needs of diverse web site visitors. It was found that satisfaction and positive emotional appeal of a web site can trigger the impulse to trust and make a purchase, thus possibly leading to a repeat purchase from that web site and customer loyalty to an e-vendor (Castanedo 2011; Harris and Goode 2010; Yoon 2002).

However, a consumer path from an initial visit of a web site to an online purchase is a risky one: studies have identified at least three types of risk that a consumer faces online (Jarvenpaa and Rao 2003; Jarvenpaa and Tiller 2001; Lee and Turban 2001):

- Privacy and security risk
- Competence or technology risk
- Merchant or retailer opportunism

Privacy and security risks are present when customers submit confidential and personal information online but they are not sure how transmission of the personal data and its proper storage is handled by a company (Lee and Turban 2001; Riegelsberger and Sasse 2001). Customers' personal and financial information could be compromised, for example, by the interference of a third party (Jarvenpaa and Rao 2003). Competence risks arise when a part of the buying process such as placing an order, viewing a shopping cart, or pricing a product, is not working properly and the outcome of an online exchange is uncertain (Jarvenpaa and Rao 2003). Merchant opportunism happens when a

retailer intentionally does not act properly: it misrepresents a product, a product is not delivered as promised, or the personal data is passed on to another party (Jarvenpaa and Rao 2003; Riegelsberger and Sasse 2001).

To reduce the above mentioned perceived risks and uncertainty in online transactions, online retailers develop different strategies that vary from designing a user-friendly web site to offering product warranties to fostering customer loyalty (Chen and Dibb 2010; Gupta and Kahadai 2010; Teo and Liu 2007; Wang and Emurian 2005).

The challenge is that 'the higher the initial perceived risk, the higher is the level of trust needed to persuade the consumer to engage in an online transaction' (Greenberg, Wong-On-Wing and Lui 2008, p. 28). Thus, the focus of e-vendors is on the initial impression of their web sites. While shopping online, consumers do not deal with salespeople but rather with a web site developed by a vendor and as such, consumers' trust is built upon a perceived trustworthiness of that web site (Jarvenpaa, Tractinsky and Vitale 2000).

The perceived trustworthiness of a party is viewed as an important antecedent of trust (Lee and Turban 2001) as it reflects that party's ability, benevolence, and integrity (Mayer, Davis and Schoorman 1995). However, evaluating a web site's trustworthiness might present a challenge due to its unique environment. While shopping in a traditional store, buyers recognize and evaluate familiar physical cues that signal trustworthiness of salespeople and the store itself (Guenzi, Johnson and Castaldo 2009). Those cues create an atmosphere that forms a perception of the store's resources, quality of products, salespeople's knowledge, and how much attention the store pays to customers' needs (Kotler 1973).

The online environment offers a different set of cues which is somewhat limited due to the virtual nature of e-commerce (Hampton-Sosa and Koufaris 2005). For example, traditional observations of people and smells are impossible on the Internet. There is only a website with its visual and audio design elements, which serves as a storefront for an online company (Lee and Turban 2001). To overcome the problem of online transactions as being impersonal (Beldad, De Jong and Steehouder 2010), e-vendors design web sites that signal their

trustworthiness. Those signals are defined as 'trust cues' (Eastlick and Lotz 2011, p. 238).

Since there is a delay between paying for tangible products online and receiving them, consumers have to develop initial trust in a web site before they do anything on that web site (Sultan et al. 2002; Wang, Beatty and Foxx 2004). Trust cues help customers develop perceptions about trustee's abilities, benevolence and integrity (Eastlick and Lotz 2011) and build initial trust (McKnight, Cummings and Chervany 1998).

Creating a positive emotional appeal online marks the first step in developing initial online trust and requires knowledge of online consumer behaviour and web design. From a strategic point of view, this step is the most important as it attracts customers from around the world to a specific web site.

There appear to be three research approaches while studying the role of culture in developing customer's online trust:

(1) to study consumer online behaviour based on one or two cultural dimensions as offered and analysed by Geert Hofstede (2010), Fons Trompenaars (1994), and Edward Hall (1990) in their studies of culture. (See chapter 2 for more information about this approach);

(2) to analyse online customers' reactions to a certain web site design feature to determine if the customers' cultural background affects the customers' attitude towards that web site feature. (See chapter 2 for more information about this approach);

(3) to conduct cross-cultural analysis of how shoppers with different national cultural background develop online trust based on one of various online trust models in an attempt to investigate if that online trust model is applicable across cultures. (See chapter 2 for more information about this approach).

Regardless of the approach undertaken by researchers, the extant literature shows a variety of opinions on the role of cultural background in developing online trust within each approach. While some researchers find that cultural background impacts online trust development (Lee and Turban 2001), others conclude the opposite, saying that culture does not influence the development

of trust (Casalo, Flavian and Guinaliu 2011, p. 201). There is also a third possibility – existence of a ‘virtual culture’ shared by consumers around the world regardless their own culture (San-Martin and Camarero 2012, p. 81).

These contradictory conclusions were made based mostly on quantitative studies using a survey method. While those studies have contributed to the research of online trust, the method reflected the results of the researchers’ empirical analysis of different aspects of online trust. Survey questions/statements included what the researchers found to be important online trust cues based on the systematic and analytic literature review, and which they wanted to verify.

There appears to be an insufficient number of qualitative cross-cultural studies exploring what constitutes a customer’s perception of a trustworthy web site. This presents an opportunity for a study using a qualitative approach that would review customers’ perceptions of online trust and help to better understand what makes customers trust one web site and not another.

1.1 Research objectives

The primary purpose of this research project is to ascertain the extent to which a customer’s cultural background affects identifying and interpreting online trust signals embedded in a web site. The study concentrates on business-to-consumer online transactions conducted on commercial web sites.

Government, educational, informational portals or non-profit web sites are not considered as their ultimate business goal is different from the goal of commercial web sites.

This study will focus on finding the answers to the following questions:

- What trust symbols do customers seek online 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? Are online trust cues universal or culture-specific?

Analysing customers' perceptions about what constitutes a trustworthy web site helps to better understand how customers evaluate web sites. The results of the study show which elements of a web site serve as online trust symbols that get noticed by consumers. The cross-cultural approach sheds light on whether customers' perceptions of online trust cues are universal, or whether customers' perceptions are influenced by their own culture.

The second, methodological, objective of this study is to implement an interpretive research framework for exploring customers' perceptions of online trust cues using the repertory grid technique that has not been used before in the study of consumer online trust.

1.2 Importance of this research

Recent political, economic, and financial crises, as well as the increase in competition and technological development, make today's business environment more vulnerable than that of a few decades ago (Ernst & Young 2011). It was found that trust can serve as a social mechanism that helps to reduce both social complexity (Luhmann 1979) and economic or transaction costs (Lane 1998). On the other hand, a shift in strategic management towards relationship commitment based on trust (Morgan and Hunt 1994), might explain the growing interest of both academics and practitioners in the subject of trust research.

As if anticipating a question about why trust research would be gaining importance in society, Luhmann wrote back in 1979: 'it is not to be expected that scientific and technological development will bring events under control, substituting mastery over things for trust as a social mechanism and thus making it unnecessary. Instead, one should expect trust to be increasingly in demand as a means of enduring the complexity of the future which technology will generate' (Luhmann 1979, p.16).

And indeed, technological developments have created a new type of environment that could not have been anticipated three decades ago – the virtual one. In an attempt to better utilize Internet potential in the area of e-

commerce, more and more academics and practitioners search for patterns of consumer behaviour online that could lead to establishing long-term trust relationships. On the other hand, consumers become more and more involved in building a company's reputation and innovative products as they share experiences, new product ideas and make suggestions for product improvement (Leeflang 2011). Most of those activities are performed online using blogs, discussion forums, social networks, and Twitter, regardless of the physical location of customers. Understanding what causes customers to trust one e-vendor and not another, or to enhance a positive reputation for one company and not another, might help companies maintain their relationships with clients. Since customers are located around the world, it appears that within the area of trust research, studies of cross-cultural aspects of trust are gaining more attention from researchers.

Several factors might explain the increase in the level of interest in cross-cultural research in trust (Ernst & Young 2011; Ferrin and Gillespie 2010; Laroche and Park 2013):

- Developments in communication technology help companies gather information around the world and respond to current volatile situations faster than they were able to a decade ago. Communicating across borders brings up a two-faceted challenge - linguistic and cultural.
- Technologies serve as the basis for new business models that emphasize innovation, efficiency and global extensions. Flexibility of those models allows businesses to take advantage of opportunities arising anywhere in the world.
- A shift in the location of economic activities from Western to Asian regions causes a blend of Western and Eastern cultures.
- Mobility of the workforce has become a factor that businesses have to consider. On the one hand, the lack of local skilled employees for international operations has been identified by leaders of major international corporations as one of the challenges in today's business environment. This forces companies to use expatriates. On the other hand, integration of the European market provides job opportunities and movement of the labour force between countries.

Cultural diversity of employees in an organization increases creativity but also adds challenges to handling employees with different business ethics.

In addition to the above mentioned trends, retention of online shoppers remains a problem for e-vendors. The Baymard Institute (Copenhagen, Denmark) compiled research data from 24 sources that published statistical reports about online shopping cart abandonment rate and showed the seven year (2006-2013) average rate at 67.89% while the average 2013 rate alone reached 71.27% (as of 3 December 2013). Among elements listed as factors impacting the checkout process were fears, uncertainty and doubts as one element and trust indicators as another (Ritholtz 2012). This puts vendors under the pressure of winning consumers' trust, retaining first-time buyers and turning them into repeat customers.

One of the current business strategic approaches that was found to be successful dealing with customer retention is relationship marketing (Morgan and Hunt 1994). It involves building long-term relationships with customers based on trust. As applied to the virtual environment of e-commerce, where buyers and sellers are separated both in time and space (Riegelsberger and Sasse 2001), customers have to trust a web site before they actually complete a purchase as they pay for a tangible product before receiving it. This makes online trust more strategic than traditional trust: online trust starts with initial trust in a web site that might turn into trust in a company and then goes on to building long-term trustworthy relationships when customers finally become advocates who promote that company (Urban, Amyx and Lorenzon 2009).

Given the importance of trust cues in gaining and retaining a diverse group of online customers, this study makes a threefold contribution to the existing literature:

First, it adds empirically to the field of online trust research as it explores the most crucial moment of establishing initial trust based on customers' interpretation of trust cues embedded in a commercial web site. Although there is extant research investigating which web design elements signal trustworthiness, there is a lack of qualitative study analysing customers'

perceptions. This research offers a list of elements identified by customers of three countries as trust cues that they consider while evaluating the trustworthiness of a commercial web site. Findings of this study provide new insights on what impacts consumers' perceptions of the e-vendor's ability, benevolence, and integrity.

Another empirical contribution of this study is that it compares findings across three countries while the majority of cross-cultural studies use only two countries and 'may have limited values compared to studies done in several cultures' (Teo and Liu 2007, p. 23). Examining customers' perceptions in three cultures offers a better understanding of how culture impacts developing online trust (Sekaran 1983; Teo and Liu 2007).

Second, methodologically, this research differs from the current academic trends as it uses a repertory grid method. This research technique has not been used before in the cross-cultural studies of online trust. In this study, the repertory grid method has been implemented to explore and analyse perceptions of online customers about trust cues of commercial web sites. It explores the first step of online trust development – identification and interpretation of online trust cues as recognized by shoppers from three different countries (Germany, Russia, and the USA).

Finally, practical implications based on the results of this research are offered to businesses with online market presence. Those recommendations are developed in an attempt to assist businesses with improvements to their overall strategy aimed at gaining and retaining online customers.

1.3 Structure of the thesis

This thesis is organized in five chapters as follows:

- Chapter One: Introduction

This chapter introduces the subject of research, explains its importance, and outlines the structure of the thesis.

- Chapter Two: Literature Review

This chapter reviews research findings in four areas related to the research question: trust, online trust, the role of consumers' cultural background in establishing online trust, and online trust cues and their interpretation. The chapter explains why Mayer, Davis, and Schoorman's (1996) definition of trust is used as the basis for the online trust analysis. A historic overview of online trust research reveals trends in research in this field. The discussion of some of the basic models of online trust shows that all of them have an element that relates to the culture of an online customer. A summary of the results of the academic research in the area of culture and online trust follows. Some of the culture-related issues such as definitions of culture, aesthetics of the web design, online trust cues and how they are interpreted by customers are described. This review of literature provides the basis for investigating the research question.

- Chapter Three: Research Methodology

This chapter discusses two founding philosophies of academic research: positivism and interpretivism; and presents arguments explaining why interpretivism is used as the research philosophy for this study. After a brief discussion of quantitative and qualitative methods of research, the focus shifts to the proposed qualitative research tool – a repertory grid (its history, design, advantages and disadvantages, and some examples of the recent use of the technique in the area of management). As a result of the epistemological and methodological discussion, the design for this research project is presented at the end of this chapter.

- Chapter Four: Main Study

This chapter begins with the description of the pilot project which was launched prior to the main study. It offers results of the pilot project and discusses lessons learned from it. Then, the chapter describes how the main study was implemented. It includes sections on sample identification and size, repertory grid design adjustments, data collection and preparation for the analysis. The chapter reviews the processes of categorization and independent reliability

check used to validate data before moving on to the discussion of the main study research findings. The results of the constructs' categorization are presented and compared. Four types of construct analysis are used to triangulate the data before the final conclusion is reached. A sample of a completed repertory grid form is provided in Appendix 6.

- Chapter Five: Conclusions

This chapter summarizes the study conducted in pursuit of the doctoral degree. It presents the threefold contribution of this research as empirical, methodological, and practical implications of the research findings are offered. This chapter also acknowledges limitations of the study that were identified during the research process. It demonstrates the researcher's ability to reflect on the results as objectively as possible. This chapter concludes with remarks about the overall significance of the research as the study crosses borders of several disciplines: strategic management, consumer behaviour, and Internet marketing, to name a few.

Following the structure of the thesis presented above, the next chapter will present a literature review that will cover several areas related to the research question: traditional trust, online trust, online trust cues, why companies send them and how buyers interpret those signals, culture, and the role of consumers' cultural background in establishing online trust based on the trust cues found on a commercial web site.

Chapter 2 Literature Review

Introduction

The purpose of this research is to explore to what extent the cultural background of customers affects their recognition and identification of web site cues that signal trustworthiness of an online vendor. Thus, the process of establishing online trust between a buyer and a seller, based on the signals that online consumers receive from a web site, is the core of this study. This chapter presents a literature review of several research areas related to the development of online trust. This discussion creates a theoretical background for the proposed research and leads to better understanding of business strategies that online retailers employ to signal their trustworthiness in order to gain and retain online buyers.

This chapter offers a review of both classical studies that build the foundation of trust research as well as current findings across multiple disciplines. While presenting results of the literature review this chapter attempts to answer the following questions:

- Traditional trust – what do researchers mean by trust in the traditional face-to-face environment?
- Online trust – is it really different from traditional trust? If so, how?
- Signals of trust online – what are they? Why and how are signals communicated and what theories are used to explain how customers interpret those online trust signals?
- Online trust signals and culture – what is the role of customers' background culture in interpreting online trust signals and developing online trust? Are online trust signals universal or culture-specific?

The order in which these topics are covered in this chapter is carefully put together to reflect upon current advances in the studies of online trust and some contradictory findings about the role of customers' cultural background on developing online trust that require further exploration and clarification.

This chapter begins with a discussion of traditional trust as a foundation for defining the concept of online trust. It then traces the major research trends in

the study of online trust and shows that the phenomenon of trust remains the same when applied to the virtual environment of the Internet. However, by its nature, e-commerce operates in an environment which is different from traditional face-to-face retail, and where one party communicates its trustworthiness using signals that differ from the signals of trustworthiness in the face-to-face scenario. Since the research question is aimed at studying which signals online buyers recognize as trust cues, and how consumers with various cultural backgrounds interpret those signals, discussion of the signalling theory, communication process, and creating meaning out of received signals is included into the background information about the topic of research.

2.1 Traditional trust

Trust has been an object of studies in psychology, sociology, e-commerce, and various fields of management and marketing such as branding, supply chain management, services, buyer-seller relationships, information systems, business ethics, and organizational behaviour (Arnott 2007). This multidisciplinary interest towards trust presented a challenge to developing a widely accepted definition of trust which led to 'semantic acrobatics' (Blomqvist 1997, p. 277). McKnight and Chervany (2002) reviewed 80 books and articles on trust from psychology, social psychology, sociology, economics, political science, and management and communications in which they found 65 definitions of trust. In those definitions, trust was approached either as expectation (Barber 1983; Fukuyama 1995; McAllister 1995), belief (Arnott 2007), probability of an outcome (Gambetta 2000), or a psychological state of mind (Chang, Cheung and Tang 2013; Rousseau et al. 1998) depending on the subject of the research.

Out of multiple explanations of trust, this research uses the following definition that present trust as '*the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor or control that other party*' (Mayer, Davis, and Schoorman 1995, p. 712, emphasized in the original). This definition was selected for this study as it reflects the social

nature of trust which is applied to 'the relations among people rather than to their psychological states taken individually' (Lewis and Weigert 1985, p. 968). Another reason to use this definition is that traditionally, trust as 'willingness' to be vulnerable is used in the majority of studies of both traditional trust (Li 2012) and online trust research (Eastlick and Lotz 2011) as well as in management and computer information systems research (Benamati et al. 2010). This definition of trust developed by Mayer, Davis, and Schoorman (1995) is widely accepted across other business areas and 'is likely the most well-known, and most studied, model of trust development in the literature' (Wildman et al. 2012, p. 140). It reflects an individual's attitude toward a risky situation impacting that individual's behaviour. In a commercial situation, this attitude leads to the intention to purchase (McKnight and Chervany 2002) which meets the ultimate goal of a business.

Although there are numerous interpretations of the concept of trust (Barber 1983; Mayer, Davis and Schoorman 1995; Pettit 1995), all focus on four elements of trust that have to be present for trust to occur (Grabner-Kraeuter and Kaluscha 2008):

1. Two parties - trustor and trustee - must exist to develop trust.
2. Vulnerability (trust exists only in a risky and uncertain situation).
3. Risk-taking action (trust results in an action that requires risk-taking behaviour).
4. Subjective matter (trust is affected by many subjective individual and environmental circumstances, and as such, is dependent on the context of the situation).

The process of trust-building in a commercial situation could be roughly outlined as follows: Party A finds itself in a situation where something has to be achieved with the assistance of Party B. Since only partial information (or none at all) is available about Party B, Party A finds itself in a vulnerable and a risky position as it must rely on an unknown player to get things done for an exchange of something valuable. Party A cannot control the actions of Party B and has to trust that Party B will act in accordance with the expectations of Party A; and will not take advantage of an opportunity to cheat on Party A.

This process of interactions (Blau 1967) continues, and if it is successful, the level of trust increases incrementally. Thus, trust between parties is built slowly over time and is based on the interpretation of observed signs and symbols (Luhmann 1979) and assessment of the other party's trustworthiness (Altinay, Saunders and Wong 2014; Pettit 1995).

Mayer, Davis, and Schoorman's (1995) definition of trust (see above) separates trust from trustworthiness in which ability, benevolence and integrity are characteristics of a trustee serving as antecedents of trust and indicators of perceived trustworthiness (Colquitt, Scott and LePine 2007; Mayer, Davis and Schoorman 1995; Schoorman, Davis and Mayer 2007). Although sometimes used interchangeably (Hardin 1996; Kiyonari et al. 2006), concepts of trust and trustworthiness reflect and belong to two different sides of the same phenomenon: while trust is developed by a trustor, trustworthiness refers to trustee's characteristics (Lee, Ang and Dubelaar 2005; Mayer, Davis and Schoorman 1995; Pennanen 2011). In other words, if Party A trusts Party B, then Party B is described as trustworthy. Trustworthiness of Party B is seen as not taking advantage of Party A's vulnerability, because 'the more B returns the more trustworthiness he or she exhibits towards A who sought to maximize returns on investment' (Ben-Ner and Halldorsson 2010, p. 66). Actions and qualities of a trustee, or Party B, are evaluated by a trustor, or Party A. The result of this assessment is used to develop a perception of the other party's trustworthiness (Altinay, Saunders and Wang 2014; Dietz 2011).

The relationship between trust and trustworthiness is that a customer's (the trustor's) decision to trust a particular vendor is based primarily on that customer's perception of a seller's (the trustee's) trustworthiness (McKnight, Choudhury and Kacmar 2002b; Mukherjee and Nath 2007; Pennanen 2011). Since trustworthiness is a multifaceted construct which focuses on capturing 'the competence and character of the trustee' (Colquitt, Scott and LePine 2007, p. 909), improving and enhancing perceptions of trustworthiness increases levels of trust (Hardin 1996). And, according to Gambetta (2000, p. 223), 'the higher the level of trust the higher the likelihood of cooperation.'

Thus, trust of one party is impacted by the perceived trustworthiness of another, specifically by the trustee's ability, benevolence, and integrity (Mayer, Davis and Schoorman 1995). Ability refers to a trustee's skills and competencies to conduct business in a professional manner (Belanger, Hiller and Smith 2002; Cheung and Lee 2006; Mayer, Davis and Schoorman 1995). Benevolence is the extent to which a trustee shows care and concern about a trustor, and is interested in a mutually beneficial outcome (Doney and Canon 1997; Mayer, Davis and Schoorman 1995). Integrity of a trustee reflects a trustee's compliance with a set of principles that makes the trustee dependable and reliable in the eyes of a trustor (Lauer and Deng 2007; Lee, Ang and Dubelaar 2005; Mayer, Davis and Schoorman 1995).

Depending on the environment and the context of a situation, there appear to be three main approaches to trust: trust is described either as cognitive, emotional (affective) or behavioural in nature. The cognitive view on trust shows a rational and rather calculative approach to evaluation of the other party's trustworthiness (McAllister 1995) while the affective perspective reflects 'reciprocated interpersonal care and concern' (McAllister 1995, p. 25), a type of behaviour that involves acting on one's feelings (Misztal 1996; Nooteboom and Six 2003). The behavioural aspect of trust refers to 'the undertaking of a risky course of action on the confident expectation that all persons involved in the action will act competently and dutifully' (Lewis and Weigert 1985, p. 971). However, there are situations where there is no clear line that could differentiate those research approaches and trust forms. The majority of researchers seem to agree that trust combines all three dimensions: cognitive, affective, and behavioural, but the ratio of those elements is different based on the context of the situation in which trust occurs.

Regardless of the context of the situation, trust has been identified as a means to reduce uncertainty (Luhmann 1979) in a situation 'of risk and potential doubt' (Lewis and Weigert 1985, p. 968) where there is 'performance ambiguity' (Singh and Sirdeshmukh 2000, p. 154), the outcomes are difficult to predict, and vulnerability and long-term interdependence is high (Gefen 2000; Li 2012).

Rousseau et al. (1998) emphasized that trust can take many forms – from calculated and reason-based to emotional depending on the situation, but ‘even within the same relationship, the degree of trust varies even in the same context, the scope of trust may vary, depending on the relationship’s history, stage of development, and cues in the immediate setting’ (Rousseau et al. 1998, p. 398). Building upon Rousseau et al. (1998) and Gambetta (2000), Clases, Bachmann, and Wehner (2003) add: ‘Trust is neither rational nor irrational, neither purely cognitive nor emotional, based on neither complete knowledge nor on total opaqueness. It is to be located between these polarities’ (Clases, Bachmann and Wehner 2003, p. 8, emphasized in the original).

Since trust is a multidimensional concept (Butler 1991; Singh and Sirdeshmukh 2000) that occurs in a social environment in a changing context (Fukuyama 1995; Luhmann 1979), one could conclude that trust is fluid. It can take any form and shape depending on the context of the situation. As a dynamic entity, trust does not keep its form and shape. It can change at any time, adjusting to changing circumstances. Just like anything fluid that must be contained and takes the shape of the container, trust is encapsulated within specific context and cannot be ‘context-free’ (Wright and Enhert 2010, p. 108).

There are some circumstances under which trust between parties occurs faster than usual. In today’s changing work environment, people often form teams of highly skilled individuals who had never previously met but are assigned to work together in order to complete a complex project under the pressure of a deadline (Wildman et al. 2012). In these circumstances of high stakes and unknown players, team members are expected to start working together from the time the group is formed (McKinney et al. 2005).

This situation presents an opportunity to develop ‘swift trust’ (Meyerson, Weick and Kramer 1996). ‘Swift trust’ is defined as trust formed on a temporary basis between individuals who do not know each other but have to work together under the pressure of meeting a deadline (Meyerson, Weick and Kramer 1996). It is based on assumptions that all players know their functions on a team and will act accordingly, so that the group project will be completed by a certain time (Li et al. 2011). Meyerson, Weick, and Kramer (1996) argued that in a

'temporary system', or a group project, members of the group are capable of importing trust from other settings to a new situation. Since people under time pressure tend to confirm existing information rather than seek evidence, category-based information processing and reliance on skills of each group member were noted to be characteristic of swift trust (Meyerson, Weick and Kramer 1996; Li et al. 2011). Another way of looking at swift trust is that team members match their skills with the processes required for a successful completion of the project and rely on each other's competencies rather than behaviour (Robert, Dennis and Hung 2009).

The high interdependence of group members on the one hand serves as the basis of swift trust formation, but on the other hand, requires effective interaction (McKinney et al. 2005). Signalling and reciprocation were found to be two essential aspects of team members' interactions leading to a team's success. However, not just any signal, but 'a signal well known to the participants is used' (McKinney et al. 2005:216), so that the respondent can 'appropriately reciprocate' (McKinney et al. 2005, p. 216).

Wildman et al. (2012) extended this theory and proposed a modified framework of trust development in swift starting action teams by adding that in the absence of 'deep-level trustworthiness information' (Wildman et al. 2012, p. 143) about all team members' ability, benevolence, and integrity, members of a team have to rely on 'quickly discernable surface-level cues' and imported information to assess their level of trust in other team members (Wildman et al. 2012, p. 144).

Harrison et al. (2002) described surface-level features as visible differences in demographic characteristics of the group members - age, gender, race/ethnicity, while imported information is defined as 'the preexisting knowledge, stereotypes, and preconceptions stored in the team members' memories' (Wildman et al. 2012, p. 145). When the team members meet for the first time, they tend to evaluate each other based on those visible or surface-level cues and assign people to 'categories' or social classes based on their own attitudes, perceptions, and stereotypes about each social group (Harrison et al. 2002). The deep-level or non-observable cues of a party's values and skills - ability, benevolence, and integrity - become known only after the

interaction with and observation of the other party's behaviour over time (Milliken and Martins 1996). This theoretical model adds importance to the role of cues and individual perceptions even in a situation where trust could be developed based on the transfer of settings and functions (Meyerson, Weick and Kramer 1996).

In the case of swift trust, once the project is completed, the group is dissolved and there is a low probability of the same members working together in the future. Thus, swift trust is a short-term, temporary phenomenon used to keep the team as a cohesive unit for the duration of a project.

Yet another type of situation develops when trust is formed quickly without any prior experience (like swift trust) but with the possibility of future transactions (unlike swift trust). Jones and George (1998) and McKnight, Cummings, and Chervany (1998) were among the first researchers who acknowledged that contrary to the traditional view of developing trust incrementally over time (Luhmann 1979), it is possible to develop initial trust very quickly before any interaction between two parties occurs.

In their analysis of the evolution of trust, Jones and George (1998) identified three states of trust experience: distrust, conditional trust and unconditional trust. Although the term 'conditional trust' that the researchers used in their study is different from the 'initial' trust as suggested by McKnight, Cummings and Chervany (1998), the idea that trust could develop prior to any commercial transaction is expressed by both groups of academics. Coming from different perspectives these researchers arrived at the same conclusion that it is possible to develop trust rapidly without any previous knowledge of a party involved in a social situation.

Jones and George (1998) analysed the evolution of trust using the theory of symbolic interactionism (see more about this theory in section 2.5 of this chapter) while McKnight, Cummings, and Chervany (1998) proposed their model based on combined research findings from personality-based, institution-based, calculative, and cognition-based trust studies. Two years later, in their study, Singh and Sirdeshmukh (2000), differentiated between 'the level of trust before initiation of an exchange episode (pre-trust)' and the level of trust defined

as 'post-trust' that happens after such an exchange (Singh and Sirdeshmukh 2000, p. 156). They explored pre-trust as pre-purchase trust and post-trust as post-purchase trust using the signalling theory (see more about signalling theory in section 2.4 of this chapter).

Based on the similarities of the first phases in the studies of Jones and George (1998), McKnight, Cummings, and Chervany (1998), and Singh and Sirdeshmukh (2000), initial trust is defined as trust which occurs between parties that 'have little solid, verifiable information about each other, and what they do know is not from first-hand, personal experience' (McKnight and Chervany 2006, p. 29). It is formed almost instantaneously rather than over time during the early stage of a relationship when there is no information about the other party (Eastlick and Lotz 2011).

Initial trust is based on trustor's perceptions of the other party's trustworthiness (McKnight, Cummings and Chervany 1998). It is the result of the trustor's evaluation of signals that a trustee uses to communicate intentions and abilities. Those signals are defined as 'trust cues' (Eastlick and Lotz 2011, p. 238). Perceptions of these trust cues impact a person's trusting beliefs (perceptions of a trustee's abilities, benevolence, and integrity), trusting intentions (willingness to depend on a trustee), behavioural intentions and behaviour (Eastlick and Lotz 2011).

Initial trust is very important in a commercial exchange situation when parties get together for the first time. A 'trust image' of a party or, specifically, a store, is developed based on observation prior to any interaction (Kaul, Sahay and Koshy 2010, p. 277). After customers create their first impression, they make a decision to continue or stop cooperation depending on feelings they develop towards a store – confidence in, or doubt about, a vendor's ability to complete a task. Thus, the result of a mere observation is crucial for establishing the first transaction. Once first-hand experience is gained from that first transaction, parties may continue or stop their relationship. Impressions of the other party's ability, benevolence and integrity 'tend to continue into the future, perpetuated by belief-maintaining mechanisms' (McKnight and Chervany 2006, p. 29).

Pre-purchase or initial trust impacts not only the decision to activate an exchange but also develop trust itself because the outcome of the first encounter can either strengthen or negate future interactions. This has strategic implications on trust development as it differentiates relational exchanges from contractual exchanges (Singh and Sirdeshmukh 2000).

Thus, both initial and swift types of trust in the face-to-face environment develop early in a relationship between a trustor and a trustee without prior interaction. These two types of relationships are affected by the cues received from the environment about the perceived trustee's appearance and functionality (Singh and Sirdeshmukh 2000; Wu, Hu and Wu 2010).

Regardless of the type of trust (rational, affective, or behavioural) and time it takes to develop it (traditional, swift or initial trust), researchers agree that trust is required in a risky situation (Li 2012) and that the three underlying determinants of trust are the same: ability, integrity, and benevolence (Arnott 2007). Trust is a dynamic process which goes through different phases - from the initial first probe of the relationship to either long-term interaction or its elimination (Rousseau et al. 1998). Trust is a requirement for many business transactions (Gefen and Straub 2003) as it reduces uncertainty (Luhmann 1979) and creates a social environment in which businesses can operate (Lewis and Weigert 1985; Luhmann 1979). In addition, trust has been seen as a major factor impacting seller-buyer relationship (Grabner-Kraeuter 2002) and developing long-term business strategies based on trust and commitment (Morgan and Hunt 1994). Trust helps to focus on future business conditions (Ganesan 1994) which now are more likely to take place on the Internet. Electronic governments, online education, and e-commerce are only some of the areas that presented research opportunities for studies of trust in virtual reality.

2.2 Online trust

Online trust... What is it? How does it differ from traditional trust? The brief discussion of traditional trust in section 2.1 has offered a basic foundation for reviewing online trust between online customers and e-vendors. On the one

hand, since a customer pays for a tangible product before receiving it from an electronic vendor, trust should develop between a customer and a vendor before the online transaction occurs to ensure security of private information submitted online; but on the other hand, customers do not want to spend time on developing trust in a traditional way (Wang, Beatty and Foxx 2004). Due to the overwhelming number and variety of online vendors, it is very easy for an online customer to compare vendors of the same product (Koufaris and Hampton-Sosa 2004). Customers frequently visit a web site but do not complete a purchase, as they are just 'online window shopping' - surfing the Internet in search of a better product with a longer warranty at a better price with a better delivery option.

Since the first online store, Amazon.com, Inc. was founded by Jeff Bezos in 1994 (Amazon.com; History of ecommerce), the issue of online trust between a customer and an e-vendor has been a research topic for academics. Numerous studies have been conducted to define online trust and to determine its nature. This turned out to be a challenging task, as, over time, research showed that online trust is a multi-dimensional phenomenon (Bart et al. 2005; Shankar, Urban and Sultan 2002) and the following review of major trends in online trust reflects that. Studying the evolution of the online trust models developed as a result of those research trends, helped to analyse the research findings, as well as to reveal a gap that this study fills in.

Early research on online trust focused more on trust in the technology itself, as in the 1990s the Internet was still a new method of conducting business. The Internet changed the way people lived, worked, shopped, and spent their free time. New technology drew the attention of researchers from different fields who questioned whether it could be trusted. Although a variety of tools designed to protect business transactions online already existed at that time (such as encryption technology and secure credit and debit card payments, for example), a standard, safe and secure business model had not yet been developed, and different companies used different approaches to operating online (Hoffman, Novak and Peralta 1999).

The variety of online product offers seemed to be overwhelming and the accessibility appealing; however, the convenience of shopping from home came at a price. A shopper's perceived invisible 'online footprint' (Clarke 1999) became very visible for companies to track in the virtual environment. Databases made it easy to 'trawl' and 'mine' consumer data (Clarke 1999).

Collecting online customer information about personal tastes, shopping habits and browsing history proved to be beneficial to online vendors as sellers could customize product offerings to anticipate customers' needs as well as place advertisements based on customers' interests and browsing behaviour. Database marketing made sharing customers' private information within the same company or between several companies profitable to vendors. That early period of the Internet boom is often referred to as the Wild West Internet, as observers noted similarities between the Wild West times in the western United States in the 1850s and wild times on the Internet in the 1990s. Consumers perceived 'the Web as a world of chaos, offering both opportunities and threats' (Patton and Jøsang 2004, p. 9). There were indeed plenty of opportunities to either build wealth in the spirit of freedom and honest entrepreneurship, or to take advantage of the seemingly anonymous Internet to engage in legally-questionable but profitable activities.

Three main reasons for the opportunistic behaviour on the Internet exhibited by some sellers are identified as (1) the perceived anonymity of the Internet, (2) the ease and relatively low costs of collecting, storing, sending or exchanging electronic data, and (3) access to global networks (Clarke 1999; Hoffman, Novak and Peralta 1999; O'Neill 2000; Smyth and Carleton 2011). These three characteristics of the Internet provide what O'Neill (2000, p. 253) called 'the most fertile ground for criminal activity yet encountered.' When in the hands of 'cybercrooks' (O'Neill 2000, p. 249) computers could be used for a variety of criminal operations: from breaking into a personal computer and stealing personal information to breaking into a company's database and manipulating bank accounts and money transfers (O'Neill 2000; Smyth and Carleton 2011). The concern was that new technologies were turning a seemingly anonymous shopper on the Internet into an identifiable and easy to follow user. The person's perceived invisible 'online footprint' became very visible for companies

to track. Clarke (1999) noted that databases made it easy to 'trawl' and 'mine' personal data and store it beyond the customer's control.

The issues of privacy and security (Culnan 2000; Liu et al. 2004), confidentiality of financial transactions (Hoffman, Novak and Peralta 1999) and third party seal of approval (Palmer, Bailey and Faraj 2000; Rifon, LaRose and Choi 2005) became a focus of online trust studies. Privacy on the Internet is understood to be secure storage and protection of personal records and confidentiality of online behaviour (Clarke 1999; Bart et al. 2005), and invasion of privacy is commonly interpreted as the 'unauthorized collection, disclosure, or other use of personal information such as selling it to other e-marketers', which does not guarantee confidentiality of records and transactions (Luo 2002, p. 112). The focus of online trust research was on studying the impact of 'seals of approval' or 'trust seals' issued by trusted third parties (Rifon, LaRose and Choi 2005; Tang, Hu and Smith 2008).

Trust seals are images or icons on a web site that 'symbolically communicate a third-party authority designed to engender trust in the Web site's information practices as stated in their privacy policy' (Rifon, LaRose and Choi 2005, p. 341). Trusted third parties are networks of companies that use these seals in an attempt to promote self-regulation as a response to customers' concerns about their privacy online (Liu et al. 2004; Luo 2002). Their mission is to audit commercial online processes to ensure that business transactions are conducted in compliance with a set of guidelines developed by those networks or third-parties.

Although e-vendors attempt to protect and guarantee consumers their privacy and security, those actions happen behind the scenes and for the most part are invisible to consumers. The companies' privacy and confidentiality policy statements outline their approach to information security. However, those policy statements could be too long or difficult to understand (Belanger, Hiller and Smith 2002). Some of the companies elect to participate in self-regulating networks that determine and confirm that a company complies with the industry standards for ensuring the privacy and security of online transactions. As a

result of participating in those networks, companies can show the image of an 'approval seal' or 'trust seal' issued by that network.

For example, TRUSTe, one of the most popular companies that issue 'trust seals', states that it 'powers trust by ensuring businesses adhere to best practices regarding the collection and use of personal information on their websites and apps' (TRUSTe.com). Although TRUSTe started as an American company promoting Fair Information Practices as outlined by the US Federal Trade Commission (Privacy Online 2000), it grew internationally and extended its certification requirements to include the EU Safe Harbor. U.S. - EU Safe Harbor is a streamlined process for US companies that store customer personal information to comply with the European Commission's Directive on Data Protection that went into effect in October 1998 (export.gov).

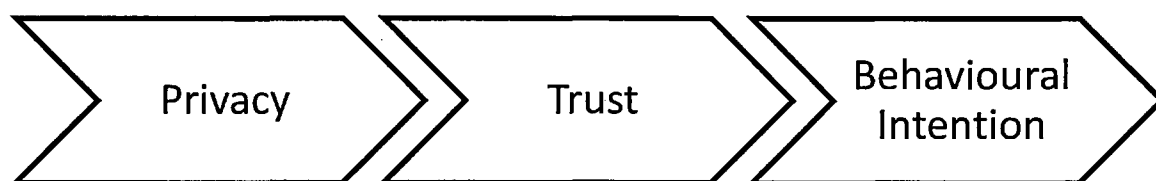
The innovative technology of TRUSTe allows the network to assess, certify, monitor, and control how a company collects and uses customers' data. Businesses go through an audit process and pay membership fees to be able to get confirmation that their policies and procedures 'meet the comprehensive privacy certification requirements established by TRUSTe' (TRUSTe.com). If an e-vendor displays an image of a seal of approval, it means that this particular vendor discloses its privacy statement and complies with the industry's best practices regarding privacy of customer information (Palmer, Bailey and Faraj 2000). However, one needs to keep in mind that the 'trust seal' does not guarantee privacy or security, it only confirms that the company that displays it, follows the best practices accepted in the industry.

In an on-going academic discussion about how effective those seals and approvals of trusted third parties could be, the results are not clear (McCole, Ramsey and Williams 2010). On the one hand, seals of approval were found to be an effective method to increase customers' willingness to accept risk and submit personal information to an e-vendor (Aiken and Boush 2006; Jiang, Jones and Javie 2008). In addition, it was reported that privacy seal presence 'had a main effect on trust; seal presence created significantly stronger Web site trust perceptions' (Rifon, LaRose and Choi 2005, p. 359). But on the other hand, Kimery and McCord (2002), and Bahmanziari, Odom, and Ugrin (2009)

did not find any significant relationship between those seals issued by the trusted third parties and online trust. Although the issues of privacy and security were important, the presence of privacy seals did not impact consumers' perceptions of web site trustworthiness (Belanger, Hiller and Smith 2002).

Online trust in the late 1990s - early 2000s was defined as trust in technology rather than trust in a business operating in virtual reality (Nissenbaum 2001; Luo 2002). The majority of conceptual models of online trust which were proposed during that period reflected that definition, and followed the main pattern expressed below as suggested by Liu et al. (2004).

Exhibit 2.1 Privacy-Trust-Behavioural Intention model. (Source: Liu et al., 2004)



Since online trust was viewed as trust in technology, the privacy and security were considered most important technological antecedents to online trust (Joinson et al. 2010). The Privacy-Trust-Behavioural Intention model (Exhibit 2.1) was developed based on the hypotheses that when online privacy and security are guaranteed, consumers would develop trust that in turn would lead to buying behaviour, or at least to the intention to buy a product online (Eastlick, Lotz and Warrington 2006; Liu et al. 2004; Mukherjee and Nath 2007).

Building on previous trust research, McKnight, Choudhury, and Kacmar (2002b) suggested a different approach when they combined the personal disposition to trust and institution-based trust as antecedents to trusting beliefs that lead to trust-related behaviour resulting in an online transaction. Since an institution provides the structure appropriate for an exchange, it adds 'normalcy' to an otherwise risky situation (McKnight, Choudhury and Kacmar 2002b). In the online environment, situational 'normalcy' or 'normality' refers to the consumer

perceptions of 'the favourability and potential success for conducting business via the internet' (Eastlick and Lotz 2011, p. 235). Online consumers usually have some experience with online shopping, therefore they develop perceptions about standard practices of buying products from online vendors. If a web site appears to be 'normal' based on consumers' perceptions and memories about shopping experiences from other web sites, then consumers are more likely to trust that web site.

The Internet represents a virtual environment for conducting business, and as such, is treated as an institutional environment whose structure (privacy, security, and reliability) can affect customers' perceptions of a specific vendor. Disposition to trust as a general ability to trust others is included in the model as it influences beliefs of an individual about online vendors (McKnight, Choudhury and Kacmar 2002b). Although the model suggested by McKnight, Choudhury, and Kacmar (2002b) incorporated more elements, the baseline is the emphasis on the beliefs in normalcy and security of the online shopping experience that create trust leading to purchasing behaviour.

Technological development of the Internet into the more interactive Web 2.0 environment allowed Internet users to build their own social networks and become active rather than passive Internet users by either building their own, or contributing to other, online content (O'Reilly 2005). The increased number of web sites, and web tools available on those web sites, presented a challenge for web designers in terms of how to make the web site user-friendly and retain users at the same time.

To address this challenge, another research approach was developed for the purpose of defining online trust. The focus shifted toward web site quality, as online trust is seen to be trust in a specific vendor's web site rather than trust in the available technology. In their study, Fogg et al. (2003) found that 46.2% of all visitors to commercial web sites evaluate a web site's credibility by visual appeal. The mismatch between what customers said was important (privacy and security) and what they did (evaluated visual effects that included colour scheme, layout and images) confirmed that the shift in academic research from mostly technical issues of privacy and security to web site appeal and quality

was necessary. Later research supported that finding, as it was reported that the trusted third party seals did not significantly affect consumers' willingness to trust a particular e-vendor. Rather, the customers' perception of web site quality became the primary factor (McKnight, Kacmar and Choudhury 2004; Schlosser, Barnett White and Lloyd 2006).

An argument has been developed that since there is no salesperson in online shopping, customers treat a web site as they would treat a salesperson (Jarvenpaa, Tractinsky and Vitale 2000). Some characteristics of a salesperson could be expected of a web site. If a customer has a positive initial experience with a web site and perceives a web site to be helpful, appealing to his/her tastes, and easy to interact with, then a customer is more likely to develop trust toward that web site (Hampton-Sosa and Koufaris 2005).

The term 'web quality' was coined to reflect both technological and 'human-like' features that appeal to online customers. Although about thirty characteristics of web site quality have been identified (Bart et al. 2005; Lowry et al. 2008), web site quality is understood as the user's perception of the web site's navigability, aesthetics, and functionality (Lowry et al. 2008). The ease of web site navigation and functionality can be evaluated more objectively as they are classified as components of the technical aspect of web design; while aesthetics, or visual appeal, seems to be difficult to evaluate as 'appeal' is determined by the customers' aesthetic norms shaped by their culture (Cyr 2013). When customers see that a company invests money in an appealing design and improving a web site's usability to create a pleasant shopping experience, they develop a perception that the e-vendor has the competence and ability to offer a good value online and they tend to trust that web site (Koufaris and Hampton-Sosa 2004; Flavian, Guinaliu and Gurrea 2006).

Thus, it has been established that despite privacy and security concerns, customers are attracted to web sites that, in customers' perceptions, have an appealing design. Once a customer develops the first impression of the web site as positive, that person might ignore any negative issues associated with it. This effect is known in marketing as the 'halo effect'. The 'halo effect' is generally defined as 'the influence of a global evaluation on evaluations of

individual attributes' (Nisbett and Wilson 1977, p. 250). When applied to the online environment, it means that a consumer develops an overall, or 'global' impression of a web site, carries that perception for a long time, and evaluates only those elements that enforce the first impression (Lindgaard et al. 2006). The same phenomenon is referred to as 'confirmation bias' in the literature about the decision making process (Nickerson 1998). It happens when people are looking for confirmation of their initial decisions.

Both terms emphasize the fact that in the presence of a very strong first impression about an object, people tend to overlook any negative issues found about that object later. The converse is true - in the presence of a strong negative first impression, any positive aspects are ignored (Lindgaard et al. 2006). It has been postulated that the 'positive confirmation bias is not a simple error; rather, it is a manifestation of a pattern of reasoning' (Jones and Sugden 2001, p. 92) and as such, it cannot be ignored while designing commercial web sites.

The above discussed phenomenon of a 'halo effect' or 'confirmation bias' and postulation that consumers' perceptions of the product's quality, company's ability to deliver a product, and security of the financial transaction received from a web site 'must be sufficiently positive to overcome perceived online uncertainty, risk, and/or vulnerability' (Becerra and Korgaonkar 2011, p. 939), emphasize the strategic importance of developing a strong first impression of a web site on a customer. A customer with a positive perception of a web site is satisfied with the online experience and is more likely to stay longer on that web site and develop initial trust in it (Kim, Xu and Koh 2004).

Thus a link between the appealing design of a web site and initial trust has been established for an online commercial environment. Initial trust, as defined earlier in section 2.1, is 'the ability of the truster to believe and rely upon the trustee without any firsthand knowledge of the trustee' (Lowry et al. 2008, p. 202).

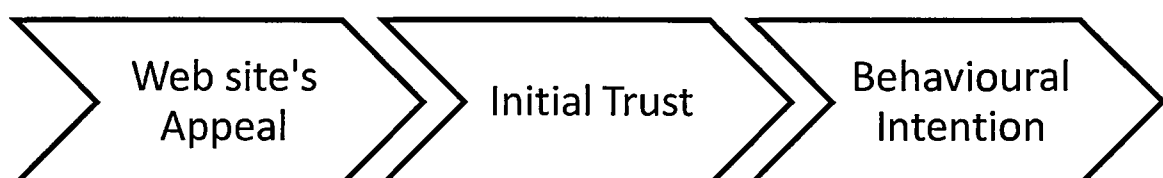
Over time, researchers saw several reasons for emphasizing the significant role of initial trust in e-commerce:

- Although online trust is formed over time and is affected by the experience and interactions between the parties involved in the online exchange, initial trust can form between the parties without any prior experience (Koufaris and Hampton-Sosa 2004). Due to the specifics of the online environment (submit personal information and pay first, then receive a product), initial trust has to be established between an online shopper and e-vendor before the transaction is completed. Thus, 'trust-image of the store begins as a pre-interaction construct' (Kaul, Sahay and Koshy 2010, p. 277).
- Without initial trust, it is impossible to establish a good transaction history between vendors and customers; and 'without a good transaction history, consumers may not build trust in these merchants' (Patton and Jøsang 2004, p. 10).
- Since it is easy for online customers to switch from one company to another, it is important for the e-vendors to establish trust at first sight, during the first visit (McKnight, Kacmar and Choudhury 2004).
- Previous studies have confirmed that trust established in the initial interaction would last for a long time. If a consumer does not develop initial trust in an e-retailer from the initial visit, then there is a little chance of a consumer of returning back to that web site (Wang et al. 2011).

After the link between the web site's appeal, initial trust and trusting behaviour resulting in an online purchase has been established, an online trust model was modified to reflect this perspective. Exhibit 2.2 below illustrates how the original Privacy-Trust-Behavioural intention model of online trust had been adjusted.

Exhibit 2.2 Web site's Appeal-Initial Trust-Behavioural Intention model.

(Adjusted from Liu et al. 2004)



This adjusted model is supported by reviewing the relationship between an object of trust and a trustor. According to one of the basic principles of the trust-building process, a trustor's experience with the object of trust determines trust toward that object (Blau 1974; Luhmann 1979). Since the object of online trust is a web site, if consumers' perception of the web site is that of a company capable of delivering promised value, then consumers are more likely to develop trust (Bart et al. 2005).

Some researchers saw the limitations of equating online trust to trust in technology or viewing online trust as trust in web site; so they combined trust in technology, trust in a specific online vendor and a web site created by that vendor into a concept of online trust (Beldad, De Jong and Steehouder 2010; Lauer and Deng 2007; Tan and Sutherland 2004). This complex concept is applicable to a consumer online purchase: a consumer, as a trustor, finds himself/herself in a risky situation where he/she uses the Internet as a tool to communicate his/her needs to an e-vendor, submits private information about himself/herself and the method of payment, expecting the technology to be a reliable means for the transaction and expecting the vendor to behave in a business-like manner and fulfil the purchase request.

Thus 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, De Jong and Steehouder 2010, p. 860). This definition is close to the trust definition of Mayer, Davis, and Schoorman (1995) provided earlier (section 2.1) and reflects a consensus among online trust researchers that the nature of, and basic meaning of, online trust is not different from the concept of face-to-face trust (Corritore, Kracher and Wiedenbeck 2003; Jarvenpaa and Rao 2003; Shankar, Urban and Sultan 2002; Wang and Emurian 2005).

The online trust elements, or 'building blocks of trust models' (Jarvenpaa and Rao 2003, p. 231), are the same as in traditional trust (Wang and Emurian 2005) discussed earlier in section 2.1 of this chapter:

- online trust, just like traditional trust, is developed 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, and
- a trustor takes a risk by entering the interaction.

Although these four elements are the same as traditional trust elements, and the online trust building process is also based on the assessment of the other party's perceived trustworthiness (Corritore, Kracher and Wiedenbeck 2003; Jarvenpaa and Rao 2003), the context of the virtual environment in which online trust develops is quite different from the traditional face-to-face environment (Bart et al. 2005). Physical stores provide a familiar environment with interpersonal interactions, while online stores offer an 'impersonal anonymous experience' (Zwarum 2007, p. 198). It was found that the environment in which an interaction occurs, impacts the ability to assess the other party's competence and professionalism (Bitner 1992; Kotler 1973). Competence is an indicator of that party's trustworthiness (as was discussed earlier in section 2.1), the characteristics of the environment serve as important cues impacting consumer trust in salespeople, trust in a store, and trust in that store's products (Guenzi, Johnson and Castaldo 2009).

As consumers look for those cues before making a purchase and evaluate that company's ability and quality of products (Bitner 1992), it is strategically important for a company 'to design buying environments to produce specific emotional effects in the buyer that enhance his purchase probability' (Kotler 1973, p. 50). Kotler (1973) offered the term 'atmospherics' that described a store's environment in sensory terms of sight, sound, scent, and touch that correspond to visual (sight), aural (sound), olfactory (scent), and tactile (touch) dimensions. Visual and aural dimensions can be transferred to and applied in a virtual environment; however, olfactory and tactile dimensions are impossible to incorporate into a web site.

Since the online environment offers fewer observable trust cues than the face-to-face environment does, it is recognized as a 'reduced-cues environment' (Flanagin 2007, p. 405). This explains one of the reasons why customers do not develop trust toward e-vendors, as there is a lack of familiar interpersonal trust building cues on the Internet (Hampton-Sosa and Koufaris 2005). For example, in the virtual environment, traditional observations of human behaviour are impossible. Since there is no salesperson in an online store, there is no eye contact between a trustor and a trustee, and there are no handshakes between the parties. There is only a website which serves as a storefront for an online company (Hampton-Sosa and Koufaris 2005; McKnight, Choudhury and Kacmar 2002b).

Aside from the obvious difference (virtual vs. physical environment), 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. He refers to the 'principle of gradualness' (Luhmann 1979, p. 41) that applies to building trust in either a simple but constantly changing environment or when the environment 'is too complex for adaptation at one stroke' (Luhmann 1979, p. 41). Since the online environment is both constantly changing and complex, and 'digital environments have a reputation for being ephemeral, confusing, and in a constant state of flux' (Long 2004, p. 60), online trust has to be present for an exchange to occur. If a consumer has had no previous online interaction with a particular web site, he or she has to make a decision to trust or not to trust that web site on the spot.

Some researchers state that in addition to a different environment and the time it takes to develop online trust, the object of online trust is different as, in the traditional environment, people trust other people or organizations; while online they trust technology and organizations (Boyd 2003; Shankar, Urban and Sultan 2002). One could argue that traditional trust in an organization has the organization as the object of trust. Any organization is built by and for people, just like technology is developed by and for people. If indeed, the object of online trust is both technology and the online organization, then it increases the risk of an online transaction and requires more trust.

There are some other aspects of e-commerce that add risk to online shopping. For example, the customer is committed to an exchange transaction before the vendor is (as the customer has to pay in advance), and there is also space and time separation between paying for the product and receiving it (Riegelsberger and Sasse 2001; Yoon 2002). Customers cannot determine the quality of the product offered online, and the choice of technology that the e-vendor uses for online transactions is beyond the customer's control (Cheung and Lee 2006; Grabner-Kraeuter and Kaluscha 2008).

Due to the higher number of uncertain aspects in e-commerce, development of trust is significantly more important, but also more difficult, in the online environment than in the face-to-face situation. Negative consequences of an online transaction that might go wrong are greater than potential positive outcomes (Lee and Turban, 2001). To prevent loss, just as in the traditional face-to-face environment, online trustors look for cues that would indicate the level of trustworthiness of a vendor. In their discussion of online trust, Beldad, De Jong, and Steehouder (2010) focus on trustworthiness since they view online trust as a reflection of the degree of trustworthiness shown by trustees. This puts online trust into a different perspective, which explains why online vendors try to use as many cues or symbols of trustworthiness as possible on their web sites.

As we see in the online environment, the basic concept of trust remains the same, but a human being has to trust an artificial object created by a human being rather than to trust another human being. The evolution of online trust models discussed in this section shows the shift of research focus from the studies of privacy and security as antecedents of online trust leading to a change in consumers' behaviour, to web site appeal as the antecedent of initial trust as a way to keep an online shopper on a web site for a longer period which might result in a purchase and long-term relationship.

Since the object of trust is virtual, its intangibility is what customers have a problem dealing with. There is no handshake, no eye contact, and no body language to observe, all of which help to make a decision to trust or not to trust in the traditional environment (Hampton-Sosa and Koufaris 2005). To

overcome the problem of online transactions as being 'faceless and intangible' (Beldad, De Jong and Steehouder 2010, p. 857), e-vendors design web sites with cues that signal their trustworthiness.

2.3 Online trust cues

Lindgaard et al. (2006) conducted three studies about how quickly online customers form their perceptions of web sites, and their results ascertain the fact that the first impressions of a web site's appeal are formed within 50 milliseconds (or one twentieth of a second). This could be considered as 'a mere exposure effect' (Lindgaard et al. 2006, p. 124). In such a short period of time, a potential consumer evaluates an e-vendor and decides whether it is capable of acting in the consumer's best interest. Later studies confirmed observations of 'the rapid interaction behaviour' of customers who spend a median of 12.4 seconds on a new web site's homepage (Weinreich et al. 2008, p. 18). These results were reported based on 60,000 visits to web sites' homepages (Weinreich et al. 2008). Research shows that the majority of the Internet users do not put effort into thoroughly evaluating an online source, as, due to the overwhelming number of web sites on the Internet, it is impractical for them to invest much time and effort into extensive research of information and evaluation of products and companies (Wang et al. 2014).

As Fogg et al. (2003) noted, even the words that online shoppers use to describe their Internet activities are 'surf the Web' or 'visit the web site' or 'lurk' which refer to 'lightweight engagement, not deep content processing' (Fogg et al. 2003, p. 12). There is consensus among researchers that customers of commercial web sites do not read everything on a web site, but rather 'glimpse over' (Weinreich et al. 2008, p. 20) and base their decisions to stay on a web site or to leave it on 'the visual design elements of Web sites, rather than any content or source information' (Metzger, Flanagin and Medders 2010, p.416). Thus, web site design elements serve as signals of a company's abilities (Wang et al. 2014), and consumers use those elements as signs or cues to evaluate vendors.

As Bacharach and Gambetta (2003) noted, a trustor observes a trustee before deciding to trust or not to trust, and the result of this observation is used as evidence of trustworthiness. Since trust-warranting properties are communicated via signs, 'the prevalence of trust increases with the significance of signs of trustworthiness' (Bacharach and Gambetta 2003, p.150). The degree of significance is determined by a customer and, as findings showed, the decision is made very quickly as online consumers scan rather than read information found on a web site (Blanco, Sarasa and Sanclemente 2010).

Signals or cues of trustworthiness, which are defined as 'attributes of the entity to be trusted' (Riegelsberger and Sasse 2001, p.18), are used to 'convey a firm's abilities and intentions' (Schlosser, Barnett White and Lloyd 2006, p.135). These cues form a basis from which a customer tries to predict the outcome of dealing with a vendor. There is a consensus among researchers that those cues could be either product intrinsic or extrinsic in their nature (Wells, Valacich and Hess 2011; Zhao et al. 2011). Intrinsic cues are those that 'if altered, change the fundamental nature of the product' (Wells, Valacich and Hess 2011, p. 375). These cues would be product specific features or characteristics that define its value.

Extrinsic cues, on the other hand, cannot change the product itself, but they signal a company's ability, benevolence and integrity as they include reputation, brand, warranties and store environment that affect customers' perceptions of that product (Wells, Valacich and Hess 2011; Zhao et al. 2011). In the online environment, where consumers cannot review intrinsic cues of a product due to the virtual nature of e-commerce (Chen and Dibb 2010), consumers rely more on the extrinsic cues (Blanco, Sarasa and Sanclemente 2010; Wang, Beatty and Foxx 2004). That's why first impressions of an unknown e-vendor are crucial as they are found to be an important basis for consumers to form their opinions about web site trustworthiness (Wakefield, Stocks and Wilder 2004; Wu, Hu and Wu 2010).

Cues that signal trustworthiness are referred to as 'catalysts of consumer trust' (Chen et al. 2010, p. 540) because they are observable signs of the vendor's abilities and intentions, and once recognized and interpreted as trust cues,

those signs help to establish initial trust. The role of trust signals or trust cues is so important for the buyer-seller relationships, that a concept of cue-based trust has been developed by Wang (2001). Building on Warrington, Abgrab, and Caldwell's (2000) definition of a trust cue as 'any outward symbol that exists prior to the exchange and would indicate to a customer that a marketer is trustworthy' (Warrington, Abgrab and Caldwell 2000, p. 163), Wang (2001) explained cue-based trust in an e-retailer as 'the feeling and belief of a consumer that this e-retailer will not exploit his or her vulnerabilities based on outward symbols and perceptions existing prior to the purchase' (Wang 2001, p.1).

Indeed, it has been established that consumers develop trust in a web site before they do anything on that web site (Sultan et al. 2002; Wang, Beatty and Foxx 2004). As Eastlick and Lotz (2011) confirmed, initial trust develops as a result of consumers' search for 'cues or outward symbols that convey information about factors that signal whether a party can be trusted' (Eastlick and Lotz 2011, p. 237). Once those cues are found, online shoppers build initial trust, which starts with the customer's first visit and perception of a web site and ends with a purchase (Zhao et al. 2011). Once an exchange is complete and its outcome is known, initial trust might change to online trust in that particular store leading to a long-term relationship.

Given the significance of trust cues, a review of how signalling works is necessary. In the analysis of online trust cues, one needs to consider a holistic picture that involves two parties: one party prepares and sends a cue while another party identifies it and interprets its meaning.

2.4 Sending cues

Developing consumer trust online is a challenge as consumers often lack information about the online vendors. This creates conditions of asymmetric information when one partner in an exchange situation has more information about another (Kirmani and Rao 2000; Chen et al. 2010; Utz, Kerkhof and Van

Den Bos 2012). The theory of information asymmetry between transacting parties was developed by Akerlof (1970) and has been used since then to explain economics of business transactions in the face-to-face environment. This theory has also been applied to studies of e-commerce whose virtual environment is described not only from the aspect of asymmetry of information, but also time and space separation (Aiken and Boush 2006; Benlian and Hess 2011; Kim, Xu and Koh 2004). In the traditional setting of a purchase, interactions between a consumer and a seller are happening at the same place and the delivery of a product occurs at the time of payment. In the online environment these interactions happen at different times and different locations: a customer visits the web site of a company that might be located anywhere in the world, finds a product, pays for it, and a few days later receives a purchased item (Komiak and Benbasat 2004).

Thus, a customer submits private information before receiving the product. In this situation, a company needs to engender trust first in order to persuade a customer to complete a financial transaction and purchase an item from its web site. The signalling approach proposed by Spence (1973, 2002), is viewed as one solution to overcome the asymmetry problem in the market place. When adopting a signalling strategy, parties can communicate unobservable elements (e.g., product/service quality, vendor trustworthiness) by providing observable ones: cues. These cues are defined as actions 'taken by the better-informed party in a setting of asymmetric information to communicate its true characteristics in a credible fashion to the less informed party' (Lee, Ang and Dubelaar 2005, p. 610). Cues, or signals, are proposed as a potential solution to resolve the problem of making a decision under the condition of incomplete information (Boulding and Kirmani 1993).

The concept of trust cues has been studied by researchers in both traditional and online environments. A number of different theories were employed to analyse why and how trust cues are formed, signalled, received and interpreted by participating parties. A quick review of some of those theories establishes a framework that helps to explain the role of signals in a customer's evaluation of a web site's perceived trustworthiness.

Signalling theory was developed based on studies of information economics in the condition of asymmetric information when sellers usually have more information about their products than buyers. In this situation, buyers would like to get more information about a company and its product to ensure that they purchase a high quality product. As not all companies offer a high quality product, there is an on-going 'game' (Boulding and Kirmani 1993, p. 112) between companies selling high quality products and companies selling lower quality products: some companies offer accurate information while others 'fool' consumers. The role of a signal, or a cue, is to help a customer to differentiate between those two types of companies (Spence 2002).

Sending a cue follows the basic process of communication and involves four elements (Kotler and Keller 2012; Mavlanova, Benbunan-Fich and Koufaris 2012):

- A sender (a person or an object that sends a signal)
- A cue (a symbol or a sign that carries meaning)
- A recipient (a person or an object that receives a signal)
- Feedback (sent from a recipient to a sender as a signal)

A review of literature on the process of sending a signal about a company (Connelly et al. 2011; Mavlanova, Benbunan-Fich and Koufaris 2012) shows that the process starts with a sender, or a signaller, an insider who knows both positive and negative information about the company and decides which cue to send.

A cue, the second element of the process, is observable but costly. Some companies can absorb signal costs while others cannot. If a low quality company believes that the costs of producing a signal will be covered by the benefits received as a result of that signal, it might be motivated to falsify a signal. To maintain their effectiveness, the costs of signals should be such that they discourage falsification (Bacharach and Gambetta 2003; Lee, Ang and Dubelaar 2005). For example, if a vendor decides to create an online reputation rating system where customers can evaluate that vendor's performance, then there could be two approaches: one is to allow independent customers to post

their values in the spirit of transparency, while the other is to fake evaluations to create a perception of high value offered by a vendor. In this case, the cost of faking evaluations should be less than expected benefits from that falsification. If it costs more to create such a rating system and maintain it, than the value of benefits that a vendor can get, then a vendor will not put it on a web site (Mavlanova, Benbunan-Fich and Koufaris 2012).

The third element of the process is a receiver who interprets the cue. Usually receivers are outsiders (customers) who need information about a company to make a decision and act upon it.

The last element is feedback that a receiver sends to a signaller in the form of countersignals. Information asymmetry works as two-way traffic: a signaller sends a cue of quality to a receiver who interprets it and acts in one way or another. But on the other hand, a signaller wants to get information about the receiver: what is important to the receiver and what cues the receiver pays attention to, so, that in the future, a signaller can improve a cue. This whole process occurs in a signalling environment which could be either between organizations, within one organization, or between an organization and an individual (Kotler and Keller 2012; Mavlanova, Benbunan-Fich and Koufaris 2012).

The process of sending a cue contributes to the process of building trust, which includes the following sequence: in a risky situation one observes cues, makes an assessment, takes a risk and acts upon the assessment, and evaluates the result (Dietz 2011). This cycle continues while the relationship exists (Lauer and Deng 2007).

Strategic signalling is the way to use cues in attempt to influence the behaviour of those who receive the cues. In the case of e-commerce, signalling is displaying tools and features that inform buyers about product value and a company's ability to deliver it (Mavlanova, Benbunan-Fich and Koufaris 2012; Wells, Valacich and Hess 2011). On the basis of signalling theory, a claim was made that 'trust in a website is generated through the signals a firm sends to an online buyer' (San-Martin and Camarero 2012, p. 67). This theory is based on the assumption that a vendor spends money developing signals of quality in

anticipation of future profits, and customers assume that the claims about the high quality products are true. Signals could be easy to verify or difficult to verify (Mavlanova, Benbunan-Fich and Koufaris 2012). For example, contact information and third party seals of approval are visible and easy to verify, but a company's return policy could be verified only if an actual item had been returned and the actual process was as it is described online.

The above discussion reflects an e-vendor's point of view and focuses on explaining the behaviour of a company when it decides which cues to send. This approach is 'market-focused' (Boulding and Kirmani 1993, p.122) and it does not explain the psychological processes of consumer buying behaviour. That theory helps to explain why companies decide to signal their quality and trustworthiness, but it does not explain how customers interpret those signals. Since this study is customer-centred and the goal is to analyse individual perceptions of trust cues by customers with different cultural backgrounds, a review of theories that explain customers' behaviour is needed to complete the theoretical background of this research.

2. 5 Interpreting cues

The process of sending cues is initiated by a company, but is directed toward a buyer (Wang et al. 2014). As the aim of this study is to explore how customers perceive a web site's cues of its trustworthiness, one needs to refer to theories that lay a foundation for understanding the role of symbols or cues in creating customers' perceptions.

The theory of symbolic interactionism provided an early start for the research of symbols or cues in building relationships. George Herbert Mead is considered to be the 'founding father' of symbolic interactionism, although his student, Herbert Blumer, made it popular (Oliver 2012). Mead defined human behaviour as a response to an individual's interpretation of the world rather than a response to the world itself (Blumer 1980; Denzin 1969). Human beings are always involved in meaning making: any object has a meaning assigned to it by a group of people as the result of their interaction among themselves and

between people and that object. There is a certain amount of negotiation going on within the group while defining objects, and to achieve agreement, there should be a certain degree of commonality of symbols used in this negotiation process (Denzin 1969). Although meanings of symbols, or cues, are shared within the group and their behaviour towards objects is identified, each individual in that community interprets cues received from the social environment and acts upon his/her personal understanding of that situation (Oliver 2012).

Denzin (1969) suggested that all forms of interaction are based on any one, or a combination of, the following: civil-legal rules that ban violence to one's self and property, etiquette rules, and rules that 'display the distinctive nature of enduring social relationships' (Denzin 1969, p. 925). Since trust is viewed as a social phenomenon, then, according to Denzin (1969), to display itself, trust should follow relational rules that define how it should be presented. In an online exchange, where trust is the goal of the relationship, an online vendor should present itself in a manner that signals trust.

Using the theory of symbolic interactionism as the foundation, Aaker (1999) studied consumer behaviour in a traditional face-to-face setting based on how consumers interpret situational and social cues. It was shown that each person retains social cues representing a specific social situation, and when a person enters, or is about to enter, a similar social situation, those 'situational cues are made salient' and influence behaviour (Aaker 1999, p. 47). As applied to the exchange (selling-buying) process, buyers tend to identify themselves only with brands that reflect the buyers' personality to achieve congruency or fit of values. Once a perception of congruency is formed, a buyer is more likely to trust a brand and form a bond with it. Although Aaker (1999) did not provide evidence, she also suggested that the role of social cues in consumer behaviour could be more important than the role of cultural cues.

Building on Aaker's (1999) research, Kumar (2013) developed the value-congruity relationship theory which 'proposes that store-shopper relationship progression depends on the extent to which the values of individual are

congruous with the store values' (Kumar 2013, p. 24). The main assumptions of this theory are as follows:

- Values are the main drivers of human behaviour
- Human beings aim to achieve harmony (congruency of values) in their relationships
- Individuals can consciously change relationships
- Relationships between shoppers and stores represent a special form of interpersonal relationship

Kumar (2013) proposed that a store's trust cues as recognized by shoppers are: store reputation, type of advertisements, and types of shoppers coming in or leaving the store. Based on symbolic interpretation of those cues, judgments are made about the store and its trustworthiness; however, unlike Aaker (1999), who emphasized the significance of social cues over culture, Kumar (2013) suggested the opposite: cues signalling trust are likely to be culture-specific and recognized by 'consumers with similar symbolic interpretation of trust cues' (Kumar 2013, p. 25). It is important to note that both researchers recognized that cues are regarded 'as behaviour guiding mechanisms' (Kumar 2013, p. 25) and thus impact consumers' actions. Therefore, stores, as objects, provide cues that are interpreted as symbolic cues by customers, resulting in an impression about the store.

The Internet does not have physical borders, and any online store is available for a customer from any place around the world, the question is whether each culture develops its own perceptions of what symbolizes trust online, or an online community (regardless of its cultural background) forms its own trust cues. Since e-commerce implements technology as its main tool, some researchers of online trust studies utilize the Technology Acceptance Model (TAM) to analyse online trust development. TAM was introduced by Davis in 1989 in an attempt to explain how customers come to a decision to accept a new technology or a new web site. This theory postulates that when a person tries a new technology or a new web site, that person develops a perception of that technology or web site's usefulness (Perceived Usefulness) and ease of

use (Perceived Ease Of Use) which could further impact that individual's attitude, behaviour intention, and actual behaviour (Davis 1989).

The literature review of the use of TAM in the field of information systems and e-commerce shows that researchers identify at least two reasons for the use of TAM as a tool for interpreting customers' perceptions of e-vendors:

- due to the lack of information about an e-vendor, customers use their interaction with a web site as the primary way to form an impression about its usefulness and ease of use (Benamati et al. 2010);
- TAM is widely used in the field of information systems as its outcome is an individual's behavioural intention toward the use of new technology, or a web site as a product of that technology. The model reflects a direct relationship between perceived ease of use and behavioural intention (Davis 1989).

Since both perceived usefulness of new technology and its perceived ease of use were found to serve as determinants of user behaviour (Davis 1989), customers' evaluations and interpretations of those perceptions were linked to their development of trust in e-commerce (Benamati et al. 2010). Although TAM was found to be helpful in studies conducted by Cho, Kwon, and Lee (2007), Gefen, Karahanna, and Straub (2003), and Salam et al. (2005) among others, Benamati et al. (2010) noted that results of their study provided evidence that 'trust may be more important than TAM in predicting intention to use' (Benamati et al. 2010, p. 389). On another hand, when McCoy, Galletta, and King (2007) used TAM in their cross-cultural study that involved over 4,000 respondents in over 20 countries, they reported that 'the relationships in the TAM model did not hold across all cultural groups' (McCoy, Galletta and King 2007, p. 87).

One possible explanation of why TAM might not be the best theory for studying online trust cues across cultures could be that it focuses more on the functional characteristics of new technology. Functionality is not the only thing that online customers look for in e-vendors. Cyr (2014) noted two trends in online shopping: utilitarian and hedonic. Utilitarian consumption is based on cognitive approach of finding information and completing a purchase to achieve a certain goal. Hedonic consumption is based on effective consumer behaviour based on

emotional response to colours, images, graphics, and layout (Cyr 2014). As has been previously discussed in the first section of this chapter, trust could be also either cognitive or affective or both. Thus to study utilitarian aspect of e-commerce related to the technology acceptance and a change in consumer behaviour, researchers use TAM. However, this theory does not explain the hedonic aspect of online shopping based on the affective type of online trust; so a different theory is needed to complement the utilitarian approach and provide a broader perspective on how cues are interpreted.

The role of emotions and feelings in the trust building process has been studied by many researchers as these 'affective attachments' (Williams 2001, p. 379) form the basis for benevolence (McAllister 1995; Mayer, Davis and Schoorman 1995) and foundation for affective trust (McAllister 1995; Williams 2001). In the business environment, buyer-seller relationships built upon, or associated with, affective trust are found to be more stable in terms of how long they last and how they handle trust violations (Morgan and Hunt 1994).

Focusing on online buyer's both functional and emotional perceptions of web site trustworthiness involves studying how each individual online shopper creates a meaning of what he/she sees online. The personal construct theory developed by George Kelly, an American psychologist, in 1955, is an attempt to explain how people see the world around them and create meanings and perceptions about it. More details about this theory and the research method developed as its methodological extension are provided in chapter 3 Research Methodology. The following is a brief description to show the link between the personal construct theory and the context of this study.

Kelly's (1963) theory, which viewed every person as a scientist, implied that just as scientists do while researching a particular topic, people develop their own hypotheses about the world around them and test those hypotheses. Each individual conceptualizes his/her world by actively construing subjective meanings based on the processes of comparing and contrasting. The result of those processes is a set of constructs, or characteristics, of an object, event or a phenomenon that builds a subjective model of a world (Siau, Tan and Sheng 2010; Tan and Hunter 2002).

Kelly (1963) further contends that each construct is bi-polar in its nature 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 or interpretations of those objects, events, or phenomena and defines the way people interact with the world around them (Hassenzahl and Wessler 2000) and anticipate future events (Hunter and Beck 2000). On the one hand, two people witnessing the same event develop different perceptions of the event based on their personal system of constructs; but on the other hand, since the processes of building constructs are similar, people belonging to the same culture develop overlapping models of their subjective reality (Marsden and Littler 2000). According to Kelly (1963), since culture can be understood as 'similarity in what members of the group expect of each other' (Kelly 1963, p. 93), then 'the similarity-of-expectations view of culture is consistent ... with the personal-construct theory' (Kelly 1963, p. 93).

As applied to this study of consumers' perceptions of online trust cues, this theory suggests that online buyers compare and contrast web sites while developing perceptions of those web sites and determining which web site to trust and which web site not to trust. While evaluating a web site, potential buyers bring their own experiences, cultural backgrounds and perceptions of what a trustworthy web site should look like (Domenici 2008). Using Kelly's (1963) personal construct theory in the analysis of consumers' perceptions 'enables us to look at the social or contextual aspects of meaning making, but without losing the uniqueness of the individual and his or her role as interpreter/construer' (Domenici 2008, p. 31). A more detailed discussion of Kelly's (1963) personal construct theory is presented in section 3.2.

Another theory that continues the discussion of how meanings are created is Fogg's (2003) prominence-interpretation theory. It explains how online customers evaluate credibility of a web site. Based on that theory, customers go through two steps: first, they notice a web site's feature or element that stands out (prominence) and then they interpret what they have noticed (interpretation). In terms of a web site, this process of noticing and interpreting 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).

Although it cannot be expressed in numerical values, Fogg (2003) presented a formula that shows the relationship between its elements:

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

For evaluation to occur, both parts have to happen: if an element is not noticed, then it has no effect on the web site's credibility.

Fogg (2003) noted that a person with a high level of motivation (looking for an item to purchase or a piece of information) notices more design elements on a web site. Each element is interpreted and contributes to a consumer's positive or negative perception of that web site. Since the interpretation part of this theory is the result of a personal judgment of a web site's element as negative or positive, it is affected by a user's culture, past experience, and expectations (Fogg 2003). A customer notices only what that individual perceives to be prominent (or important) and then interprets that feature.

Given that emotions and feelings are personal reactions to events and phenomena that affect people's perceptions and behaviour (Zajonc 1980), the prominence-interpretation theory (Fogg 2003) is used in this research to analyse what elements customers notice online while visiting a commercial web site and how they respond to those elements.

Although trust and credibility are not the same phenomenon, the connection between them is that credibility has two components – trustworthiness and expertise (Fogg and Tseng 1999). The trustworthiness component 'captures 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). Based on this assumption, it is possible to use the Prominence and Interpretation theory of evaluating web site credibility to explain prominent elements identified as web site trust cues.

The two theories - Kelly's (1963) personal construct theory and Fogg's (2003) prominence/interpretation theory explain the process of identifying and interpreting 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; therefore, the evaluation of the same store's trustworthiness may be different for different customers.

Earlier studies of how customers with different cultural backgrounds interpret signals and create meanings or perceptions about what is being communicated, noted cultural impact on customers' responses to online cues. Barber and Badre (1998) offered a concept of 'cultural markers' that are defined as 'elements that are most prevalent, and possibly preferred within a particular cultural group' (Barber and Badre 1998). They argued that although the Internet or the World Wide Web is globally accessible, web sites should have designs that 'reflect a cultural sensitivity' (Barber and Badre 1998). Similar terms of 'cultural fingerprint' and 'website attractors' describing the same concept were suggested by Smith et al. (2004). Since the above mentioned terms, as well as the terms 'cues' and 'signals', are used interchangeably in the literature, to avoid any possible confusion, this thesis will refer to them as 'cues', as defined in section 2.3. Although the issue of cultural impact on interpreting cultural cues was raised by the researchers, it was not clear exactly what cues are recognized by online shoppers. Empirical research shows different results for which web site qualities serve as trust cues.

In addition to the web qualities that have been discussed in section 2.2 of this chapter, more examples illustrate the lack of consistency in what are considered online trust cues. For example, Wang, Beatty, and Foxx (2004) selected five cues that signal trust: a seal of approval, return policy, security disclosures, privacy disclosures, and awards from neutral sources. Those cues were chosen based on a literature review and a content comparison and analysis of fifty web sites. Riegelsberger, Sasse, and McCarthy (2004) suggested that valid trust cues are located in the site structure, its privacy and security rather than in the layout and content of the home page. Quite the opposite conclusion was reached by Bart et al. (2005) who reported that in their study security was not found a determinant of trust. Also, Fogg (2003) stated that 74% of evaluative

comments made by online shoppers were about the appearance of a web site and its content rather than privacy and security.

Building on previous studies, Chen et al. (2010) selected brand image, privacy policies, past experiences, and web site investment as means to increase consumer trust. Utz, Kerkhof, and van den Bos (2012) analysed how consumer reviews, store reputation, and trust seals (known also as assurance seals) affect consumers' perceptions of online store trustworthiness. Results of the study showed that, contrary to expectations, 'reputation of the online store did not influence perceived trustworthiness' (Utz, Kerkhof, and van den Bos 2012, p. 52). The table below offers a more comprehensive list of web site qualities that were considered to be trust signals.

Exhibit 2.3 Research into web site qualities

Author(s)	Web site design element that sends an online trust signal	Research method
Aiken, D. and Boush, D. (2006)	Trustmarks or third party certification, third party ratings (objective sources) and advertising outside the Internet	Quantitative study based on 299 usable surveys
Bente, G. Baptist, O. and Leuschner, H. (2012)	Photos, company's reputation scores among users	30 participants took part in a trust game that modelled a sales situation between a buyer (trustor) and a seller (trustee)
Bregman, M. and Karimov, F. (2012)	Presence of social network sites and corporate blogs on a company's web site	Quantitative study with 226 respondents

Chen, Y-H., Chien, S-H., Wu, J-J., and Tsai, P-Y. (2010)	Brand image, comprehensive web site design, privacy policy, and unconditional money-back guarantees	Quantitative study with 332 participants
Chen, Y.-H. and Barnes, S. (2007)	Third party ratings of a web site, clearly expressed security and privacy policies, use of logistic partners for delivery-and-payment services	Quantitative study with 103 participants
Cyr, D., Head, M., Larios, H. and Pan, B. (2009)	Images and photos of people	90 participants (30 from each one of three participating countries – Canada, Germany, and Japan) in a controlled experiment.
Everard, A. and Galletta, D.F. (2005)	Web site presentation flaws (obsolete links, incomplete designs, language errors)	Quantitative study with 272 respondents
Kaluscha, E.A. and Grabner-Krauter, S. (2003)	Web site sections: Contact Us, Consumer Testimonials, return Policy	Theoretical paper
Keeling, K. McGoldrick, P. and Beatty, S. (2010)	Avatars (animated online characters)	Quantitative study with 635 participants
Lee, B.-C. Ang, L. and Dubelaar, C. (2005)	Availability of the privacy policy and unconditional 30 days money back guarantee, the product category, delivery time, price discounts, the use of a brand	Quantitative study with 132 participants
Riegelsberger, J. Sasse, M. A. and McCarthy, J.D. (2003).	Photos of e-vendor's employees on the web site	Qualitative study in the lab, 39 participants

Wang, S. Beatty, S. and Foxx, W. (2004)	Seals of approval, return policy, security disclosures, privacy disclosures, and awards from neutral sources	Quantitative study with 402 participants
Warrington, T. Abgrab, N. and Caldwell, H. (2000)	Extended warranty, liberal return policies, recognizable and known brand, professional appearance of the web site, security of transactions, company's credibility and ethical conduct, alternative ways to place an order.	Theoretical paper

The table above (Exhibit 2.3) shows studies in which researchers identified various web site trust cues based on an analytical review of existing literature, and validated their hypothesis with quantitative methods. Although those studies contributed to the research of online trust cues, they tend to reflect researchers' views; but what about the views of customers themselves? If customers are intended recipients of trust signals, and they 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. And here is where a communication challenge arises: how does a consumer's cultural background affect the process of identifying and interpreting online trust cues? To answer this question, one needs to clarify the concept of culture.

2.6 Culture and its role in developing online trust

As has been discussed earlier in this chapter (section 2.2), developing online trust occurs between two parties in the online environment. While a company (trustee) develops a web site, it is a customer (trustor) who evaluates the web site and decides whether or not to trust it. Each individual interprets a web site's trustworthiness differently. Multiple models of online trust seem to have one

element in common – the personal characteristics of a trustor, or in this research, a customer shopping online. With the lack of physical borders online and the ease of use of the Internet, consumers very often find themselves interacting with e-vendors from other cultures. How does that affect their choice of an online vendor? And how can customers interpret signals of trust used by an online vendor from a different country?

'Culture' in this research is used to refer to the national cultural background of a customer- American, German, Russian, etc. 'Culture' is not used to identify organizational culture (as in 'the culture of innovation at the Apple Corporation') or group culture of peers or fans (as in 'the culture of the Harley Davidson bikers'). What is a national culture then? The same problem seems to exist with the definition of national culture that was discussed in section 2.1 of this chapter referring to trust: there are many definitions of culture and they all focus on different aspects depending on the area of research in which the word 'culture' is used.

In the area of management studies, the word 'culture' is usually associated with the research contributions of Edward Hall (1971, 1990), Geert Hofstede (2010), and Fons Trompenaars (1994). Hofstede's well-known definition of culture - *'Culture is the collective programming of the mind distinguishing the members of one group or category of people from others'* (Hofstede G., Hofstede G.J. and Minkov 2010, p. 6, emphasized in the original) – has been around since 1980 and the 2010 edition of the book in which it was published is the third extended edition in the thirty years of its existence.

In his original theory of cultural dimensions offered in 1980 and extended in 2010, Geert Hofstede and later Hofstede G., Hofstede G.J., and Minkov (2010) identified five dimensions of culture: uncertainty avoidance, power distance, masculinity/femininity, individualism/collectivism, and long-term or short-term orientation. The uncertainty avoidance dimension shows how people feel towards future and unorthodox behaviour, and to what extent they tolerate 'unstructured, unclear, or unpredictable situations' (Doney, Cannon and Mullen 1998, p.614). A country's high score on this dimension means a preference for rigid rules and a controllable future and predictable behavior. A low score

describes a somewhat relaxed attitude towards future and tolerance of any type of behaviour (Hofstede G., Hofstede G.J. and Minkov 2010). Power distance reflects how members of a cultural community handle differences in social hierarchy (Burgmann, Kitchen and Williams 2006). If they accept inequality of power distribution, where certain classes exercise more power than others, then their score on this dimension is high. If they seek equality in their society, then the score is low (Hofstede G., Hofstede G.J. and Minkov 2010).

Individualism/collectivism describes a country's 'I' or 'we' orientation (focus on oneself or a group). The masculinity/femininity dimension describes a society's environment and goals: a high degree of masculinity shows a society's orientation towards material objects, earnings, and competition, while a high degree of femininity refers to a society that emphasizes cooperation, quality of life, and caring for others (Cyr and Head 2013; Doney, Cannon and Mullen 1998). Long- or short-term orientation of a society addresses a society's respect for tradition and attitude toward time (Cook and Finlayson 2005; Doney, Cannon and Mullen 1998), and describes its members' attitude toward planning and spending. Countries with long-term orientation tend to save money for the future, invest and show patience in achieving their goals. Members of societies with short-term orientation tend to spend money and want to see quick results.

Hall (1990) defined culture as: 'the way of life of a people. It is the sum of their learned behaviour patterns, attitudes, and material things' (Hall 1990, p. 20). He focused mostly on studying how people transmit those patterns and attitudes as he also equated culture to communication, clearly stating that 'culture is communication' (Hall 1990, p. 97). Hall and Hall (1990) directed their research toward uncovering explicit (visible) and implicit (hidden) cultural cues that people use to share information within a cultural group.

Hall (1990) is known for his study of context (high vs. low), time (polychromic vs. monochromic) and space (proxemics) in culture and their significance in inter-cultural communication. People sharing the same culture might express themselves either implicitly through the use of unspoken language of shared experiences where just a few words express a complex message (high context) or explicitly where one has to build long phrases and verbally express himself/herself (low context) and rely on written documents and mass media

(Jin, Park and Kim 2008; Mazaheri et al. 2014). Monochromic time, or M-time, describes people's ability to do one thing at a time and have a precise schedule for everything. Societies with polychromic time emphasize interaction with people over getting things done and don't have any specific schedule for anything – things happen when they happen (Burgmann, Kitchen and Williams 2006). In the study of space, Hall (1990) differentiated societies that needed more personal space from those that could live with less. Some cultures require keeping a distance between people during a conversation while others encourage people to get really close to each other. The related principle of high territoriality refers to a tendency to protect what is 'mine' and mark that territory, while people with low territoriality don't appreciate boundaries and share their territories.

Trompenaars (1994) saw the essence of culture as 'the shared ways groups of people understand and interpret the world' (Trompenaars 1994, p. 3) He suggested seven cultural dimensions: universalism/particularism, individualism/collectivism; neutral/affective relationships, specific/diffuse, achievement/ascription, inner/outer directed, and time orientation (Trompenaars 1994). The dimension of universalism/particularism describes a society's attitude toward laws. Universal cultures focus on all-inclusive laws and apply them to their relationships. Particularism allows individual members of a society to develop rules by which they live, thus making 'obligations arising out of relationships' more important than any general rules (Burgmann, Kitchen and Williams 2006, p. 65).

Individualism/collectivism describes the priorities that an individual sets for himself/herself. Either personal obligations or group obligations may be more important to that individual. Neutral/affective dimension refers to how people control their emotions: in neutral societies an effort is made to hide one's feelings and control emotions, while in affective cultures people find ways to show their emotions. Specific/diffuse dimension describes people's ability to separate work from personal relationships. Specific orientation creates an overlap between work and personal relationships, and people consider good relationships with co-workers to be necessary for accomplishing their work objectives. Diffuse orientation separates personal relationships from work.

Achievement/ascription dimension reflects a society's attitude toward a person and his/her title: achievement emphasizes personal qualities and performance regardless the title and rank, while ascription focuses on personal position and age that determine behaviour (Burgmann, Kitchen and Williams 2006).

Inner/Outer direction explains where control is in a society: inner believes that members can control nature and the environment, and the control function is within a society; while outer society accepts the notion of being controlled by its environment. Time orientation could be either sequential or synchronous: members of the sequential society plan one activity at a time, develop a schedule and value punctuality; members of a synchronous society can work on several projects at a time and view time as a past, present, and future interwoven into one period.

Despite the different nuances in these researchers' definitions of culture and the development of their cultural models, all three agree that culture is shared among people, is taught from generation to generation, and affects people's view of the world, thinking, and behaviour. Their research contributed a lot to the study of culture; however, in the last two decades globalization has altered the way culture is expressed by its representatives. Globalization is understood as a free flow of products, money, people and culture across borders (Ariely 2012; Arnett 2002). It has been noted that technological developments in the area of communications, political changes in the countries around the world, and economic cooperation and interdependencies increased the degree of globalization (Arnett 2002).

Although, advantageous from an economic point of view, globalization makes it harder for any nation to preserve its unique cultural perspective. Globalization results in cross-national exchanges and sharing of symbols, media, and lifestyles. It has been argued that in a time of globalization, there are three trends towards culture: developing a global culture (Alden, Steenkamp and Batra 2006; Dutta, Dutton and Law 2011), maintaining local culture (Sia et al. 2009; Snelders, Morel and Havermans 2011), or creating a hybrid, or 'glocal', strategies (Svensson 2001) where both trends of cultural divergence and convergence occur (Goodrich and de Mooij 2011; Lynch and Beck 2001).

In today's world dominated by the borderless and wireless Internet, societies are not immune to the influences of other cultures (Fang 2011). In a virtual world, where consumers are global customers, it is becoming more and more challenging, if not impossible, to preserve an individual national culture (Ariely 2012). Cultural diffusion is happening via the Internet where cultures are shared (Gong 2009). 'The idea of a convergence of cultures and values makes sense within the architecture of the Internet and the networked world, where everyone can virtually be connected and have access to ideas and values other than their own' (Dutta, Dutton and Law 2011, p. 32). In our current dynamic business environment, cultures also become dynamic (Bird and Stevens 2003). Given the three above mentioned options (developing a global culture, maintaining local culture, or creating a glocal version), are those earlier cultural models still valid?

Hofstede G., Hofstede G. J., and Minkov (2010) and Trompenaars (1994) built their cultural concepts on the classical foundation of culture as a stable and internally consistent set of values and traditions passed from one generation to another through communication and socialization within one nation (Fang 2011). Since the values are shared and preserved, all representatives of that nation have the same values (Soderberg and Holden 2002). This assumption has two flaws:

This approach reflects a static environment. However, recent research shows that culture is dynamic and sensitive to the environmental changes (Altinay, Saunders and Wang 2014; Leung et al. 2005).

It assumes that each country has one nation that shares one culture.

Researchers (Soderberg and Holden 2002; McSweeney 2002, 2009) argue that this view does not reflect variations and diversity of values within the same nation. For example, multi-cultural countries such as USA, Canada, Russia and Australia were treated by Hofstede as countries with a single, homogenous culture.

Another erroneous assumption in Hofstede's model of culture was that culture was equated with the boundaries of a nation (Soderberg and Holden 2002), and the unit of the analysis was a country. However, in a world where countries are increasingly dependent on each other, where free flow of workforce and

exchange of information become necessity, and business and leisure travel sees an increase, this unit of analysis becomes obsolete. As McSweeney (2009) put it: 'National borders are not cultural borders' (McSweeney 2009, p. 937).

In the third edition of his book 'Cultures and Organizations: Software of the Mind. Intercultural Cooperation and its Importance for Survival', Geert Hofstede and his colleagues (2010) touched upon how some cultural dimensions affect shopping and the use of the Internet. Although the book was published in 2010, when the Internet and social media were all known, some of the statements could be disputed. For example, Hofstede in Table 4.4 (Hofstede G, Hofstede GJ and Minkov 2010, p. 124) listed key differences between collectivist and individualist societies as those differences related to school, the workplace, and ICT (Information and Communication Technologies). He stated that in collectivist societies, 'The Internet and e-mail are less attractive and less frequently used' (Hofstede G, Hofstede GJ, and Minkov 2010, p. 124).

However, it is a well-known fact that the highest number of Internet users is in China, a collectivist society according to Hofstede's findings. Overall, 44% of all Internet world users come from Asia, a collectivist region (Miniwatts Marketing Group 2012). It appears that a collectivist society can gain from new technological developments and create virtual groups that are characteristic of their culture.

Thus, it seems that technological developments might help to enhance certain specific characteristics of a nation; but in other respects, they might completely eliminate differences. Karvonen, Cardholm and Karlsson (2000) pondered if research of online trust could help to create a new virtual culture 'based on assumptions of trustworthiness' (Karvonen, Cardholm and Karlsson 2000, p. 2). A decade later the question could be paraphrased - is there a unique virtual culture that unites people of different cultural backgrounds? Are potential online buyers looking for price deals and efficiency rather than for similarities in cultural values? Is it possible that a sort of 'virtual culture' that ignores specifics of any national culture is being developed online?

If one cannot be too specific about the cultural characteristics of a society, then maybe a more generic approach towards a definition of culture is appropriate. For example, Linda Smircich (1983) defined culture as 'social or normative glue' (Smircich 1983, p. 344). According to Smircich (1983), culture is an independent variable whose presence is shown by actions of individual members. Culture expresses shared values that are reflected in symbols, myths and languages. Smircich (1983) observed that culture, understood as 'shared key values and beliefs' (Smircich 1983, p. 345), can provide

- 'a sense of identity' (Smircich 1983, p. 345),
- communicate 'commitment to something larger than the self' (Smircich 1983, p. 346),
- 'social system stability' (Smircich 1983, p. 346),
- a device that shapes behaviour

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. Researchers proposed that 'multiple cultural identities are combined in different ways' (Chao and Moon 2005, p. 1132).

Chao and Moon (2005) created their metaphor on the basis of two main assumptions: culture is a social phenomenon and culture encompasses 'a value

component' (Chao and Moon 2005, p. 1128). That 'value component' became the focus of their research as values help to differentiate groups of people. Although some values are common, there are others that are unique and group specific (Chao and Moon 2005).

This discussion of various models and aspects of culture shows that in culture we have a complex phenomenon that unites people into groups based on their shared values which could be expressed in cues. The priorities of those values change based on the context of the situation, just like a kaleidoscope does when you rotate it. As online trust is a highly contextualized phenomenon, the Chao and Moon (2005) model of culture fits the process of online trust development better than other models; therefore it is used to analyse the data collected for this study (section 4.4). With changes in context, the study of cultural impact on online trust presents a few challenges. The next section focuses on the discussion of research approaches found in the online trust literature that analysed the impact of cultural background of customers on developing online trust towards e-vendors.

2. 7 Research approaches to studying the effect of culture on online trust

Research into the relationship between the cultural background of customers and online trust has been done since the early days of e-commerce. Although there are numerous studies in this field, it appears that there are three main approaches in the area of culture and online trust in which researchers:

- (1) conduct a cross-cultural study of online trust development based on a comparison of one or two cultural dimensions as suggested by Hofstede or Hall (Ferrin and Gillespie 2010),
- (2) analyse reactions of online customers from different countries to a certain web site design feature to determine if the customers' cultural background affects their attitude towards that web site feature, and
- (3) conduct cross-cultural analysis of how shoppers with different cultural backgrounds develop online trust based on the application

of one of various online trust models in an attempt to investigate if that online trust model is applicable across cultures.

Let us briefly review those approaches. The first one was to study consumer behaviour based on one or two cultural dimensions as suggested by Hofstede or Hall in their models of culture (see an earlier discussion of those in section 2.6 of this chapter). Over a period of five years, between 1967 and 1973, Geert Hofstede conducted cross-cultural research in more than fifty countries (later another twenty six countries were added). He showed that world cultures vary along five consistent dimensions: power distance, individualism vs. collectivism, femininity vs. masculinity, uncertainty avoidance, and long- vs. short-term orientation. Hall (1976) is known for his study of context (high vs. low), time (polychronic vs. monochronic) and space (proxemics) in culture and their significance in inter-cultural communication. (See section 2.6 for more detailed description of those two models).

Based on a literature review, it appears that the mainstream studies of the role of cultural background in developing online trust have focused principally upon two of Hofstede's cultural dimensions: individualism/collectivism and uncertainty avoidance. It also seems to be typical that only two countries from the opposing sides of Hofstede's cultural index compiled in 1974 are selected. For example, An and Kim (2008) compared Korean and American web site visitors to determine how individualism/collectivism and uncertainty avoidance affect consumer trust in the online shopping context. Their research found that to develop consumers' online trust in individualistic cultures, online businesses should emphasize their ability to complete transactions in a reliable and timely manner. On the other hand, gaining the online trust of customers in collectivistic societies requires focus on the benevolent intentions of online vendors.

A different study conducted by Frost, Goode, and Hart (2010) concluded that 'individualism and collectivism do not influence the loyalty of online customers' (Frost, Goode and Hart 2010, p. 20). It may be argued that trust and loyalty are not, and should not be, used interchangeably; however, if online loyalty is understood as staying with the same web site and purchasing from it, it could

be assumed that without trust in that e-vendor, an online transaction would be improbable.

Hwang and Lee (2012) explored the role of the cultural dimension of uncertainty avoidance on online trust. In cultures with a high Hofstede's score of uncertainty avoidance, individuals experience a lot of stress in an unknown situation. To reduce it, formal rules and stable and consistent structures are required. In the online environment, uncertainty could be reduced through shared information from friends who had used that web site or from a feedback tool embedded into that web site.

In their recent study, Cyr and Head (2013) used Hofstede's masculinity/femininity cultural dimension for their study to test whether perceptions of a web site's content, navigation and visual design differ between men and women, and whether gender moderates trust and web satisfaction. They concluded that 'gender differences are strong in high-masculinity countries, and weak in low masculinity countries' (Cyr and Head 2013, p. 1365)

Said and Galal-Edeen (2009) studied perceptions of Egyptian online consumers of perceived reputation and perceived familiarity on developing online trust, and analysed those perceptions based on the cultural dimension of uncertainty avoidance. They postulated that the high level of uncertainty avoidance in consumers was associated with the stronger effect of perceived reputation and perceived familiarity on online trust.

Ganguly et al. (2010) used masculinity/femininity, uncertainty avoidance, and individualism/collectivism cultural dimensions to analyse the relationship between culture, web site design, online trust, and purchase intentions. Their study showed that overall, the masculinity dimension of a national culture acts as a 'quasi moderator' between the information on a web site and trust, and uncertainty avoidance is a 'quasi moderator' between the navigational features of a web site's design and online trust, while collectivism and trust interact in a negative way (Ganguly et al. 2010, p. 317). They found that, 'except for collectivism, there is no significant difference in the cultural values between the Indian and the Western samples' in developing online trust toward an e-vendor (Ganguly et al. 2010, p. 319).

Marcus (2005) and Cook and Finlayson (2005) so far have been the only ones who have plotted web site elements against all five of the cultural dimensions suggested by Hofstede. They also discussed which features of a web site would fit each one of the cultural dimensions. For example, countries with a high level of uncertainty avoidance prefer a simple design with limited options. Countries with a low level of uncertainty avoidance are willing to take more risk and therefore, enjoy more options and adventurous exploration of the web site. Although Cook and Finlayson (2005) assessed all five of Hofstede's cultural dimensions, analysed how those could be incorporated into web site design, and provided practical recommendations; their contribution was theoretical as it was based on a critical review of existing literature. The study did not compare web sites within the same industry, and some web sites that were analysed in their study were governmental services, not commercial web sites.

Hall's high and low context cultural dimension was used by Mazaheri et al. (2014) in their study of customers' evaluations of twenty five web sites from eight different industries. Based on Hall's high/low context cultural dimension, meaning is explicit in low-context cultures and meaning depends on the context, setting and status of those who said something (a detailed discussion of the model is offered in section 2.6 of this chapter). Perceptions of online atmosphere were found to have a stronger effect on consumers from high context cultures as compared to the low-context cultures (Mazaheri et al. 2014).

All of the above studies used cultural dimensions of models that have not been updated in the last three or four decades to accommodate technological and economic developments impacting national cultures and resulting in globalization of consumers. Although they have contributed to the understanding of online trust and online consumer behaviour, they might not reflect current changes occurring throughout the world.

The second approach used by researchers to study how culture influences online shopping is to analyse online customers' reactions to a certain element of a web site's design to determine if a customer's cultural background affects that customer's attitude toward that web site feature. Although research shows that web site design elements impact development of online trust (Bart et al. 2005;

Chen and Barnes 2007; San-Martín and Camarero 2012; Snelders et al. 2011), there is no consensus about which design elements have the most effect as studies have investigated various types of visual and audio web design features: images, photos, colours, animation, and music. Even studies of the same element show contrasting results. For example, the studies of the effects of photos on developing online trust are numerous but somewhat contradictory.

Researchers of images and personal photos in e-commerce agree that posting a picture online is an action that has two functions: to disclose one's identity as a signal for an open and honest exchange (Bente, Baptist and Leuschner 2012) and, thereby, to form an impression of trustworthiness (Bacharach and Gambetta 2001). Bente et al. (2012) suggested that posting photos online helps to add a 'human' touch and builds a basis for trust. In their study of the role of photographs on developing online trust, they concluded that trustworthy photos 'increase trust and purchase rates' (Bente et al. 2012, p. 8). However, one can argue that the definition of a 'trustworthy photo' is very personal and depends on the subjective perceptions of individual customers.

Cyr et al. (2009) tested a model which showed how human images (pictures of human beings placed on a web site) created image appeal and perceived social presence that in turn affected building online trust. The result showed that online shoppers focused on what was defined as four conceptual categories: 'aesthetics (visual qualities), symbolism (implied meaning of design elements), affective properties (emotion inciting qualities), and functional properties (elements of website structure)' (Cyr et al. 2009, p. 556). Participants from three countries, Canada, Germany, and Japan, noted different aspects of images used in web site design. The practical recommendation of Cyr et al. (2009) was that web designers consider adjusting the visual appeal of the web site to better fit local cultures by modifying not only images or pictures of human beings but also colours, language styles, and navigational icons.

Although the Cyr et al. (2009) and Bente et al. (2012) studies showed the importance of images and photographs in web site design, there are studies that did not find evidence of significant effect that images make on developing online trust. Riegelsberger and Sasse (2001) researched the role of

photographs and names of salespeople, photographs of a company, and photographs of customers receiving items as well as chat and call-back online tools. Trust cues that added functionality to a web site were found to be perceived better than those without, such as a picture of a customer receiving an item (Riegelsberger and Sasse 2001).

Kondratova and Goldfarb (2010) studied the use of colour in the design of web sites. They analysed 36,000 web sites from 38 countries using both automated and manual 'cultural audits' approaches (Kondratova and Goldfarb 2010, p. 5) and concluded that although there might be colours that are appealing across cultures, there were differences in colour preferences found in online consumers of different cultures.

Conflicting results about the impact of culture on online trust can also be found in studies that did not use Hofstede's or Hall's models and did not select a specific web site element to explore the reaction of customers from different cultures. The third research trend in studying cultural differences in developing online trust is based on a comparison of antecedents of online trust as reflected in various models of online trust across cultures.

For example, Teo and Liu (2007) developed an online trust model that included several characteristics of trustees (e-vendor's reputation, size, multichannel integration, and system assurance) as antecedents of consumers' online trust. They examined development of online trust based on that model in three countries: USA, Singapore, and China. Results of the quantitative study showed that a company's perceived reputation significantly affects a consumer's online trust in an e-vendor regardless of his or her culture (Teo and Liu 2007). They suggested that 'future research can examine the proposition that culture does not make a difference on trust among educated people from various cultures' (Teo and Liu 2007, p. 36).

In their analysis of online trust development in Korea and the USA, Jin, Park, and Kim (2008) proposed two paths: one is a reputation-driven path that shows the impact of a company's reputation on consumer trust, satisfaction and loyalty. The other path is trust-driven that links trust to customer satisfaction and loyalty. Jin, Park, and Kim (2008) reported that contrary to their

expectations, they found no cultural differences affecting the relationship between a company's reputation and online trust, and online trust and loyalty. Those links were strong regardless of the cultural background of buyers.

Vance, Elie-Dit-Cosaque, and Straub (2008) developed an online trust model and tested it using two groups of respondents: one from France and one from the USA. Their model used visual appeal and navigational structure as antecedents of trust leading to the intention to use an information technology artefact (a commercial web site accessed via a mobile phone). Culture and ease-of-use were treated as moderating effects on trusting beliefs in an information technology artefact. Research findings showed that 'culture has a moderating effect on the relation between navigational structure and trust,' (Vance, Elie-Dit-Cosaque and Straub 2008, p. 92) but contrary to some earlier studies, culture does not have a moderating effect on the relationship between visual appeal and trust.

Casalo, Flavian and Guinaliu (2011) conducted research into how online trust is developed in Spain. For their study the researchers selected usability, reputation, satisfaction, security and privacy as the factors they considered to be 'commonly associated with the generation of trust on the Internet' (Casalo, Flavian and Guinaliu 2011, p. 201) They also added the level of commitment, type of product, honesty, benevolence, and e-vendor's ability to deliver as promised to their online questionnaire to determine the level of e-commerce acceptance as a reflection of consumers trust of e-vendors. Those researchers stated that 'although the idea that culture affects online sales cannot be ruled out, it is reasonable to conclude that the factors influencing the development of trust are not affected by culture' (Casalo, Flavian and Guinaliu 2011, p. 201). It is possible that the process of developing online trust does not relate to a customer's culture or any of the above mentioned factors.

Thus, researchers came to divergent conclusions while studying the effect of the cultural background of customers on developing online trust: Hofstede's cultural dimensions might (An and Kim 2008; Sia et al. 2009) or might not (Orr and Hauser 2008; Yu, King and Yoon 2010) explain online trust, some design elements incorporated into a web site might (Bart et al. 2005; Cyr et al. 2009) or

might not (Casalo, Flavian and Guinaliu 2011) affect online trust, and it is possible that a 'virtual culture' exists that is based on the customer's needs and efficiency of e-commerce (Karvonen, Cardholm and Karlsson 2000).

The seemingly conflicting results of cross-cultural studies were put into a system by Ferrin and Gillespie (2010). Based on their critical review of fifty six empirical cross-cultural studies of trust, they concluded that:

- the average level of disposition to trust differs across cultures
- determinants and consequences of trust can be both universal and culturally different
- although benevolence, ability and integrity appear to be universal, there are culturally different interpretations of those characteristics of trustworthiness

This finding prompted Ferrin and Gillespie (2010) to state that 'as a variform universal, the general principle of trust holds across cultures, although some of its specific manifestations differ across cultures' (Ferrin and Gillespie 2010, p. 73). However, no empirical evidence was provided in support of this theoretical conclusion, thus presenting an opportunity to further explore this area.

2.8 Filling the gaps in existing literature

The literature review that was conducted for this study helped to understand the current state of research in the area of online trust and revealed gaps and opportunities that exist in the area of online trust signals. This section summarizes both gaps and opportunities, and explains the niche into which this work fits in the big picture of academic research on trust.

With the growth of international businesses, the increased interest in cross-cultural trust studies does not come as a surprise. In times of fast technological development and social and economic crises, both academics and practitioners are looking for ways to initiate, develop and maintain the trust of online consumers around the world as a means of reducing uncertainty (Luhmann 1979) in online commercial transactions and developing long-term customer

commitment (Morgan and Hunt 1994). This presents a challenging opportunity for researchers because online consumer trust became a focus of studies relatively recently; thus, it is being explored from different perspectives (see section 2.2) in an attempt to gain a holistic picture of this phenomenon.

After discussing traditional trust and comparing it to online trust, this literature review shows that although the concept of online trust does not differ from the concept of trust in a face-to-face situation, the virtual environment impacts the trust development process and emphasizes the importance of initial trust as an early stage of online trust development. Since the purpose of this study is to explore what cues customers identify as trust cues in the early stage of trust development, the results of this work contribute to further our knowledge of online trust as a dynamic phenomenon moving from one phase to another. This answers the call expressed in the trust literature to studying trust using a process concept which reviews how trust is built (Mollering 2006). The research findings shed light on what could be, strategically, the most important issue of what triggers online trust, initial trust based on cues embedded in a web site.

The crucial role of initial trust has been identified by extensive literature on online trust; however, there is no consensus among the researchers about what web site cues signal trustworthiness and generate initial trust in customers. What complicates the issue of online trust is that global customers represent buyers with different cultural backgrounds and it is not clear to what extent cultural background impacts customers' perceptions of cues signalling web site trustworthiness. The need for cross-cultural studies of online consumer behaviour in general, and online trust in particular, has been addressed by a few studies, which have not sufficiently clarified the picture. This deficiency presents a research opportunity for this study.

A lack of cross-cultural studies into online trust could explain yet another inconsistency: although designing a culture-specific web site is found in some business online strategies, researchers have different views about adjusting a web site to the cultural preferences of consumers and provide empirical evidence supporting their contrasting opinions. On the one hand, the needs and cultural preferences of the potential users of a web site should be considered

while developing a visually appealing web site to reach a target market (Cook and Finlayson 2005; Cyr 2014), but on the other hand, researchers offer evidence that culture does not have any effect on developing online trust (Casalo, Flavian and Guinaliu 2011; Teo and Liu 2007). As discussed in section 2.6, these opposing results present an opportunity that the cross-cultural nature of this research is designed to address.

However, Dietz, Gillespie, and Chao (2010) expressed a caution regarding the consideration of the effect of culture on trust and explained their reasons for the concern as follows:

- Researchers may overestimate the role of culture in building trust
- Behaviour may be determined by institutions rather than culture
- It is difficult to determine which cultural dimensions should be considered in studying the effect of culture on developing trust

Based on the above reasons, there is a need to use a research methodology that is centred on the customers who use commercial web sites. When Tan and Sutherland (2004) discussed the three 'dimensional constructs' that constitute online consumer trust: the consumer (dispositional trust), the vendor (interpersonal trust) and the Internet (institutional trust), they concluded that 'the consumer as an individual is central to the understanding of trust, and in turn that the individual's personality and culture form the foundation for the development of trust' (Tan and Sutherland 2004, p. 40).

Focusing on the individual consumer, however, creates a challenge for researchers of online trust as, on the one hand, it presents studies of individual cases rather than cultural groups; but on the other hand, it gives a true customer-centred analysis of the online trust building process. This challenge is overcome by using the induction approach of building a theory from the level of individual observations up to making more generalized conclusions. The analysis of customers' perceptions adds to the existing literature on online trust in the cross-cultural context. The results of this analysis fill in a gap that is formed due to insufficient qualitative research on the impact of the cultural background of customers on identifying and interpreting online trust cues. Since the findings of the quantitative research are contradictory, as the discussion in

section 2.3 and 2.5 showed, there is a need for a study with a different methodological approach that contributes to the discussion of online trust development across cultures.

Using the qualitative method of the repertory grid technique, that has never been used before for studying online trust, this research answers the call for studying trust with qualitative methods as it helps to create a better picture of online trust development. As Mollering (2006) emphasized, a research method selected for study should evaluate and look into the respondents' experiences of developing trust, not the researcher's expectations of how it is done. One of the advantages of the repertory grid technique is that it allows a researcher to elicit perceptions of customers (see the discussion of the method and its advantages in the next chapter).

Summary

The scope of this study presents a challenge as it spans several disciplines, including psychology, Internet marketing, web site design, and international management and strategy, to name a few. This research applies several theories from different disciplines to build its theoretical foundation. For example, the economics signalling theory (Spence 2002) is used to explain why signals of trustworthiness are formed and communicated, the psychological theory of personal constructs (Kelly 1963) explains how the perceptions are construed, the prominence-interpretation theory (Fogg 2003) provides a basis for identification of cues, the symbolic interactionism (Blumer 1980; Denzin 1969) and value-congruity relationship theories (Kumar 2013) focus on consumer behaviour; the commitment-trust theory of marketing management (Morgan and Hunt 1994) emphasizes the role of consumer trust in keeping customers satisfied, and strategic planning is needed to develop a strategic approach to gaining and retaining customers.

This challenge of crossing several disciplines also serves as a strong point of the study, as its research findings provide insights into a holistic picture of online trust, thus filling a gap created by a lack of multidisciplinary approaches to studying online trust. This study supports Bachmann's (1998) idea of a multidisciplinary approach to trust research. Bachmann (1998) showed that the

existing three approaches to viewing trust creation (the cognitive, the normative, and the calculative approach) can only provide a 'partial' (Bachmann 1998, p. 307) explanation as they focus on different aspects. Only by being combined can they reflect the complexity of the issue.

The next chapter will introduce the research philosophy and research method that is designed to reflect the customer-centred approach of this study while exploring the extent to which the cultural background of an online shopper affects recognizing and interpreting online trust cues embedded in a commercial web site.

Chapter 3 Research Methodology

Introduction

The objective of this research is to ascertain the extent to which a customer's cultural background affects identifying and interpreting online trust cues embedded in a web site. This is a non-directional study as there is conflicting evidence of the role of culture on development of online trust (Sekaran and Bougie 2010). Previous studies show that, on the one hand, culture does not have a significant effect on online trust development, as the focus is on online effectiveness and efficiency (Teo and Liu 2007; Casalo, Flavian and Guinaliu 2011); but on the other hand there are studies that confirm a customer's cultural background is important in establishing online trust between a customer and an online vendor (Cook and Finlayson 2005). The challenge of this study is that it spans several disciplines, including psychology, Internet marketing, web site design, and international management and strategy. Since this study involves examination and comparison of customers' perceptions, it is centred on an individual but at the same time it is aimed at analysing a group representing a particular culture. Thus, selecting a research method that meets the design and purpose of the study is crucial for its successful implementation.

While reviewing academic findings on online trust research, chapter 2 presented several areas with conflicting results and explained the need for cross-cultural studies using a qualitative research approach to investigating consumer trust development. It was shown that, traditionally, the majority of studies of online trust were designed around a quantitative method which involved either conducting a survey based on a respondent's previous experience with shopping online (Greenberg, Wong-On-Wing and Lui 2008; Jin, Park and Kim 2007) or conducting a lab experiment (Aiken and Boush 2006; Chen and Dibb 2010). Only a few studies of online trust used a qualitative approach (Karvonen, Cardholm and Karlsson 2000; Pennanen, Tiainen and Luomala 2007). To answer the call for more qualitative studies of trust with innovative research methods that would reflect the respondents' experiences (Mollering 2006), a new method is needed in order 'to go much further beyond the supplied and predetermined questions of a survey instrument' to reveal how

people interpret and make sense of their experiences in their own, and not in a researcher's, words and concepts (Wright and Cheung 2007, p. 209).

To identify the epistemological and methodological framework for the research, it is necessary first to clarify terminology (defining terms will continue throughout the paper as new terms are introduced) and build a foundation for research.

This chapter provides a brief review of the major research philosophies, explains a choice of the research philosophy for this study, its method, data collection and analysis. It describes the personal construct theory (Kelly 1963) that serves as the basis for the repertory grid method, as the research instrument. This is followed by a brief history of the original repertory grid technique, discussion of its modern adjustments, and samples of studies in the area of trust and technology where this research method was used. A thorough description of the implementation process is offered including types of data analysis available for a researcher. The discussion of the reliability and validity as well as the advantages and disadvantages of the repertory grid technique justifies the decision to use it for analysing consumers' perceptions. The chapter concludes with a description of the study design to meet the research objective.

3.1 Determining research philosophy

Any research framework is determined by at least three elements in addition to the research objective: method, data collection, and analysis. These elements are interdependent and may reflect the researcher's view of the world, which would then affect the overall result. Since two early major research philosophies (positivism and interpretivism) serve as the foundation for other, later-developed, research philosophies, they might merit some discussion before proceeding to the outline of the research philosophy for this thesis.

The major question for any research philosophy is how to proceed with capturing the reality around us and how to 'separate true from false knowledge' (Fuchs 1993, p. 24). Earlier philosophers tended to approach the world around us as objective or subjective, existing in our knowledge or outside of it. Those opposing views were formally shaped into philosophies with their research

instruments relatively recently. Positivism and interpretivism are known as the two opposing views that gave growth to other philosophies.

Auguste Comte (1798-1857) coined the term 'positivist philosophy' to describe a philosophical view towards science that emphasized (1) the unity of social and natural sciences (Hughes and Sharrock 1997; Duberley, Johnson and Cassell 2012) and (2) positive verification of knowledge obtained from the external world which is tested by 'neutrally gathered' facts (Duberley, Johnson and Cassell 2012, p. 18). According to positivists, all scientific ideas come only from our sensory experience of the world that can be properly measured. The same procedure could be repeated by different people in different locations but the same results would be achieved. Fixed and predictable outcomes were essential in the work of positivists as any deviation from the norm pointed at an error in the research. Positivists' universal rationality did not tolerate anything that could be interpreted in different ways. Fuchs (1993) referred to positivism as 'normal science' (Fuchs 1993, p. 30) which is about 'routine habits of the mind and practice' (Fuchs 1993, p. 31).

Although this philosophical view held its ground with natural sciences, human nature presented a challenge as it was not measurable and identifiable by researchers' senses. Since positivists treated the intangible as meaningless, this challenge was overcome by reducing human nature to physiological, chemical, and biological processes (Hughes and Sharrock 1997; Duberley, Johnson and Cassell 2012). Now everything became objective reality that could be observed in an experiment with mathematical precision. If there was an initial condition, then any event could be predicted following the logic of the initial statement; for example, 'If there is A, then B would occur'. This type of hypothetico-deductive model was used by positivists for their explanation of any phenomena. Since the natural science approach produced a number of positive results, it was assumed that the social sciences, as a part of unified science, should also use mathematical precision in its research (Corbetta 2003).

This precise mathematical approach to explaining the nature of events did not accommodate the views of those who studied society and people. For example, philosophy, history and art were not material objects, and could be understood

only from the experiences of others. Debates about the differences between the mind and matter were popular in Germany at the end of the 19th century and are associated with names of Wilhelm Dilthey (1833-1911), Heinrich Rickert (1863-1936), and Max Weber (1864-1920) (Hughes and Sharrock 1997; Duberley, Johnson and Cassell 2012).

The first criticism of the positivist approach towards science came from Dilthey (1883) who illustrated the difference between 'sciences of nature' and 'sciences of spirit.' According to Dilthey, an object of natural science belongs to the external world of the researcher and could be explained by an observer (Corbetta 2003). In contrast, an object of the 'science of spirit' is not detached from the observer and must be understood rather than explained. Max Weber built on Dilthey's idea of understanding the mind while remaining objective (Corbetta 2003). Weber explained that the difference between natural science and social science was in the fact that a human being was both the subject and the object of the research. According to Weber, interpretive understanding would give researchers a method of studying a social phenomenon without interfering with the world of those who are being studied. This method would allow a researcher to put himself into the object of study's position so that it would be possible to understand another person's motivation and behaviour. Weber's position was that social scientists are more 'interested in understanding particular social phenomena in their socio-historical contexts, rather than in discovering and applying universal scientific laws' (Hammersley 2007, p. 293). Since researchers can use different perspectives, there are no constant universal values in social sciences, but a range of values which could be used to explain or interpret a phenomenon selected for investigation (Hammersley 2007). Thus, interpretivism as a research philosophy was born.

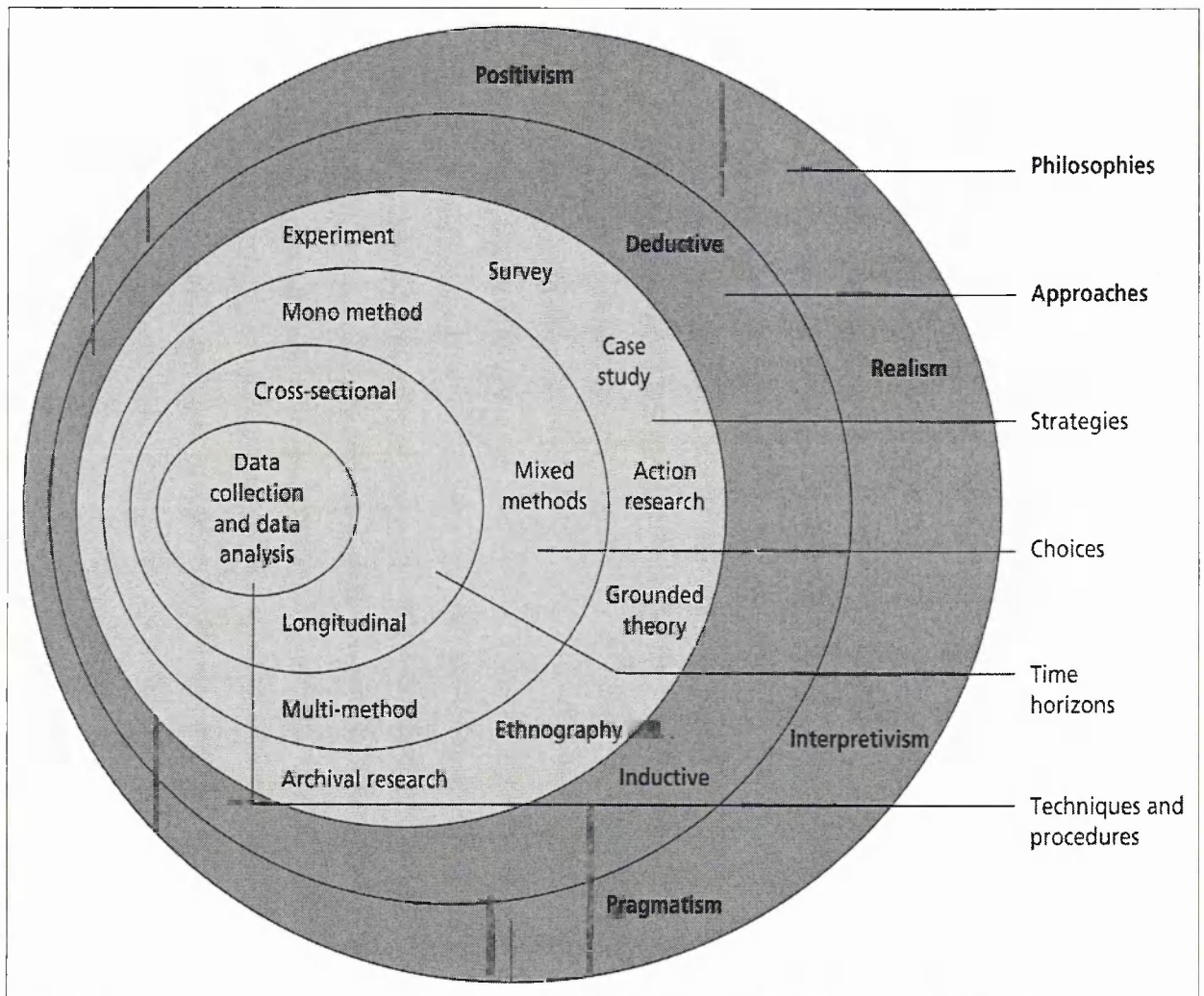
These two philosophical approaches (positivism and interpretivism) express two directly opposite views. Over the years, however, other views were developed – post-positivism, realism, pragmatism - just to name a few. They adopted some of the postulates of either positivism or interpretivism or both. Pragmatism, for example, is a research philosophy that extracts theory from practice, modifies it hoping to improve it, and then applies it back to practice. It is usually associated with the works of Charles Sanders Peirce (1839-1914), William James (1842-

1910), John Dewey (1859-1952), and George Herbert Mead (1863-1931). Pragmatists believe that our understanding of reality is 'distorted through language and individual perceptual frames' (Oliver 2012, p. 412). There is no universal definition of truth as there are too many consequences of that concept. Pragmatists focus on solving specific problems and building knowledge that could then be applied to practice and could make things work better in the future. They act as entrepreneurs whose goal is to get things done by interfering with and manipulating reality. As a research philosophy, 'pragmatism places action before belief, success before truth, and tinkering before rule-following' (Fuchs 199, p. 30).

Interpretivism is the most appropriate philosophical approach for the research objective of this study because it implies that knowledge is socially constructed and enables investigation into people's perceptions. This research philosophy is subjective, as it reflects somebody else's interpretation of concepts and events leading to the development of trust between two or more parties. This philosophy supports the notion of trust as a social and highly contextualized phenomenon which requires a look from within the worlds of the participating parties. The other research philosophies would not be able to encompass trust, defined as 'an intrinsically fuzzy phenomenon' by Clases, Bachmann, and Wehner (2003, p. 8). As an object of the research addressed in this paper, clarification of this 'fuzzy phenomenon' is to be achieved through an in-depth examination and interpretation of a variety of individual perspectives.

Once the overall research philosophy is adopted, a method of data collection needs to be identified. Saunders, Lewis, and Thornhill (2009) suggested a 'Research Onion' model (see below) that shows the multiple but interconnected steps involved in developing the research framework. This graphical presentation of the classification and relationships between research philosophies, approaches, techniques and procedures serves as a set of guidelines for developing a holistic approach to one's research. The authors guide the researcher in finding a match between a research philosophy, an approach to the actual research within that philosophy, and then a procedure appropriate for the chosen approach. Based on the 'Research Onion' model, a grounded theory procedure falls under the interpretivist approach.

Exhibit 3.1 'Research Onion' Model.
 (Source: Saunders, Lewis and Thornhill 2009)



Grounded theory is a process of building a theory from data solicited during systematic research as opposed to developing a theory by logical deductions from previous assumptions (Glaser and Strauss 2010; Saunders, Lewis and Thornhill 2009). Barney Glaser and Anselm Strauss are credited with developing this methodology 'that is grounded in the words and actions of those individuals under study' (Goulding 2005, p. 296). The major characteristic that

sets a grounded theory approach apart from other research methods is that in the grounded theory approach, the researcher does not pre-ordain a hypothesis, but rather collects the data first. Once the data are coded and analysed, the researcher either produces a new theory or provides clarification of the circumstances under which the existing theory works better.

To explore the social world through individual experiences of reality, interpretivism uses the grounded theory approach which consists of three elements. It appears that there is a consensus among researchers about two elements of grounded theory: symbolic interactionism and ethnography, while there are debates about whether the third element should be hermeneutics or formal theorizing (Duberley, Johnson and Cassell 2012; Goulding 2005).

George Herbert Mead, the 'founding father' of symbolic interactionism, argued that our reality is social as it is created through interactions with other people and objects. As the result of those interactions, people do not respond directly to reality but rather they respond to their own social interpretation of it (Oliver 2012). Any action is treated as a reaction to a symbol that requires individual understanding and interpretation. Since a person has the ability to name objects and assign them to certain phenomenon, understanding symbols is an important part of human communication and interaction. Interpreting symbols, or meaning making, is a social process in which not only an individual but his/her reference groups (friends, colleagues, family) and social institutions participate as they add their own perspective on the situation. In the online commercial environment, a web site acts not only as a platform for conducting business but also a means of communication to promote a company and its product as well as establish relationships with customers (Wareham, Zheng and Straub 2005). As such it incorporates symbols signalling trust, and according to symbolic interactionism, creates some common perceptions shared by a group of customers (Denzin 1969).

In symbolic interactionism, each person brings in his own perspective of reality and tells us something that is important for him or her, but not the whole story (Oliver 2012). Only by comparing several perspectives and noting where they overlap, is it possible to define a trend or a concept. 'By examining the points at

which the resulting perspectives differ and converge, the researcher constructs a cumulative picture representing his or her best approximation to what is "really" going on' (Oliver 2012, p. 414). As symbols have different meanings in different cultures, a research design that is specific to a group of people sharing the same meanings of symbols would lead to a better understanding of an event or phenomenon in the lives of those people.

Ethnography is a qualitative research method usually associated with cultural studies that explains people's behaviour from an insider's point of view when a researcher immerses himself or herself into the situation under study. This method explores how members of a group, community or organization make sense of their activities (Cunliffe 2011). In the ethnographic approach, a researcher employs analysis of what a participant considers to be a routine situation or social event to challenge the participant's conception of normal, ordinary and taken for granted rules and /or traditions (Denzin 1969).

The third element of the grounded theory is mentioned as 'hermeneutics' by Duberley, Johnson and Cassell (2012, p. 12) but as 'formal theorizing' by Goulding (Goulding 2005, p. 296). Duberley, Johnson and Cassell (2012) clarified that 'the key principle underlying hermeneutics is that the meaning of a part can only be understood if it is related to the whole' (Duberley, Johnson and Cassell 2012, p. 21). A hermeneutic circle is created when there is a link between pre-understanding and understanding of a concept which leads to understanding of something bigger.

In Goulding's (2005) opinion, formal theorizing is the last step of building a theory using the grounded theory approach. When it comes to developing a theory based on the researcher's findings, there are two possible outcomes: substantive and formal. Substantive, or empirical, theory is developed for a specific instance or case while formal theory is developed for a conceptual purpose. The scope of substantive theory can be increased to the level of formal theory. As a matter of fact, although formal theory can be generated directly from data, it is better when a substantive theory is used as a starting point for formal theory (Glaser and Strauss 2010; Goulding 2005).

Contextual similarities between drawing a connection from an understanding of a case that leads to understanding of a bigger picture and substantive theory being a part of the formal theory are obvious, although the terminology is different.

Per Goulding (2005), grounded theory is 'a methodology particularly suited to situations that have a symbolic and, or, an interactional element to them' (Goulding 2005, p. 304). Since customer engagement in online shopping involves both elements as the customer interacts with a web site full of (or lacking) symbolic meanings and images, grounded theory is an appropriate research approach for exploring online trust. Although online trust is an existing concept, it will be analysed from the cultural aspect of an online customer, and the comparative analysis of customers' perspectives might give rise to new hypotheses in terms of either which 'cultural tiles' (Chao and Moon 2005) customers use to develop online trust, or which web site characteristics signal trust to different cultures.

Based on this general overview of research philosophies, interpretivism and grounded theory are found useful in exploring the extent to which the cultural background of customers affects the process of identifying and interpreting online trust cues and building online trust.

Having established the philosophical boundaries for research, it is necessary to determine how the primary data is gathered and analysed. There are three possible approaches:

- Quantitative
- Qualitative
- Mixed

The goal of quantitative research is deduction: collection of data to provide empirical support of existing theories (Corbetta 2003). The quantitative research approach is highly linear as it is designed to solicit 'hard' (standardized and objective) data from a statistically representative sample using a structured research instrument (Cooper and Schindler 2014). Very often this structured instrument is an experiment in a lab where a researcher artificially recreates the

situation under study. Another popular quantitative research tool is the survey. The major advantage of surveys is their 'robustness, in the sense of reliability and objectivity, and their efficiency' (Hassenzahl and Wessler 2000, p. 442). The major disadvantage is that respondents cannot share any additional information that could be added to the research as respondents' contribution is limited by the structure of the research tool.

An objective of quantitative analysis is discovering a variable and exploring the causes of the variation (Cooper and Schindler 2014). Due to the wide scope of the research and its precise structure, mathematical and statistical formulas are extensively used in the explanation of a variance and the results are presented as tables and graphs that show correlations. Quantitative findings could be easily generalized based on the laws of relationships between cause and effect (Corbetta 2003).

Since quantitative research focuses on methods that can measure a phenomenon and provide numerical data for statistical analysis, it is not appropriate for the purpose of this study. The challenge with trust research is that trust is intangible and difficult to measure. Mollering (2006) recommends that those who plan to use the quantitative research approach might wish to focus on trusting behaviours rather than attitudes, and count the number of instances where the trusting actions occur. This is frequently done in a laboratory setting in the context of a trust game. Critics of this approach argue that the validity of the experiments is questionable as the environment is artificially created (Cooper and Schindler 2014). Another argument is that the difference between cooperation of participants and their trust in the researcher is not clear. There seems to be a consensus among critics that the greatest advantage of this approach is the statistical analysis that results in numerical reports; however, even this advantage could be turned into disadvantage if the report is not properly compiled. Blastland and Dilnot (2007) warned against the improper use of numbers, comparison of incomparable objects and events, and the assigning of causal relationships where none exist.

The goal of qualitative research is to build a theory from observation in a natural setting. Participants are active and the structure of observation is constantly

changing as it depends on the environment and behaviour of participants without interference from an observer (Corbetta 2003). Qualitative research is designed to collect 'soft' (rich, deep and subjective) data from a sample that might not be statistically representative using an unstructured research instrument (Saunders, Lewis and Thornhill 2009; Corbetta 2003). As the object of qualitative research is an individual, the purpose of the analysis is to interpret somebody's behaviour, and as such, no statistical formulas can be used in this situation. Qualitative research presents its findings as quotes and extracts from interviews and uses classifications and typology as the way to report results. Since the outcome of the research is 'text' based, it is a challenge to present results in a measurable, numerical manner. Generalization is difficult if not impossible (Cooper and Schindler 2014).

Qualitative researchers view routine actions and events as potentially remarkable. Not only tangible objects such as documents and artefacts, but also people's behaviour, values, and perceptions can offer new perspectives on the subject under study (Silverman 2007). Therefore, the use of unstructured methods is wide spread as it provides 'the required openness' and an opportunity to discover something new (Hassenzahl and Wessler 2000, p. 442). The range of these methods is very broad and includes ethnographical approaches that involve observations, semi-structured interviews with open-ended questions, diaries or autobiographies, and action research that is aimed at solving a specific problem. Those methods gather rich data but require a lot of time and effort for analysis (Ashleigh and Nandhakumar 2007).

Another challenge of qualitative research according to Silverman (2007) is 'found' vs. 'manufactured' data, where 'found' data are 'naturally occurring events' and 'manufactured' data are obtained by a researcher in such a way that the data's reliability may be affected. A third common criticism of the qualitative method is that, due to the small number of case studies used in the analysis, the validity and generalizability of findings can be found questionable (Cooper and Schindler 2014). It is important to remember that the purpose of qualitative research is not to provide numerical statistical data, but to add depth to a known theory or develop a new theory. With respect to trust research, 'it is

clear that qualitative methods are required to understand trust as a complex idiosyncratic achievement by the embedded actor' (Mollering 2006, p. 145).

Mixed methods research combines qualitative and quantitative methods 'for the broad purposes of breadth and depth of understanding and corroboration' (Johnson, Onwuegbuzie and Turner 2007, p. 123). The advantages of this approach are that it confirms the results of the research by using a variety of methods and theories, it collects the 'rich data' (Johnson, Onwuegbuzie and Turner 2007) which might reveal something new or conflicting with previous findings, and it helps to either build, test, or integrate theories. While using the mixed methods approach one should be aware of the following challenges:

- integration of the data collected from the qualitative side and quantitative side of research;
- validity of research and philosophical interpretation as the method combines positivism (quantitative approach) and constructivism (qualitative approach)
- triangulation – a cross-examination approach that combines different aspects of the research to ensure its validity

Since this is an exploratory study whose purpose is to better understand the role of buyers' national culture on developing initial online trust based on trust cues embedded in a web site, more information is required to explain whether the cultural background of a customer should be incorporated into a model of trust in the online environment. Online trust is an interactive social and context-based phenomenon (see chapter 2) and as such, it should be studied from the user's perspective. As 'qualitative research methodologies unlike quantitative methods are best able to take account of the nature of human perceptions' (Storr 2004, p. 424), a qualitative research method that combines the openness of an interview and the efficiency of surveys in eliciting consumer's perceptions should be used in this particular study to yield relevant insights.

3.2 Personal construct theory and repertory grid technique

The focus of this study is to identify which web site elements customers recognize as online trust cues. Since individuals develop different perceptions of the same object, event or phenomenon in their lives, this presents a challenge to researchers who study that object, event or phenomenon. While shopping on the same web site, customers develop different perceptions of a web site's trustworthiness based on their own experiences, expectations and goals (Cyr 2013; Cook and Finlayson 2005; Gefen 2002). A methodological technique that can capture how customers develop meanings of web site elements that they observe and use, and how this affects building online trust is needed to examine the highly individual process of 'meaning construction' (Tung, Xu and Tan 2009, p. 103).

The question of how people make sense out of the world around them has been a main research topic for a number of researchers, including George Kelly, an American psychologist, who developed the psychology of personal constructs also known as the personal construct theory in 1955, in an attempt to answer this question. His theory stands out as it helped psychologists understand how people view reality based on their own mental notes or construct systems. Unlike other theories, Kelly's (1963) process of construing involves all senses and offers a bigger and more holistic picture of how people create meanings (Marsden and Littler 2000).

Kelly (1963) argued that each individual understands the world around him/her as the result of an active process of building meanings while comparing and contrasting events rather than the result of passive reaction to those events (Marsden and Littler 2000). This 'constructive alternativism' (Kelly 1963, p.15, emphasized in the original) theory states that all people interpret the world around them using their own set of bipolar constructs. In the act of naming an object, event or phenomena, people are also aware of its opposite. According to Kelly (1963), while observing similar and contrasting features of other people or objects, each individual creates his/her own constructs or characteristics of those people and objects based on a combination of two cognitive processes: generalization and contrasting. These two mental processes help each

individual create a personal framework for evaluating the world in which he/she lives and predicting the future outcomes of events. For example, something is 'good' only if and when that something falls within each individual's set of constructs defining what 'good' means for that person.

Acting as a scientist, each individual sets a theory, has certain expectations, creates an experiment, and achieves a result (Kelly 1963). Based on the results, the framework of constructs is modified. Each individual evaluates objects (both tangible and intangible) from the established set of constructs. As people want to improve the accuracy of their predictions of events, they modify their personal construct systems, and the cycle continues (Ashleigh and Nandhakumar 2007; Fransella and Bannister 1977).

The nature of this study is to identify inductively what online shoppers perceive as trust cues. As applied to this study of consumers' perceptions of online trust cues, the personal construct theory suggests that online buyers develop their personal constructs when they compare and contrast web sites while determining which web site to trust and which web site not to trust. Potential buyers bring their own experiences, cultural backgrounds, and any perceptions of a trustworthy web site that they might have, into the process of evaluating a web site, which impacts their interpretations of that web site's trustworthiness (Domenici 2008). Another application of this theory to the study of online trust cues is that although consumers develop these personal sets of constructs, their individual construct systems reflect the social context of meanings because people construe their perceptions in a similar way (Easterby-Smith, Thorpe and Holman 1996). Individual subjective interpretations of events, objects or phenomena overlap if they share the same culture, language, and social context (Kelly 1963). This aspect of the Personal Construct theory offers a common basis for establishing and analysing trends between consumers' subjective perceptions (Hunter and Beck 2000) and makes this theory a part of the framework for this research.

As a methodological extension of his theory, Kelly (1963) introduced the repertory grid technique as a research method 'of extracting personal constructs in a systematic way' (Hassenzahl and Wessler 2000, p.444). Although in his

personal constructs theory Kelly (1963) discussed the fundamental postulate and eleven corollaries, the following four were marked by Easterby-Smith, Thorpe, and Holman (1996) as the most important assumptions for application of the RGT:

- 'A person's processes are psychologically channelized by the ways in which he anticipates events' (Kelly 1963, p. 46). This fundamental postulate emphasizes that each individual is oriented towards the future and is an active participant of creating interpretations of the world around him/her.
- 'Individuality Corollary: Persons differ from each other in their construction of events' (Kelly 1963, p.55). The significance of this statement is that two people in the same situation react to that situation differently. As the result, they process their experience and knowledge from that experience in different ways. Hence, 'the knowledge held cannot be considered to be objectively true or false, but only as meaningful to the person who holds it' (Easterby-Smith, Thorpe and Holman 1996, p. 7). Since all respondents develop their constructs individually in their personal ways. This is the condition that adds richness to the research (Fransella and Bannister 1977).
- 'Experience Corollary: A person's construction system varies as he successively construes the replications of events' (Kelly 1963, p. 72). This corollary implies that people learn from experience and as they develop, they adjust the system of constructs.
- 'Commonality Corollary: To the extent that one person employs a construction of experience which is similar to that employed by another, his psychological processes are similar to those of the other person' (Kelly 1963, p. 90). Since people can construe the world in similar ways, it is possible to trace trends.

These four assumptions emphasize that constructs are tied to a specific context. Since trust as a concept is highly contextualized, using a repertory grid method for exploring customers' perceptions of web site trustworthiness evokes personal constructs associated with that specific situation.

Kelly's (1963) original research using the repertory grid technique was conducted as follows:

- A respondent was given a blank grid form that looked like a spread sheet, as it had columns and rows.
- Per Kelly's guidance, the respondent listed elements across the top in the column titles row leaving the first and the last column blank (in Kelly's case – elements were people within the individual's circle - family, friends, and co-workers)
- A separate card was created for each element. Each card had the name of the element on one side and a corresponding number on another side.
- The cards were placed face down and shuffled. Three cards were randomly selected
- The respondent marked the elements that were randomly selected on the grid with a symbol "X". The respondent was asked to identify which two of those people whose names were drawn are more alike, and to connect those elements with a line on the grid.
- A criterion that made two people similar was written down in the box in the first row below the title of the first column (on the left side of the grid) and a criterion that described how two people differed from the third person was written down in the first row of the last column (on the right side of the grid).
- The respondent was then asked to evaluate all elements listed on the grid based on the criterion (constructs). Originally, Kelly asked his patients to mark those elements that met the description of the construct
- Once all the elements were evaluated, another three people were selected randomly, their names were marked and another construct was solicited.

An example of the original repertory grid form is provided below. Note that the three elements that were selected in a triad are circled and the two similar elements are marked with an X inside a circle. Those elements that are close to the emergent pole have a tick (checkmark). The process of identifying criteria continued until a respondent ran out of constructs. All constructs were then analysed.

Exhibit 3.2 Kelly's Original Repertory Grid. (Source: Benjafield 2008, p. 244)

																			CONSTRUCTS			
	Self	Mother	Father	Brother	Sister	Spouse	Ex-Home	Pol	Ex-pul	Rejecting Person	Priviled Person	Threatening Person	Attractive Person	Accepted Teacher	Rejected Teacher	Boss	Successful Person	Happy Person	Ethical Person			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	SORT NO.	EMERGENT POLE	IMPLICIT POLE
																				1	Don't believe in God	Very religious
																				2	Same sort of education	Comable different education
																				3	Not athletic	Athletic
																				4	Both girls	A boy
																				5	Parents	Ideas different
																				6	Understand me better	Don't understand at all
																				7	Teach the right thing	Teach the wrong thing
																				8	Achieved a lot	Hasn't achieved a lot
																				9	Higher education	No education
																				10	Don't like other people	Like other people
																				11	More religious	Not religious
																				12	Believe in higher education	Not believing in too much education
																				13	More sociable	Not sociable
																				14	Both girls	Not girls
																				15	Both girls	Not girls
																				16	Both have high morals	Low morals
																				17	Think alike	Think differently
																				18	Same age	Different ages
																				19	Believe the same about me	Believe differently about me
																				20	Both friends	Not friends
																				21	More understanding	Less understanding
																				22	Both appreciate music	Don't understand music

3.3 Application of the repertory grid technique

Although originally, Kelly (1963) developed a repertory grid technique for use in the clinical psychology, its flexibility and ability to elicit individual perceptions were proved to be applicable to other disciplines. The repertory grid is especially valuable when the object of the research is people's perceptions of concepts or systems (Hinkle 2009). There are many examples of how grids are used in different subject areas.

An online library search via the Web of Science database (run on July17, 2014) using a Boolean search combination of two phrases ' "repertory grid technique" or "repertory grid method" ' for the 2010-2012 time period returned sixty two results while a Google Scholar search of the same combination ' "repertory grid technique" or "repertory grid method" ' for the same time period returned eighty seven results. However, a review of the abstracts showed that there were only forty nine and fifty four studies respectively that actually used a repertory grid

technique. The difference in the number of articles available on Google compared to the University of Surrey library database could be explained by the fact that some older (1970s) articles have become available online since 2011 and some book chapters are available on the Google Scholar web site as separate articles but not available on the Web of Science.

Exhibit 3.3 Results of the search for articles. (Source: present author)

Field of Study	Number of studies listed by the Web of Sciences database	% of 49 results listed by the Web of Sciences database	Number of studies listed by Google Scholar	% of 54 results listed by Google Scholar
Medical field	14	28.57%	10	18.51%
Information Technology	10	20.41%	10	18.51%
Education	7	14.29%	2	3.7%
Sociology	4	8.16%	5	9.25%
Psychology	3	6.12%	4	7.4%
Human Resources	3	6.12%	3	5.55%
Consumer Behaviour	2	4.08%	7	12.96%
New Product Development	2	4.08%	8	14.81%
Construction	2	4.08%	1	1.85%
Small Business Ethics	1	2.04%	1	1.85%
Library	1	2.04%		1.85%
Event Management			1	1.85%
Trust Research			1	1.85%

It appears that the repertory grid method has not been used for trust research very often, as only four studies were found to have been conducted within the last ten years: Ashleigh and Nandhakumar (2007) studied the role of trust in a work environment affected by technological developments, specifically, within and between teams working with Information technology; Clases, Bachmann, and Wehner (2003) investigated trust in virtual organizations; Ding, Ng, and Cai (2007) explored factors affecting interpersonal trust and willingness to share knowledge among Chinese architects working together on a design team, and Alexander et al. (2010) looked into the issues of trust between participants in the Siyabuswa educational project in South Africa.

Ashleigh and Nandhakumar (2007) used two companies in the energy distribution industry to study trust within the team of sixteen engineers (eight from each company), between two teams, and when interacting with technology. Due to the nature of their work, the engineers were in constant interaction with each other (both face-to-face and from a distance), equipment of the physical plants, and technology. The repertory grid method was used to explore development of trust in that work environment. Three sets of elements were developed in cooperation with the participants: one set for discussing trust between members of the same team, another for trust between teams, and the third one for interaction with technology. Triading was used to solicit constructs for each set of elements. For example participants were asked 'when thinking about the concept of trust, what characteristic makes the "team member you work most with" similar to "your best friend on the team" but different from "another engineer on your shift" '(Ashleigh and Nandhakumar 2007, p. 610).

Once all the constructs had been elicited, participants were asked to evaluate all elements on a five-point Likert scale. Sixty constructs elicited during the study were reviewed based on the content analysis method and reduced to thirteen core constructs which were placed in one of three trust categories: emotive, cognitive or behavioural. Note that Ashleigh and Nandhakumar (2007) did not create categories based on the analysis of the elicited constructs, but rather fit those constructs into existing categories. Researchers then developed a hierarchy of constructs for each one of the three groups. They found that quality of interaction was the most important construct for trusting technology.

Also, there was a higher level of expectancy from technology than from people in terms of trust (Ashleigh and Nandhakumar 2007).

Research conducted by Clases, Bachmann, and Wehner (2003) focused on a network of independent companies that operated as one single entity known as a 'virtual organization'. Although they operated in different geographical areas, members of the network created a synergy of resources by pulling together their core competencies. This type of organizational arrangement specifically depends on trust developed among all the players. Clases, Bachmann, and Wehner (2003) explained that one of the advantages of using the repertory grid was the opportunity it provided to collect subjective opinions about the meaning of trust rather than imposing a definition from the researcher's perspective. Another advantage of this technique was found to be the ability to present the respondents' subjective definitions in graphical form, which can be easily interpreted by both researchers and industry experts. These researchers argued that this methodology, which combines qualitative and quantitative methods, 'is well suited to achieving exploratory objectives in research fields in which solid and empirically testable hypotheses still have to be generated' (Clases, Bachmann and Wehner 2003, p. 22). However, they admitted that a weakness of the research is that the transferability is limited as the study was aimed at the specific type of organization, and therefore might not be applicable to other institutions.

Ding, Ng, and Cai (2007) studied development of interpersonal trust between architects on a project design team. Although architectural design is 'a knowledge-intensive activity' (Ding, Ng and Cai 2007, p. 937), it was found that architects do not always share their knowledge with their team members. The purpose of their study was to reveal factors and any personal constructs that might impact trust between team members and their willingness to share knowledge. Researchers conducted nine interviews in three locations in China. For the repertory grid, participants selected between six and eight team members as elements including people with whom participants shared knowledge and people with whom participants did not share knowledge. Researchers applied the triading method of creating constructs during interviews, when a participant is asked to compare three team members listed

as elements and write down a way in which two of the team members are similar to each other but at the same different from the third team member. Once the constructs were listed, respondents rated them on a five point Likert scale. Ding, Ng, and Cai (2007) used three types of analysis to ensure triangulation of the process: content analysis, cluster analysis, and principal component analysis. The research findings showed that contrary to previous results, trust was not explicitly stated as a factor affecting knowledge sharing among team members, rather, it served 'as a mediating variable for willingness to share knowledge' (Ding, Ng and Cai 2007, p. 946).

The last, and most recent, trust research conducted by Alexander et al. (2010) discussed the case of the Siyabuswa Educational Improvement and Development Trust (SEIDET). It is a rural community project in South Africa aimed at assisting learners to pass science and mathematics exams. Numerous activities and partnerships have been developed to assist learners. One of the partners is the Department of Informatics at the University of Pretoria. The trust that has been developed between SEIDET and the University of Pretoria led to research opportunities to extend SEIDET's operations into for-profit activities that would empower the country's black population and lead to job creation. SEIDET's request for assistance initiated action research that culminated in a workshop.

Alexander et al. (2010) decided to extend the repertory grid (RepGrid) method into the reflection grid (RefGrid) as the original research process was modified and applied to the group setting. Rather than having interviews with individual participants, all members of the team discussed elements, constructs, and their contrasts. Since elements were abstract, the dyading rather than the triading method of construct elicitation was used. Laddering helped to identify the constructs that would be used to evaluate elements. A nine-point scale was used to evaluate each element. After creating a list of constructs to evaluate the elements listed on the RefGrid, researchers individually scored the elements. One person consolidated the data and provided a graphical representation of the results. All members discussed the results and differences in perceptions that they had of the workshop's objectives.

The four cases described above directly relate to the subject of trust research using the repertory grid method. There are, studies, however, that might not directly cover the issues of trust, but they investigate customers' perceptions about web design and are tied in with research in the area of information technology. Two of these studies are of particular interest as they contributed to the design of this study: Crudge and Johnson (2007) and Tan, Tung, and Xu (2009).

Crudge and Johnson (2007) analysed 'mental models' of people using search engines. The researchers emphasized that the concept of how the search engine web site should work differs depending on the perspective of the web designer and that of the Internet user. Since previous findings concluded that both the concept model of the designer and the mental model of the system created by the users should coincide to be effective, Crudge and Johnson (2007) found it important to focus on how the mental model of the users is created and how that model affects evaluation of search web sites.

Researchers used a repertory grid combined with the laddering technique.

The method of dyadic solicitation was applied in which participants randomly selected two out of four search engines used in the study, and described either a similarity or a difference between them. Then, an opposite characteristic of a construct was provided for each element thus creating a construct with two contrasting poles. Pairs of search engines were presented until no more constructs could be elicited. Once all constructs were listed, a five point scale was applied to evaluate all four engines. As the researchers explained, the main reason for using the repertory grid method was to solicit as many evaluative elements of the web search engines as possible without the researchers' imposing their views (Crudge and Johnson 2007).

Laddering helped to explore why those elements were important for respondents. Unlike the majority of studies based on a repertory grid technique, Crudge and Johnson (2007) used dyading and analysed constructs based on their hierarchical position in the participants' mental models of what a good search engine should be. This type of analysis relates closely to the research topic of a web site's trustworthiness as it can present constructs reflecting

consumers' mental model of what a trustworthy web site should be. More details about this type of analysis are offered in section 3.4.4 Analyzing repertory grids. Both approaches, dyading and the analysis of constructs' hierarchy, are useful for operationalization of this study.

Related to the Crudge and Johnson (2007) study of search engine design, was research conducted by Tan, Tung, and Xu (2009). They explored the effectiveness of the web site design. Two main web site characteristics were identified as content and design. Content provides information on a product, while design keeps customers' interest in a web site (Tan, Tung and Xu 2009). Due to the increased use of the Internet for commercial purposes, more attention is being paid to the design of website that can keep customers online and turn them into repeat customers. Tan, Tung, and Xu (2009) studied the effectiveness of the website design from the designers' point of view while pursuing two research objectives: to find out effective website design features and to analyse the relationship between those features. As the researchers explained, the main reason for adopting the repertory grid method was to obtain those constructs that web designers (not researchers or users of web sites) consider effective. This was a new approach since all previous studies on the effectiveness of web sites had used pre-structured questionnaires which listed web sites' design elements that researchers (not designers or users) found effective.

For their study, Tan, Tung, and Xu (2009) selected six of the ten top web sites listed on Nielsen/NetRatings in 2000. The list of those six websites was provided to respondents a week before the scheduled interviews. During interviews with twenty respondents, Enquiry Within software was used to randomly draw three of the six web sites for evaluation. Respondents were asked to identify how any two websites are similar and yet different from the third website (triading) regarding effective web design features. Web designers were then asked to list that common effective design feature and provide its contrast. Laddering or additional questioning was used to clarify certain constructs. The process was repeated until a designer could not find any more features. Then all the websites were evaluated based on the constructs listed by the designers. Since the repertory grid reflected the designers' perception of

the effectiveness of the website design, and not the researchers', the researchers were able to identify several under-studied categories such as promoting corporate identity, headlines, presentation of information, categorization of information, and advertising.

However, there were limitations to the research conducted by Tan, Tung, and Xu in 2009:

- researchers selected six websites with very broad content which might not be very representative of a B2C website;
- the authors admitted that they did not have any disabled designers that could have pointed out some web features important for people with disabilities;
- some meta-categories listed as separate could have been discussed as one category.

Tan, Tung, and Xu's (2009) study suggested how to select elements for this research – as choosing web sites from a ranking list had not been done before. This method helps to find web sites that draw large audiences and the respondents were expected to have at least some knowledge of those web sites (Tan, Tung and Xu 2009). In addition, respondents were given plenty of time to browse those web sites on their own in order to become familiar with the design and navigation. This was considered a valuable approach, so was included into the research design of this study.

Two more studies that are worth mentioning are: cross-cultural research conducted by Hertzum and Clemmensen (2012) and Hunter and Beck (2000). Although they do not relate directly to studying trust, they were conducted in three (Hertzum and Clemmensen 2012) or two countries (Hunter and Beck 2000) and provide valuable information on collecting and analysing grids completed by respondents with different cultural backgrounds.

Hertzum and Clemmensen (2012) explored perceptions of web site usability as expressed by designers from China, Denmark, and India. Although this study does not directly relate to trust, it is an example of research that used the repertory grid technique in a multi-cultural environment. Hertzum and

Clemmensen (2012) conducted twenty four interviews using the RGT: eight with Chinese participants, eight with Danish and eight with Indian participants. The repertory grid data solicitation was conducted by local interviewers in those countries. In preparation for the data solicitation, the researchers developed guidelines for respondents and distributed those among the local interviewers. The local interviewers met with study participants in different locations and elicited constructs based on the training received from the researchers. Participants were asked to select six elements. This type of data collection using the repertory grid technique in three countries was successfully validated by Hertzum and Clemmensen (2012). Their experience contributed to the design of this study as shown later in this chapter.

Hunter and Beck (2000) conducted their research in the area of information systems in Canada and Singapore. One researcher worked in Canada, while another in Singapore. Together, they interviewed eighty seven people regarding their experience of working with information system analysts. Respondents were asked to use six names of analysts with whom they had worked, as elements in the grid, and a nine-point rating scale was used to evaluate all those elements (the analysts) and their qualities. Five themes emerged from the data and comparative content analysis showed both commonalities and differences between cultures. From a methodological point of view, an important contribution was the finding that 'the RepGrid technique grounds the data within the culture of the research participant' (Hunter and Beck 2000, p. 99) and as such, serves as an appropriate method for studying perceptions of individuals and comparing them across different cultural groups.

All of the above given examples illustrate that the repertory grid method can be used in the area of online trust research as the method has been validated by studies of trust and web design. The discussion of methodological advantages and limitations of the repertory grid technique offered in those studies, assisted in the design of this research as is shown later in this chapter.

All the studies provided as examples of research using the repertory grid method have been conducted using traditional interviews. The question is whether the repertory grid technique could be applied to, and used in, the online

environment instead of traditional face-to-face settings. Klaus Heine (2009) conducted research into the development of a luxury brand personality using the repertory grid method. While the focus of the research was on a topic within the marketing academic subject area, and not online trust development, the use of the online repertory grid deserves special attention. The researcher used a traditional application of the repertory grid method for his study but conducted a complementary survey to explore the possibilities of using an online grid.

Heine (2009) listed nextpractice, sci:vesco web and WebGrid as possible web applications for the online repertory grid; however, an open source program, described as a collaborative repertory grid method, was specifically developed for his study. The major steps of this method are the same as for a traditional grid, but they were completed online in the following sequence:

- Respondents used a web site that shows triads of images of print ads.
- Respondents could use either their own adjectives to identify the style of a print ad or select any one of previously used words from a dropdown menu option.
- Respondents then had to describe the opposite pole.
- Finally, respondents ranked the print ads based on the constructs.

The link to the repertory grid was sent to 150 students at the Berlin Institute of Technology and 50 students participated in the online interview. Examples of luxury brands' print advertisements were used as elements in the online repertory grid. The result was 519 adjectives that served as constructs which were divided into ten categories. As a comparison, when Heine (2009) conducted interviews with 31 participants in the face-to-face environment, the interviews resulted in only five distinct personality elements: modernity, eccentricity, opulence, elitism, and strength.

Heine's (2009) experience suggests that it is possible to use the repertory grid technique online either as a stand-alone online research method, or in conjunction with, the face-to-face interviews. This experience shows that the online environment for eliciting constructs with a repertory grid was more conducive to developing constructs than the traditional environment, possibly

due to the perceived anonymity of the Internet. Although, one has to be careful about drawing this conclusion, this option presents an opportunity for conducting an online repertory grid study.

3.4 Repertory grid technique: Operationalization

As was shown in earlier sections, the repertory grid technique is used to explore participants' perceptions of a particular topic related to people, objects, events, experiences or phenomena (Alexander et al. 2010; Honey 1993; Micheli et al. 2012). Individual constructs that create individual perceptions are elicited about a topic under study to reveal how a person views that topic. People have constructs about almost everything, and the same construct can be used for some topics but not others. However, if a person does not have any experience about a particular topic, he/she does not have constructs for it. Kelly (1963) argued that a construct is always used within a certain specific context and there are a limited number of elements that a person can apply during a specific situation. Thus, Kelly (1963) emphasized that when working with respondents and designing grids, all elements should be within the range of convenience for that person, and that should be kept in mind while selecting a topic and developing a research project using the repertory grid method (Fransella and Bannister 1977).

A review of studies that used the repertory grid as a research method shows that there appear to be three core elements related to the three major steps in the process of implementing the repertory grid technique (Dick 2000; Siau, Tan and Sheng 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

These basic three parts require further description and detailed explanation as follows.

3.4.1 Elements

The first step in applying the repertory grid technique is selecting elements that reflect the research question. As defined by Jankowicz (2004, p. 13), 'an element is an example of, exemplar of, instance of, sampling of, or occurrence within, a particular topic'. Depending on the topic of study, elements could be people, objects, or events (Easterby-Smith, Thorpe and Holman 1996). When determining a list of elements, a researcher should ensure that several conditions are met:

- First, the elements should be '*within the range of convenience*' (Fransella and Bannister 1977, p. 13, emphasized in the original) which means that a set of elements is familiar to all participants who develop constructs by constantly comparing those elements.
- Second, '*the elements must be representative of the pool from which they are drawn*' (Fransella and Bannister 1977, p.13, emphasized in the original).
- Third, elements must be discrete and not overlapping (Tan and Hunter 2002).
- The fourth, and last condition, is that elements should be homogeneous and drawn from the same category – either people or objects, but not a mix of people and objects (Tan and Hunter,2002).

Originally Kelly (1963) used types of interpersonal relationships in his clinical studies and developed a list of roles that people play in the lives of his patients: mother, father, sister, brother, spouse, attractive person, threatening person, and others. Over the years, the use of the method has been extended to areas other than psychology, and researchers used a variety of elements for their studies: for example, people (Hunter and Beck 2000; Boyle 2005), companies (Lemke, Clark and Hugh 2011) and different tangible and intangible objects such as search engines (Crudge and Johnson 2007), design prototypes (Hassenzahl and Wessler 2000), and printed advertisements (Heine 2009).

Once the topic of a study is developed, and elements are identified as specific objects, people, or events, the question arises as to how many elements a

researcher should include in a grid. Previous research shows that a set of six elements is sufficient for constructs elicitation (Tan, Tung and Xu 2009).

Based on the reviewed literature, there are three ways of introducing elements:

- (1) Respondents select their own elements based on generic requirements set up for a study. This was the original way when Kelly (1955) provided guidelines and generic descriptions of elements and a respondent had to select elements (in Kelly's case – people) that fit the description of the element. For example, his instructions were to think of somebody who is a successful person, threatening person, happy person, attractive person, and so on. Based on the description, a respondent would select a person from his/her environment that met that description (Ashleigh and Nandhakumar 2007; Lemke, Clark and Hugh 2011).
- (2) A list of elements is selected by a group. A group of respondents chosen to participate in the study discusses several elements that could be used in the study, and after all members of the group agree to it, offers the list of elements that all members are comfortable with (Alexander et al. 2010).
- (3) The elements are carefully selected by a researcher to ensure that they reflect the research question. A list of elements is given to the study participants (Hassenzahl and Trautmann 2001; Hinkle 2009; Tan, Tung and Xu 2009).

Each of these options has its advantages and disadvantages. Allowing respondents to select their own elements reduces researcher bias (Curtis et al. 2008) but adds challenges for analysing data. As online trust is a context-based phenomenon, websites selected by respondents could reflect different types of situations that might not be comparable to one another. Providing a list of websites as elements for the repertory grid to respondents better frames the scope of the research. If respondents are not familiar with the web sites offered for review of trust cues, then participants are given a chance to familiarize themselves with the websites before the study (Curtis et al. 2008).

Supplying elements to respondents is important for a researcher who is interested in comparing responses from a number of participants in a group and

across the groups. The set number of elements provides the basis for comparison (Tan and Hunter 2002).

3.4.2 Constructs

Constructs are characteristics that both describe and differentiate elements (Easterby-Smith, Thorpe and Holman 1996) and create a respondent's perception of that element. 'A construct is a way in which some things are construed as being alike and yet different from others' (Kelly 1963, p. 105). Construing is making sense of, or having a personal understanding of, an object since a construct is 'an interpretation of a situation and is not itself the situation which it interprets' (Kelly 1963, p. 109). Constructs can be intuitions, perceptions, or feelings towards objects or events that a person uses as guidelines for action (Björklund 2005). It is up to each individual to decide which characteristic to choose and what degree of abstractness or specificity to use while describing an event. A construct is not a real feature of an event but rather an interpretation of that event in the mind of each individual. People choose their own constructs and apply them to other situations in an attempt 'to make accurate predictions about future events that are of concern to them' (Benjafield 2008, p. 248).

While assigning meaning to objects around them, people develop their own interpretation of those objects based on how similar but yet different those objects are. This bipolar nature of a construct is represented by an emergent pole (a characteristic that is explicitly mentioned as an obvious similarity in the eyes of an individual) and implicit or differentiation pole (a characteristic that describes a contrasting feature of an object). It should be noted that a contrasting meaning is not a linguistically contrasting phrase (like an antonym) but rather contrasting meaning (Lemon 1976). Constructs could be expressed as one word (usually an adjective), descriptive phrases, or complete sentences. If a researcher's goal is to understand how an individual sees the world 'in his or her own terms' it is necessary to elicit those constructs (Jankowicz 2004, p. 11). Fransella and Bannister (1977) stated that the constructs are collected in one or more of the following five ways:

- 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.
- 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.
- Laddering is an interview technique that is structured to determine the degree of a construct's importance in the respondent's mind. Kelly (1963) believed that all personal constructs have a hierarchy. A few constructs, which reflect an individual's core values, are located on the top of the hierarchical pyramid and the rest of the interrelated constructs are further down on that pyramid (Crudge and Johnson 2007). For example, after a construct is developed, a researcher asks a person to explain why it is important for that person, thus digging deeper into the perception and moving from the basic concrete level to a higher abstract level of an individual's perception.
- Constructing pyramids helps to determine which constructs are on the bottom of the pyramid reflecting basic perceptions vs the top of the pyramid reflecting core values. This interviewing technique is the opposite of laddering.
- Self-characterization is based on creating a holistic picture of an object. A respondent is asked to fully describe in his/her terms what he/she thinks about a particular object. In this case a general description is more important than details.

Although the above listed ways are presented by Fransella and Bannister (1977) as five different research techniques, it appears that they combined the ways to develop constructs with the interview techniques helping to elicit more or clarify existing constructs.

The researcher selects either dyading (the use of two elements for comparison), triading (the use of three elements) or self-characterization (a full description of one object) and then follows up with laddering to construct a pyramid

(Alexander et al. 2010). One cannot use laddering or construct pyramids without obtaining the constructs first. The self-characterization could be used by itself in a case where respondents' general perceptions of objects are more important than details (Fransella and Bannister 1977).

The majority of researchers support this view that laddering and pyramiding are interviewing techniques used to clarify but not to elicit constructs. They agree on the following methods of personal construct creation:

- Triading – a respondent selects a random combination of any three from all of the elements and develops constructs by reviewing those three elements (Easterby-Smith, Thorpe and Holman 1996; Marsden and Littler 2000; Tan and Hunter 2002).
- Dyading – a respondent selects a random combination of any two of the offered elements and develops constructs based on those two elements (Crudge and Johnson 2007; Curtis et al. 2008; Easterby-Smith, Thorpe and Holman 1996).
- Full-context solicitation – a respondent reviews all elements at once and divides elements into groups based on similarities and differences between them (Curtis et al. 2008; Tan and Hunter 2002).
- Supplied constructs – a researcher develops and provides the constructs, and respondents evaluate elements based these identical constructs (Easterby-Smith, Thorpe and Holman 1996; Tan and Hunter 2002).

Once it is determined which method should be used to elicit constructs in a study, the following question arises – does one ask a respondent to provide a construct and its 'opposite', 'contrast' or 'different' characteristic? Originally, a standard and commonly accepted way of obtaining personal constructs was to present three elements (people or objects) and ask respondents to identify any two that are similar in some way but different from the third element (triading). Over the time, however, the method was modified and respondents were given three objects and asked how any two of them are similar but at the same time are 'opposite of', rather than 'different from', the third one.

While comparing those two ways of presenting triads, Neimeyer, Bowman, and Saferstein (2005) concluded that the use of 'difference method' (identify how the third element is different from the other two in the set of three) led to a greater number of the 'bent' (or non-antonymous) constructs that reflected a higher level of personal construct differentiation (a higher level on the pyramid of the personal value system) while the use of the 'opposite method' (identify how the third element is opposite to the other two in the set of three) led to the clear bipolar constructs but a lower level of personal construct differentiation (lower level on the pyramid). This observation led Neimeyer, Bowman, and Saferstein (2005) to develop a 'contrast' method which 'was designed to retain the relative simplicity and bipolarity associated with the opposite method without incurring either the extreme negativity of its contrasts or the decrements in differentiation associated with the use of this method' (Neimeyer, Bowman and Saferstein 2005, p. 243).

Neimeyer, Bowman, and Saferstein (2005) conducted a study in which they compared three methods of presenting a triad: difference, opposite and contrast. The research showed that:

- Both difference and contrast methods reflected a higher level of personal construct system differentiation.
- The opposite method produced construct pairs that were more extreme and negative than construct pairs obtained by difference or contrast methods.
- The difference method produced the highest number of bent constructs (8%) vs the opposite and contrast methods (less than 2% each).

Neimeyer, Bowman, and Saferstein (2005) concluded that 'the newly developed contrast method appears to retain the advantages associated with both the difference and opposite methods, without incurring the disadvantages associated with either of them' (Neimeyer, Bowman and Saferstein 2005, p. 250). This conclusion suggests that if someone intends to use dyads or triads in the repertory grid technique, then the best way of soliciting constructs would be

to ask respondents to develop characteristics of the elements based on the features that are similar but at the same time contrast to the other element.

Although, theoretically, it is possible to either solicit constructs or supply an interviewee with the prepared constructs, consensus among researchers is that supplying constructs defeats the purpose of qualitative research and is contradictory to the assumptions of the personal constructs theory (Marsden and Littler 2000). By supplying constructs, a researcher imposes verbal labels on a study participant (Easterby-Smith, Thorpe and Holman 1996). It does not help to determine whether a construct falls within the range of personal constructs of an individual participating in the study or if a construct falls beyond the range as not relevant to a participant and not making any sense. Supplying constructs goes against Kelly's (1963) Individuality Corollary which postulates that 'Persons differ from each other in their construction of events' (Kelly 1963, p. 55). Supplying constructs does not offer an opportunity to review differences and as such is not appropriate for this study.

In the literature review about the use of repertory grids, it was found that researchers solicited constructs until respondents exhausted themselves and could not provide any more constructs. Previous research suggests that seven to ten constructs from each study participant are sufficient for analysis (Tan and Hunter 2002).

Palmer (1978) was the only researcher in the reviewed literature who recommended that the number of solicited constructs should be determined by the formula:

$$\text{Number of constructs} = \frac{1}{2} N * (N-1)$$

where N is the number of elements. For example, if respondents have 6 elements to evaluate, then they should come up with at least 15 constructs, where $N=6$, $(\frac{1}{2}*6)=3$, $(6-1)=5$, and $3*5=15$. Respondents are free to use any element's attributes to make judgments of similarity between them while creating constructs.

In a more recent study, Curtis et al. (2008) stated that 'although no specific rules exist on the number of constructs that should be created, most studies range from 10 to 25, and most salient constructs can be elicited from just 7 to 10 triads' (Curtis et al. 2008, p. 44). This statement is supported by other studies in which the average number of constructs elicited from each respondent ranged from 3.75 constructs per study participant (Ashleigh and Nanhakumar 2007) to 13.1 (Siau, Tan and Sheng 2010).

It appears that if there are five elements in the repertory grid, then soliciting at least nine constructs per grid would satisfy both Palmer's (1978) formula and Curtis et al. (2008) suggestion for the validity of the method. However; one might argue that forcing respondents to meet a required number of constructs could shift the focus of a respondent from identifying constructs to meeting the desired number of constructs (from quality to quantity). This could lead either to making up false constructs or to frustration of the respondents and their refusal to cooperate.

3.4.3 Evaluating elements

The above discussion of constructs and elements takes us back to Kelly's (1963) fundamental postulate of the personal construct theory cited earlier – 'a person's processes are psychologically channelized by the ways in which he anticipates events' (Kelly 1963, p. 46) – as 'ways' in his postulate are the constructs and 'events' are elements in a repertory grid (Bell, Vince and Costigan 2002). To show how an individual is anticipating events, the next step in using a repertory grid is to evaluate elements based on the developed constructs.

After all the constructs have been solicited and listed on the repertory grid, it is important to analyse how each construct is applied to each element and to which extent it reflects an individual's perception about that element. Kelly (1963) offered a methodology that used a mathematical approach to describe a psychological space. His assumption was that there is a mathematical relationship between a person's evaluation of an object and psychological

processes used as the basis for those evaluations (Kelly 1961). Those relationships are incorporated in the structure of a grid and represent relationships between constructs and elements. 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. Once respondents list all the constructs, they are asked to evaluate all the listed elements based on their personal construct system (list of constructs or characteristics written on the grid form) (Honey 1993). Three types of evaluation method were utilized in previous studies:

- Dichotomous method: placing an element on one or another pole of the construct (marking 'Applies' or 'Does not Apply' by putting a check mark). Although it makes evaluation easy for the respondents, the results present only extreme evaluations without anything in between. This method was originally used by Kelly (1963) when his patients marked with a tick those elements where constructs were applicable and left other elements blank if they could not apply the construct. The final form of a grid appeared as a matrix with ticks (checkmarks) and blanks. However, this method presented a challenge as some respondents felt that the same construct could not be applied to all elements, so they marked only one element out of all listed on a grid.
- Ordinal method (or ranking) – a respondent is asked to place elements in order from one pole of the construct to another in a meaningful way. The purpose of the task was to show to what degree and how each element reflects the construct; however, the rank does not show the magnitude of difference between the first and second rank, for example.
- Rating scale method – two polar constructs are considered as polar ends of a rating scale and a respondent is asked to rate each element on the Likert scale of seven or nine points to show to what degree a construct is reflected by that element. Palmer (1978) pointed out that the use of a seven- or nine-point scale for rating is preferred as it helps a respondent 'to express a gradation of meaning' (Palmer 1978,

p. 1140). Those nuances in rating create a better understanding of a person's system of constructs as it mirrors a person's perception of an element (Jankowicz 2004). Using a seven- or nine-point scale also offers a middle point as neutral point for evaluation (Björklund 2005).

The rating method of evaluating elements based on constructs that respondents develop was found to be the most widely used and validated by previous studies (Björklund 2005; Dillon and McKnight 1990). In the event a construct does not apply to all elements, and a respondent cannot rate all elements in a set, it is recommended that a researcher should not insist on rating all the elements and, instead, use a middle point as it completes the grade with the least damage for the purpose of the analysis unlike ranking or dichotomous evaluation (Jankowicz 2004).

Once an evaluation method is selected, the question is how to evaluate elements as there are two ways of doing it: one method is to write down a construct and then evaluate all elements, thus moving horizontally across the grid. Another method is to write down all constructs first and then evaluate one element at a time based on all constructs while moving vertically from the top down to the bottom of a grid (Metzler, Gorden and Neimeyer 2002).

Those respondents who rate elements one construct at a time instead of writing down all the constructs and then rating the elements, consider the position that each element takes between two poles of a construct more carefully. This results in a greater number of comparisons and contrasts between the elements thus offering a better differentiation among the elements. In this process, respondents are moving horizontally on the grid as they follow the same row viewing elements one against another and noticing more differences. If respondents write down constructs first and then move vertically down, then they evaluate one element at a time based on the variety of constructs and are more likely to select a middle point rating for evaluating elements (Metzler, Gorden and Neimeyer 2002). Thus, it is recommended that respondents evaluate elements based on one construct at a time – write down a construct first, then evaluate all elements, and move on to developing another construct.

Based on the discussion of these options, to get a better picture of the personal construct system, the study of how the cultural background of customers affects building online trust uses a rating scale method based on a seven-point Likert scale. Respondents are asked to use a horizontal approach while evaluating elements based on one construct at a time.

Although Eden and Jones (1984) and Moynihan (1996) suggested that the most important part of the repertory grid is the constructs solicitation, and that the rating part is not worth the effort, this research uses an evaluation of elements. The aim of the study of the effect of culture on building online trust is to determine what makes a customer trust an online vendor and what features of the web site are of the most importance to the customer. It is not sufficient just to get a list of constructs from respondents. The data should be evaluated to draw valid conclusions about effect of culture on developing online trust.

Since the repertory grid technique was introduced by Kelly in 1955, numerous modifications have been made by researchers. Adjustments were made to both the process itself and to the design of the grid. For example, elements and constructs can be offered to the respondents or solicited from them, either the dyading or the triading method can be used, or respondents are asked to either 'differentiate', 'oppose' or 'contrast' constructs, and various ranking or rating systems can be used to evaluate elements.

Neimeyer, Bowman, and Saferstein (2005) offer three reasons why researchers should understand the consequences of all those changes on their work:

- The reason for using the repertory grid technique is 'to instantiate' (Neimeyer, Bowman and Saferstein 2005, p. 238) the personal construct theory which focuses on the bipolar or dichotomous nature of personal constructs.
- Different repertory grid methodologies might produce different results. If somebody wants to replicate findings then the procedure used in the original study should be followed without any modifications.
- To make a better decision on which modification to use, researchers should evaluate the advantages and disadvantages of each

modification to ensure that the modification meets the purpose of the research and will yield valid results.

Based on the above discussion of repertory grid operationalization options and recommendations for careful adjustments to the technique, the following procedure for the current study is suggested for implementation:

- six web sites as elements are carefully selected and presented to the study participants,
- dyading (comparing two web sites at a time), is recommended for developing constructs,
- a seven-point Likert scale is suggested for rating all six web sites based on personal constructs.

A slight adjustment to the structure of the repertory grid is made as respondents are asked to write an emergent pole in the first column and a contrasting pole in the second column instead of the last column of the grid for the convenience of comparison. While evaluating web sites, it is easier to look at two constructs located closer to each other rather than across a page. A more detailed description of this research design is provided in Chapter 4 Main Study.

3.4.4 Analysing repertory grids

Once all the repertory grids are filled by respondents and collected by the researcher, the analytical stage of the study begins. The unique feature of this method is that it combines both qualitative and quantitative approaches to research as it provides an opportunity for respondents to identify characteristics of an object under study in their own words in a structured way (Alexander et al. 2010; Tan and Hunter 2002). For a researcher it means that the data could be analysed either with quantitative, qualitative, or a combination of quantitative and qualitative methods.

The literature review of studies which applied the repertory grid method identifies at least two qualitative and two quantitative types of analysis commonly used (not necessarily at the same time) in those studies:

- Qualitative analysis is done based on grouping of all constructs into categories. Reviewing the meaning of each category is known as content analysis (Curtis et al. 2008; Goffin, Lemke and Szwejszewski 2006).
- The quantitative approach uses a cluster analysis and a principal component analysis. They are statistical procedures which focus on the count and structure of constructs rather than constructs' content (Tan and Hunter 2002; Curtis et al. 2008).

Content analysis of multiple repertory grids is 'a technique in which the constructs of all the interviewees are pooled, and categorized according to the meanings they express' (Jankowicz 2004, p. 148). Since there is a potential for a researcher bias during the process of grouping constructs into categories (Hassenzahl and Wessler 2000), the assistance of independent reviewers is used to enhance reliability (Ashleigh and Nandhakumar 2007; Tan, Tung and Xu 2009).

While analysing the content of the repertory grid, one has to refer to the overall meaning of the construct as expressed by two poles, emerging and contrasting, together: 'The label on the second pole highlights and defines the meaning provided by the label of the emergent pole' (Feixas, Geldschlager and Neimeyer 2002, p. 3). Only then will dividing constructs into categories be comprehensive and exclusive (not overlapping).

When elements are supplied by the researcher and constructs are elicited from the respondents, valuable information can be gathered by counting how many times the same construct was used by participants to characterize an element thus adding another perspective to content analysis (Jankowicz 2004).

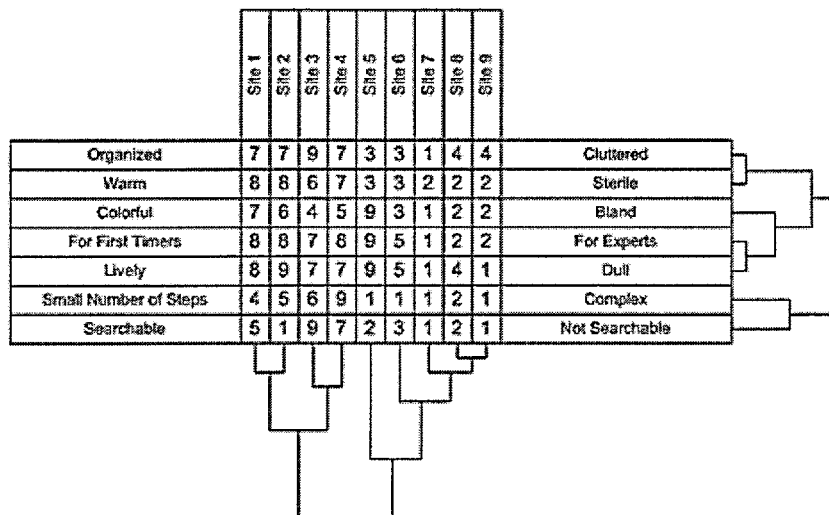
A different type of qualitative analysis of repertory grids was employed by Crudge and Johnson (2007, p. 263) who studied 'mental models' of online search engine users. To analyse how users evaluate those web sites,

researchers used the repertory grid technique. Crudge and Johnson (2007) elicited constructs with a dyading method in which two search engines were compared and contrasted by respondents. Building on Kelly's (1963) theory that all personal constructs have a hierarchy that could be represented as a pyramid with the most important or core constructs on the top of the pyramid, and basic constructs on the bottom of the hierarchy, Crudge and Johnson (2007) categorized all constructs into three groups: basic description (low level constructs describing attributes of elements), evaluative description (middle level constructs reflecting consequences of attributes), and key evaluations (high level constructs showing core values). The basic description group had constructs that were at the lowest level of the hierarchical pyramid: screens and functionality. Evaluative description reflected readability of screens, visibility of items, and the content of the result. The key evaluation group of constructs had the highest level of the core beliefs – more abstract statements reflecting values, such as ease, efficiency, effort, and effectiveness (Crudge and Johnson 2007).

The quantitative approach uses two major methods – a cluster analysis and principal component analysis (Tan and Hunter 2002; Curtis et al. 2008). The cluster analysis is a type of statistical analysis used to review the similarity scores between elements or between constructs. It reveals correlations either between elements or between constructs within a repertory grid. Visually the result of the analysis is presented graphically in a tree structure (a dendrogram) and is known as the 'focus' analysis (Björklund 2005). This method re-arranges constructs and elements in such a way that similarly rated elements and similarly rated constructs are located close to each other and are connected by lines forming a shape of a tree with branches. This structure shows 'the level of statistical similarity' (Easterby-Smith, Thorpe and Holman 1996, p. 18, emphasized in the original). The higher the percentage of a matching relationship between the elements, the more likely they are to share similar ratings. The higher the percentage of a match between constructs, the more likely it is that they discriminate between the elements in a similar way (Dillon and McKnight 1990).

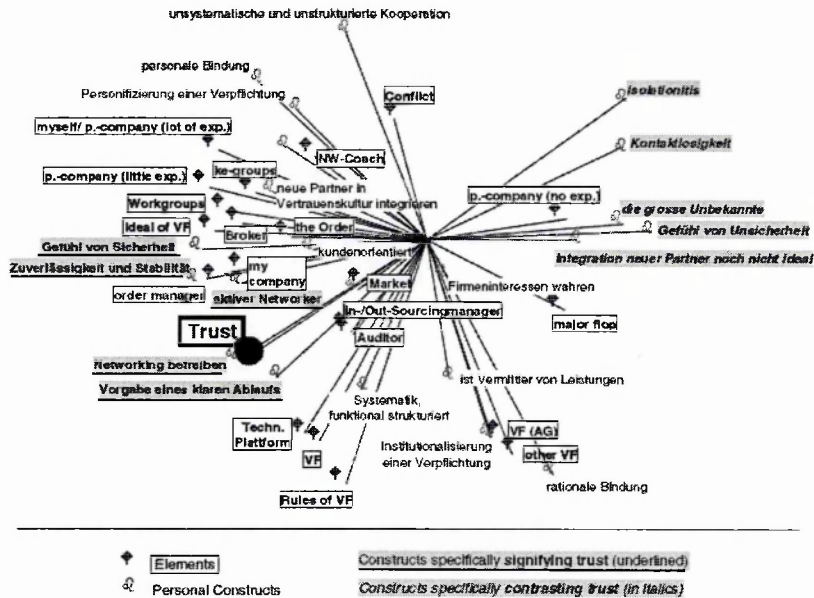
Below is an example of a computer printout of a cluster analysis of a repertory grid form about a customer's experience with the web sites' user interface used by Hawley (2007). Lines that connect rows with constructs show the level of correlation between those constructs and lines connecting columns show the level of correlation between web sites.

Exhibit 3.4 An example of a repertory grid layout with cluster analysis.
(Source: Hawley 2007)



Principal component analysis or spatial analysis takes the cluster analysis further as it shows not only the relationship between constructs or between elements but also the relationship between elements and constructs (Easterby-Smith, Thorpe and Holman 1996). Principal component analysis breaks the repertory grid data into a number of factors that explain more than 80% of its variance (Tan and Hunter 2002). Most grids could be explained by two main factors which could be presented on a graph known as a conceptual map, or concept mapping, or 'subjective meaning space' (Clases, Bachmann and Wehner 2003, p. 14). Below is an example of a computer printout that illustrates perceptions of one of the respondents in the study conducted by Clases, Bachmann, and Wehner (2003).

Exhibit 3.5 An example of a subjective meaning space map.
 (Source: Clases et al. 2003, p.16).



Researchers see two advantages to the use of statistical analysis in the repertory grid technique: it can help identify the most important constructs and it presents the data graphically which is easier to read. Among the disadvantages of using statistical analysis are the following: a graphical presentation does not provide meaning in itself as it still has to be interpreted (Easterby-Smith, Thorpe and Holman 1996). And, although useful in some studies, principal component analysis omits some details while presenting relationships between constructs and elements (Boyle 2005). Even if this weakness in using principal component analysis could be dealt with, there is a bigger issue that relates to the comparison of two grids: 'both elements and constructs must be held constant between the two' (Boyle 2005, p. 185, emphasized in the original). Since this study used the same elements while soliciting constructs from respondents, constructs differ between grids and thus, the principal component analysis is not recommended.

Despite its advantages, statistical methods tend to take a researcher away from the main purpose of understanding a phenomenon in order to process the

numbers. Björklund (2008) warned against the use of too much statistical processing of the data collected with the repertory grid technique. Since the data elicited from the respondents are not linear, and dependent on the specific situation and a respondent's beliefs about online trust, focus on statistical analysis might bias the conclusions. Constructs are very subjective and should be interpreted with great care (Easterby-Smith, Thorpe and Holman 1996).

In addition to the traditional types of repertory grid analysis discussed above, recent studies that used the repertory grid technique as their research method suggested some new ways of analysing the data that are worth considering for the study of consumers' perceptions of web site trust cues.

For example, Tomico et al. (2009) used the repertory grid technique to study the effect of culture on how product attributes are viewed by designers from different cultures. The study was not related to trust research, but its purpose was to learn more about individual perceptions of a product design. A web site could be treated as a product that reflects not only a company's offerings but also its philosophy toward consumers. Keeping this parallel in mind, and abstracting from the specifics of the study, the type of analysis used by Tomico et al. (2009) is worth considering.

Tomico et al. (2009) suggested three categories of content analysis: dominance, importance, and descriptive richness. Dominance shows how frequently the same construct is used by respondents and is measured by a relative percentage of a certain construct used compared to the total number of constructs. Importance is shown by the elicitation order when the constructs that appear first are considered more important to the individual than the constructs listed at the end of the grid. Tomico et al. (2009) defined descriptive richness as 'the range of different personal constructs (attributes) elicited within the same category' (Tomico et al. 2009, p. 57). Those three different aspects of reviewing the data support triangulation, or, cross-examination, of the validity of a study.

Another new method of analysing data solicited with the repertory grid technique was used by Lemke, Clark, and Hugh (2011). Although Lemke, Clark, and Hugh (2011) studied customer perceptions of service quality, not trust, their

work indirectly relates to trust as the correlation of the product quality and trust has been noted before. Researchers reviewed the frequency and variability of all constructs used in the repertory grids to determine which constructs could be defined as key. According to Lemke, Clark, and Hugh (2011), the construct must be listed by at least 25% of the respondents to be considered a frequently used construct. The variability is the range of ratings that the same key construct received from respondents. This same approach to the analysis of constructs was used by Hertzum and Clemmensen (2012) while studying system designers from three countries. This type of analysis provides a basis for comparing perceptions of respondents with different cultural backgrounds.

Comparative analysis is described as 'a strategic method for generating theory' (Glaser and Strauss 2010, p. 21, emphasized in the original). Using this method a researcher collects evidence, then creates categories and illustrates a concept that emerges based on the results of their comparison. Although online trust is an existing conceptual category, it will be analysed from the cultural aspect of an online customer. Those online trust properties that are significant to online customers of one cultural group might not be that important to online customers from another culture, thus giving a rise to new hypotheses in terms of which web site characteristics signal trust to different cultures.

3.5 Reliability and validity of the repertory grid technique

Foreseeing questions about the reliability of repertory grids, Fransella and Bannister (1977) said: 'Given the multiplicity of form, content and analysis for extant grids (and envisaging the many kinds of grid which have not yet been invented) it is clearly nonsense to talk of *the* reliability of *the* grid' (Fransella and Bannister 1977, p. 83 emphasized in the original). Rather than discussing the reliability of a single universal grid, the reliability of the method in terms of its stability and predictability should be evaluated. Ginsberg (1989) supports this view by stating that 'efforts to assess the reliability and validity of grid measures are directly dependent on the theory from which grid methodology is derived' (Ginsberg 1989, p. 431). Kelly's personal construct theory is based on two

major assumptions: (1) people, as scientists, develop constructs which serve as hypotheses about events around them. If those constructs are not validated, then people change constructs, and (2) relations between constructs are organized in an interpretation system that, on the one hand, helps to understand an event but on the other hand, restricts behaviour. Thus, if reliability is understood as consistency, then traditional methods of evaluating reliability are not useful as constructs are constantly adjusted (Ginsberg 1989). For example, since the repertory grid is a qualitative research tool that solicits personal constructs from respondents, it would be impossible to achieve the same stable results with the same constructs prioritized in the same order, or rated in the same way by each respondent. Therefore, it was suggested that researchers evaluate the repertory grid method based on 'whether or not it is an instrument which enables us effectively to inquire into the way in which people maintain or alter their construing' (Ginsberg 1989, p. 431).

As applied to the analysis of qualitative research data in general, reliability reflects the degree to which a research instrument is free from error (Cooper and Schindler 2014) and encompasses 'category reliability' (Sekaran and Bougie 2010, p. 384) and 'interjudge reliability' (Sekaran and Bougie 2010, p. 384). Category reliability is defined as the ability of a researcher to create and define categories and present them to judges (Kassarjian 1977). Judges should be able to use those definitions to classify the data. Interjudge reliability is defined as the level of consistency between different researchers who process the same data (Kassarjian 1977; Sekaran and Bougie 2010). A commonly used measure of interjudge reliability is calculated as 'the ratio of coding agreements to the total number of coding decisions' (Kassarjian 1977, p. 14). Agreement rates of 90% or higher are considered to be satisfactory (Goffin and Koners 2011; Jankowicz 2004). Both category and interjudge reliability checks are applied to the analysis of the data elicited by the repertory grid technique as follows:

- Initial categorization (or coding) is done by a researcher when all the constructs from individual grids are added, reviewed and divided into the groups. Each group has its name and code (for example,

constructs related to the correspondence with the vendor could be categorized as Communication and coded as COMM)

- Independent reliability check is a process completed by a person who is not directly involved with the study. That person analyses and codes constructs in his/her own independent way.
- A reliability table is created in which categories suggested by the researcher are listed as titles of the columns and results of the independent reviewer are listed as titles of the rows. The cell in the intersection of the row and column with similar titles is identified as reliable. 90% is an acceptable level of reliability of categorization (Goffin and Koners 2011; Jankowicz 2004),

The above described process has been found to be a reliable and valid procedure for developing a reliability table for the analysis of a qualitative study (Goffin and Koners 2011; Micheli et al. 2012).

Sekaran and Bougie (2010) suggested that validity in qualitative research could be determined by ensuring the representativeness of cases and the inclusion of deviant cases that might contradict the theory as well as triangulation. Since the study of the effect of cultural background of customers on online trust development is done with the repertory grid technique, all constructs from the respondents' personal construct systems are included in the analysis of findings. As for validity of the method itself, Fransella and Bannister (1977) stated that for research using the repertory grid technique to be valid, the grid should have a number of objects for evaluation that all respondents are familiar with, and those objects should be representative of the set. These two conditions help to effectively reveal trends which reflect the validity of the instrument (Ginsberg 1989).

To ensure the validity of the repertory grid technique in the research of how culture affects online trust development, all respondents were given an opportunity to explore web sites selected for evaluation, and all respondents were familiar with online shopping and submitting private information to online stores. All of the web sites sell the same product and the design of the web sites is typical of the design found on other commercial web sites. Since low

reliability was noted in the studies where different elements were used for eliciting constructs (Gathercole, Bromley and Ashcroft 1970), the same elements (web sites) were offered to all participants.

3.6 Advantages and disadvantages of the repertory grid technique

The repertory grid technique developed by Kelly (1963) as a research method to support his personal construct theory falls under the interpretivism research philosophy. It focuses on exploring psychological processes that people use to make sense of their physical and social environments. It also ties with the symbolic interactionism principle of a grounded theory discussed earlier in this chapter. Previous research revealed that the use of the repertory grid technique offers a more holistic picture of meaning making (Marsden and Littler 2000).

Although the above discussed studies validated the use of the repertory grid technique both in an online and face-to-face environment, this method, as does any academic research method, has its advantages and disadvantages that have to be considered in the study of the effect of customers' cultural background on developing online trust. Based on the reviewed literature, one could expect to deal with the following pros and cons of the use of the repertory grid technique.

The major advantage of the repertory grid technique is that it elicits personal opinions of respondents and allows researchers to get into the internal world of the customers (Ginsberg 1989). It helps to explore how customers view the world around them instead of imposing researchers' own perceptions and views on that world. This method 'identifies perceptions, together with associated feelings and intuitions held about the issue in question' (Björklund 2008, p. 51) as expressed by the study participants; and, as such, it represents an independent and unbiased way of collecting data as a researcher does not interfere with the process of selecting what is important and what is not (Ashleigh and Nandhakumar 2007; Boyle 2005).

Repertory grids are also considered improved questionnaires as respondents use their own wording and experience to identify constructs (Alexander et al.

2010). Although it has a structured approach, it is still open to the perceptions and opinions of respondents (Clases, Bachmann and Wehner 2003). Therefore, richer data can be obtained and some issues or new perspectives on issues can be collected (Alexander et al. 2010; Hassenzahl and Wessler 2000).

The technique is based on the respondents' personal experience, which makes the process more meaningful to respondents (Hassenzahl and Trautmann 2001). As respondents develop and list their own constructs, the social desirability bias (when a respondent makes up answers to look more socially important) is minimized.

Although a repertory grid reflects an individual's view of the world, a collection of grids can be used to analyse perceptions and opinions of a group of people representing a community based on a shared culture (Ginsberg 1989). The method assumes that people in a shared community build their perceptions in a similar way. The experiences that those people have are different but they develop a mental map of the world using bipolar constructs that both define and contrast an object, event, or phenomenon. This extension of an individual grid to the analysis of group constructs is based on the Kelly's (1963) Commonality Corollary which postulates that 'to the extent that one person employs a construction of experience which is similar to that employed by another, his psychological processes are similar to those of the other person' (Kelly 1963, p. 90).

If a collaborative online repertory grid technique is used, then another advantage could be added: the collaborative nature of the repertory grid technique encourages consensus between the respondents in addition to soliciting individual opinions (Heine 2009). When a researcher uses the collaborative online repertory grid technique, respondents can see constructs added by other participants and they can either select the same or add their own. By selecting the same constructs, respondents show agreement with the opinion of others.

The data collected by the repertory grids can be analysed using both quantitative and qualitative methods – anything from a quick descriptive to a detailed statistical analysis. This combination does not contradict, but rather

validates, the data analysis (Alexander et al. 2010; Curtis et al. 2008). However, when it comes to the overall analysis, Björklund (2008) warned against the use of too much statistical processing of data collected by the repertory grid technique.

The literature review reveals several disadvantages of using the repertory grid technique. For example, it was noted that the repertory grid technique has a limited scope because the elements used by respondents are limited, as all elements should be within the range of convenience and respondents' familiarity (Curtis et al. 2008; Hassenzahl and Wessler 2000). The elements should also represent concrete objects rather than abstract concepts (Alexander et al. 2010). One can argue that using a limited number of elements reflects a qualitative emphasis on research that explores new areas rather than research that verifies and confirms already developed theories. The main purpose of this study is to analyse the routine activity of browsing a web site in natural settings while 'attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them' (Denzin and Lincoln 2003, p. 5). A repertory grid technique's requirement that respondents should be familiar with elements actually goes along with the 'natural setting' (Denzin and Linkcoln 2003, p. 4) condition of a qualitative study, as it puts respondents at ease and makes them comfortable sharing personal constructs. A set number of concrete elements can be seen as a restriction in the present study. It is possible that although web sites selected for respondents' review are concrete objects representative of typical designs of online bookstores, all types of trust cues may not be integrated in one web site design. On the other hand, it is possible that some respondents might notice not the presence of, but the absence of, certain cues that signal trustworthiness.

Another limitation of the repertory grid technique as noted by Alexander et al. (2010) and Glaser and Strauss (2010) is that generalizability of the results could present a challenge due to the limited number of elements selected for the research. As a counter-argument, one can refer to the issue of generalizability as a known issue in any qualitative research (Cooper and Schindler 2014; Gordon 2011). Exercising special care while interpreting results of research

findings is a common recommendation to those who conduct qualitative research (Goffin, Lemke and Szwejczewski 2006; Silverman 2010).

The process of constructs solicitation can be tiring and cognitively demanding as respondents have to constantly refer to their mental framework of constructs to evaluate elements (Boyle 2005; Curtis et al. 2008). There is nothing that could be done in terms of finding a way to reduce this mental burden on respondents. A researcher should be appreciative of the efforts that respondents make to contribute to the study.

When the list of all elicited constructs is compiled, it should be categorized based on the researcher's subjective, and possibly biased, opinion (Hassenzahl and Wessler 2000). This limitation has been acknowledged by researchers who have suggested a solution to this problem. They recommended the assistance of independent reviewers while preparing the data for analysis. The reviewers group all of the constructs into categories based on their understanding of the constructs and categories (Ashleigh and Nandhakumar 2007; Tan, Tung and Xu 2009). Jankowicz (2004) described a method of preparing the reliability table to ensure that researcher bias is minimized when working with repertory grids.

Since the data collected from individual grids offer rich insights into a concept of study (Easterby-Smith, Thorpe and Holman 1996; Tan, Tung and Xu 2009), some researchers might be overwhelmed by the challenge of analysing all the data. The perceived disadvantage of having a large amount of data for analysis can be considered an advantage for an exploratory study whose purpose is to find new aspects of a research topic.

As to the use of an online repertory grid, Heine (2009) acknowledged two major disadvantages that are common to any type of online research method:

- There is the challenge of determining the representativeness of the sample.
- As a part of the qualitative research method, an observation of body language is missing.

Heine (2009) also mentioned that regular revision of the constructs used by online respondents in an online collaborative grid could be viewed as a

disadvantage, as the researcher might have to remove inappropriate or profane wording from the database of adjectives created by the respondents.

The above discussion of advantages and disadvantages of this research method, as well as suggestions on how to turn weaknesses into strengths, shows that the repertory grid technique is a good fit to meet the objective of this research. Since the research question focuses on customer's perceptions of online trust, and to what extent cultural background might affect building trust online, the choice of the repertory grid technique as a qualitative research method helps to better understand perceptions of other people. The nature of this research is not to confirm or test an established theory but rather to explore and identify individual perceptions and compare those perceptions across three groups of people. The repertory grid technique is 'designed to investigate a research participant's opinion' (Siau, Tang and Sheng 2010, p. 568) and allows researchers to 'probe deeper' (Tung, Xu and Tan 2009, p.103) into the minds and inner subjective worlds of respondents.

The repertory grid technique deals with two processes at the same time – observation of an event and a system of interpretation that assigns meaning to that event in a specific context (Ginsberg 1989). Since the study focuses on observation of web sites and interpretation of the signals communicating web site trustworthiness, this research method is appropriate for the objective of this study. Although this method is not without its disadvantages, earlier discussion has been shown how some of the disadvantages can be turned into strengths adding to the reliability and validity of the study.

Discussing their experience with the use of the repertory grid technique, Ashleigh and Nandhakumar (2007, p. 614) noted that 'although labour intensive, the Repertory Grid method seems to produce data richness which gives a more in-depth appreciation of trust'. This research method allows researchers to analyse consumers' perceptions of trust from an interpretivist philosophical approach which is why that method has been chosen for this research. As was shown earlier in this chapter, interpretivism reflects the researcher's belief that there could be multiple interpretations of what signals online trust to customers in a specific context.

The study of online trust perceptions elicited from customers of different cultures meets the need for the 'more context sensitive approach' (Bachmann 2010, p. 88) in trust research. Bachmann (2010) argues that trust differs in the way it is produced, what form it takes, and how it is maintained across different cultures. Due to its social nature, trust is linked to culture (Bachmann 2010) and serves as 'a basic social coordination mechanism' (Bachmann 2010, p. 95).

When talking about the use of the mixed-method approach as a step in the right direction toward context-based trust research, Bachmann stated that 'repertory grid-based analyses may be even more effective in fully understanding the role of trust in different (country-specific) cultural and institutional contexts' (Bachmann 2010, p. 104).

The decision to use the repertory grid technique for the research of online trust is also in line with the call for an empirical study that utilizes a methodology which analyses trust from a process perspective and allows a researcher to 'get closer to the respondents' idiosyncratic experiences and interpretations' (Mollering 2006, p. 151).

3.7 Design of the main study

Keeping in mind the theoretical framework and methodological background that were introduced previously, this section presents a description of the research design for the main study. Research as an 'organized inquiry' (Cooper and Schindler 2014, p. 23) follows six steps that are found to be common in any academic study: formulating a research question, identifying a research sample, developing a research instrument and testing it in a pilot study, collecting and processing the data, analysing the data, and reporting research findings.

Following is the description of the research design which is based on the above listed research steps.

- Step One: Research question

The purpose of this study is to explore the nature of online trust cues (universal or culture specific) identified by online customers and the extent to which the cultural background of online customers affects their online trust in an e-vendor. Specifically, to analyse which online cues are identified by customers of different national cultures as signals of trust. Once identified, comparing customers' perceptions of the trust signals embedded in websites helps to determine the role that cultural background plays in customers' decisions to trust an e-vendor.

- Step Two: Research study sample and its size

Since the goal of any qualitative study is 'understanding social reality' (Corbetta 2003, p. 266), and the specific purpose of this research is to explore perceptions of online customers with different cultural backgrounds, the study participants need to be drawn from a population of online shoppers. However, the entire population of online shoppers is not known and cannot be identified; hence, statistical probability sampling cannot be used. Therefore, a purposive sample is chosen for this study. A purposive sample is a non-probability sampling technique that selects study participants based on a researcher's judgment (Saunders 2012; Teddlie and Yu 2007) and is used most often in qualitative studies based on content analysis (Elo et al. 2014).

The aim of this study is to answer two research questions: first, investigate which web site elements online shoppers identify as online trust cues; and, second, to compare those trust cues across three groups of shoppers from different cultures in order to determine whether those trust cues are universal or culture-specific. To meet these research objectives, the purposive sample was based on two criteria: (1) geographical location to ensure that participants of a sample represent the same cultural group and (2) that study respondents have authority to make an online purchase. This study is exploring typical behavior of online consumers in an attempt to analyze their perceptions. Therefore, based on a typology offered by Saunders (2012), a typical case purposive sample fits the study goals.

Finding participants that are representative or typical allows a researcher to make comparisons across several cases (Teddlie and Yu 2007) or, in this study, groups of online shoppers. Since this is a cross-cultural study that had to be conducted in the field, the pragmatic issue of gaining access to participants who agree to contribute to this study had to be considered (Saunders 2012; Sinkovics and Alfoldi, 2012). As qualitative studies in the area of trust research are often very sensitive (Lyon 2012), finding people who are willing to participate is a factor that impacts the design of a study.

After a thorough examination and evaluation of opportunities for selecting study participants, groups of student respondents from Germany, Russia, and the United States who met two above mentioned criteria were identified. As was shown in the pilot project (section 4.1), students comprise a valid sample for this study because they belong to the 'Affluent Millennials' generation of people 18-29 years old who spend more than 40 hours a week online (Kraus and Shulmann 2012) and represent the largest group of online shoppers (Statista).

This approach of using a purposive sample reflects the main objective of a researcher who focuses on covering a social situation and exploring its context as being representative of that situation, 'rather than attempting to reproduce the characteristics of the population in full' (Corbetta 2003, p. 268). This is also in line with Goulding (2005) who stated that researchers engaged in a grounded theory use purposive sampling in which those who can provide information about an event or phenomenon are selected before data collection starts.

To determine the size of a sample from each one of three countries, a review of previously validated studies that used the repertory grid technique was conducted. It showed that researchers collected data from samples ranging in size from six (Dillon and McKnight 1990) to fourteen respondents (Moynihan 1996). On the other hand, 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, Van Rossem and Buelens 2010, p. 430).

Therefore, it is concluded that having at least fifteen fully completed and valid repertory grids from respondents who represent the same culture is sufficient. Although findings from a study with a relatively small sample size present a difficulty in reaching conclusions about an overall population and transferring those conclusions to other situations, 'it is still possible to generalize theoretically' (Saunders 2012, p. 42). Hence, a minimum of forty five respondents (fifteen from each culture) is proposed and the assistance of trained local interviewers is recommended per the validated practice of Hertzum and Clemmensen (2012).

- Step Three: Method of data collection

Based on the discussion of the research methodology offered earlier in this chapter, the repertory grid technique as a tool for a qualitative research study is used to gain insights into customers' perceptions of a web site's signals of trust. As a result of the previous discussion, the repertory grid technique was modified for online research as follows:

A repertory grid is a matrix that looks like a spread sheet as it has columns and rows. The top row is used for listing elements or objects of evaluation. For the purpose of this research, six book web sites are selected as elements. The first two columns of the grid are used to fill in the constructs or characteristics of web sites that describe trust cues as recognized by customers. The first column is for the emerging construct (the characteristic that a respondent notices about a web site) and the second column is for a contrasting characteristic. Based on the construct that a respondent writes while comparing and contrasting two elements, all elements are evaluated on the Likert scale of 1-7 with the seven points assigned to the emergent construct and one point assigned to its contrasting pole.

A list of web sites (elements) selling books online is provided to, rather than solicited from, respondents for evaluation in order to achieve validity and reliability of the research. This approach allows comparing trust cues noticed by

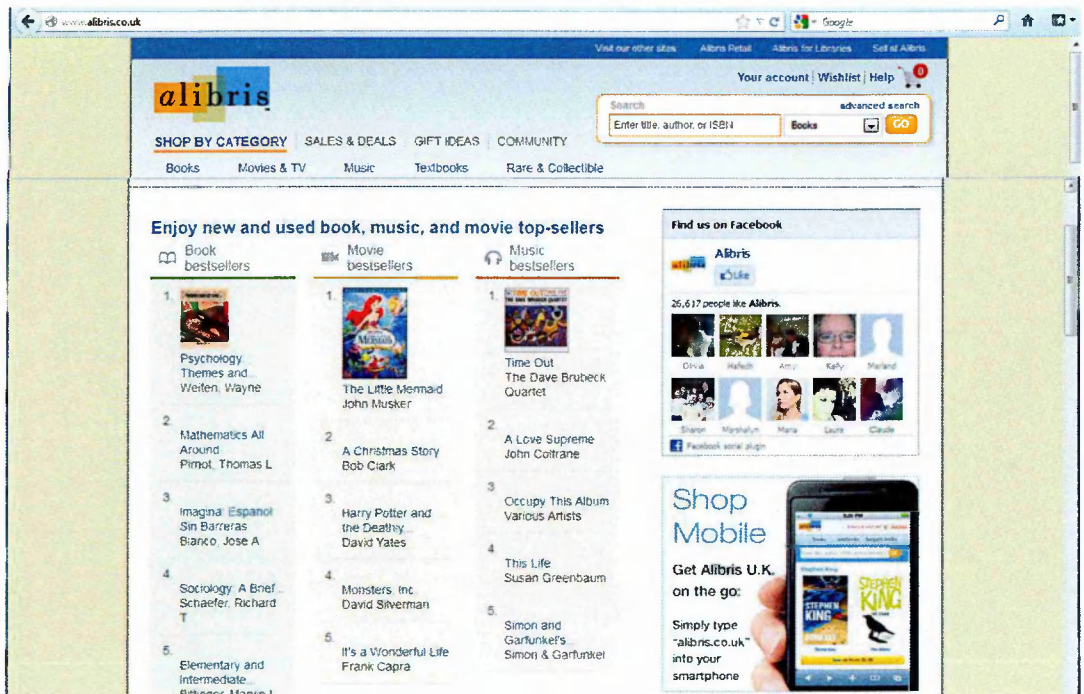
customers of different cultures from the same web sites as it creates a common set of elements (Tan and Hunter 2002).

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

- Book selling web sites were chosen for this study as books are identified as one of the most commonly purchased online products (Moore 2012). Books have been steadily listed as the top online product category. In 2010, 44% of 27,000 respondents in 55 countries in the Nielsen global market research said that they selected books for online purchase (Nielsen Global Consumer Report 2010). The number of people who purchased books online increased in 2011 to 47% (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 and Parsa 2005).
- As gender neutral and 'low price and low touch' products (Gefen, Karahanna and Straub 2003; Chen and Barnes 2007) books are found to be an acceptable product to use for the study of online trust (Chang, Cheung and Tang 2013; Ribbink et al. 2004).
- Books are search products, whose characteristics are known (Lee, Ang and Dubelaar 2005) and do not require physical examination, such as trying on, tasting or touching. They seem to be better for the online trust research as the trust-store patronage relationship 'proves stronger for the search site than for the credence site' (Keeling, McGoldrick and Beatty 2010, p. 798).

The following web sites are offered to respondents for identification of trust cues and evaluation of web sites' trustworthiness:

Exhibit 3.6 Screenshot of Alibris web site's homepage.



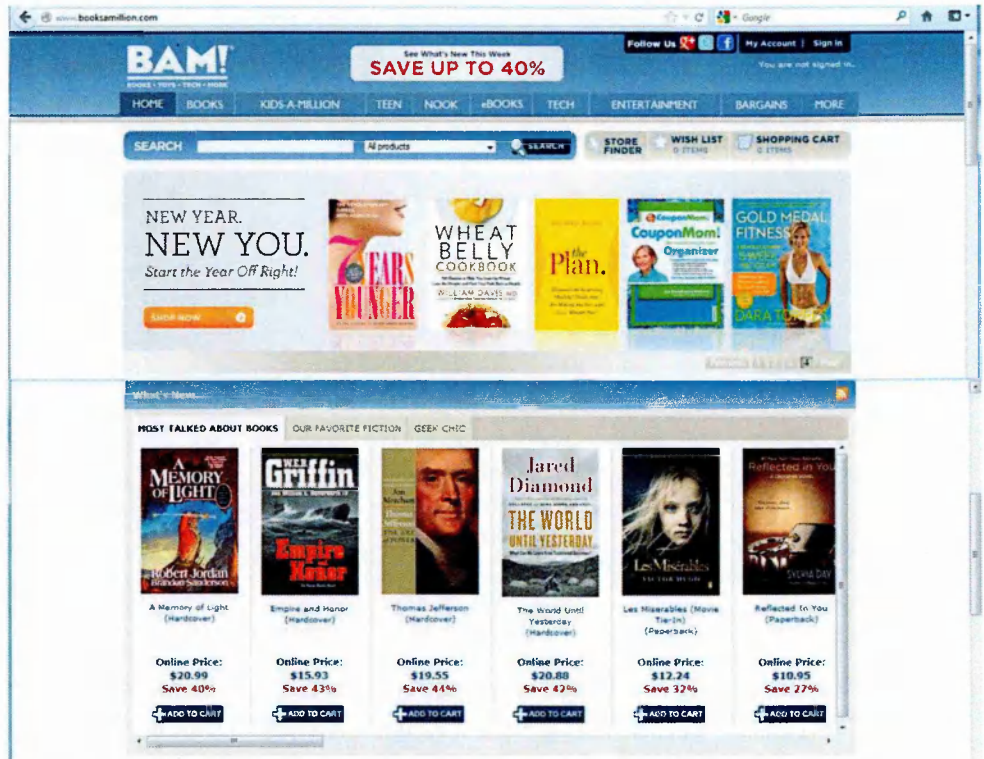
Alibris <http://www.alibris.co.uk> ranked 5/10 by Top Ten Reviews (nd)

Exhibit 3.7 Screenshot of Amazon web site's homepage.



Amazon <http://www.amazon.com> ranked 1/10 by Top Ten Reviews (nd)

Exhibit 3.8 Screenshot of BAM! Books-A-Million web site's homepage



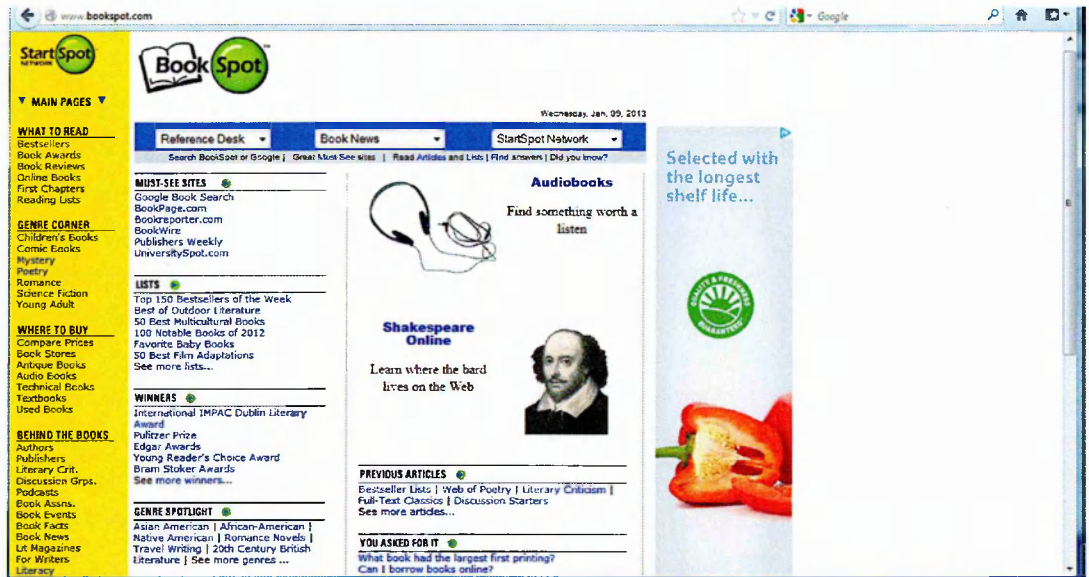
BAM! Books-a-Million <http://www.booksamillion.com> ranked 4/10 by Top Ten Reviews (nd)

Exhibit 3.9 Screenshot of Biblio web site's homepage



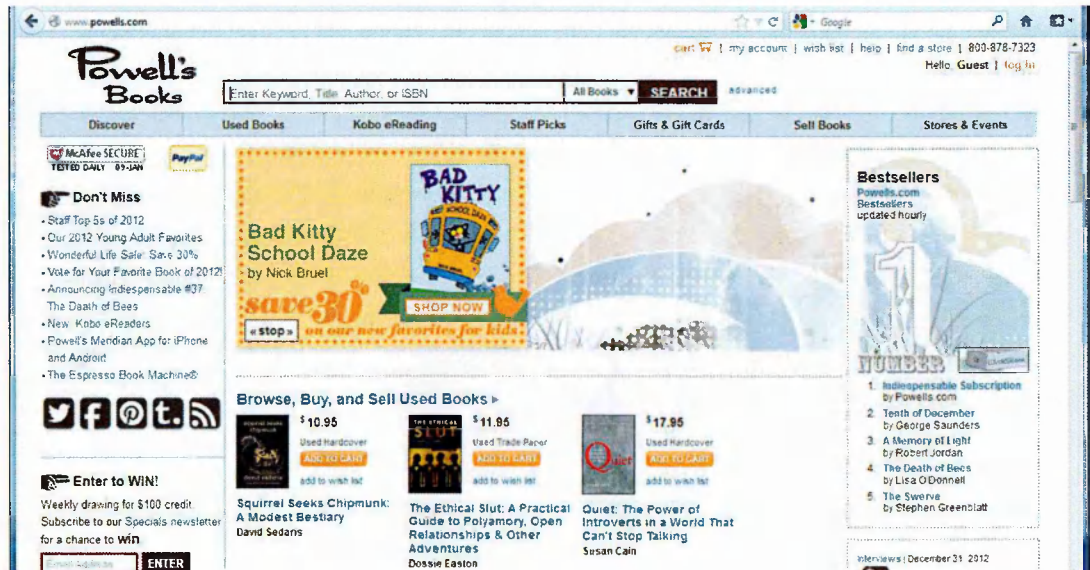
Biblio <http://www.biblio.com> ranked 7/10 by Top Ten Reviews (nd)

Exhibit 3.10. Screenshot of BookSpot web site's homepage



BookSpot <http://www.bookspot.com> did not make to the top ten (Top Ten Reviews nd)

Exhibit 3.11. Screenshot of Powell's Books web site homepage.



Powell's Books <http://www.powells.com> ranked 3/10 by Top Ten Reviews (nd)

These web sites represent a combination of vendors with different degrees of name recognition and ranking. 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 (nd), and one web site was selected out of the range of the top ten. Amazon is the company with the highest ranking (Top Ten Reviews) and Bookspot is the vendor with the lowest ranking as it did not appear on the list compiled by the Top Ten Reviews (nd).

As the result of the earlier discussion about the triading vs dyading methods of soliciting constructs (section 3.4.2 of this thesis), the decision is made that dyading is an acceptable method of conducting a repertory grid, because the purpose of the study is not to show how the construct is built but rather to solicit existing constructs about online trust cues. Fransella and Bannister (1977) explain that Kelly used the triading method to show how constructs are built. If a researcher solicits constructs that are already formed in a respondent's mind, there is no need for the use of three elements; and the triad is not necessary for obtaining a contrasting pole. 'There is nothing sacrosanct about the triad' (Fransella and Bannister 1977, p. 15). Another reason for the use of dyads is that triading is considered to be difficult by some people while developing constructs. It is easier for them to compare and contrast two elements (Easterby-Smith, Thorpe and Holman 1996).

Palmer (1978) brought up another issue in the use of triads - triading could be 'unrepresentative of the dimensions' (Palmer 1978, p. 1148) which might cause some bias in interpretation of personal construct systems. Echoing Palmer (1978), Karapanos and Martens (2008) noted that in their experience, constructs elicited from triads could not be applied to all elements during the evaluation phase of the study. As the result, rating of elements was done based only on one pole of the construct as the other pole was not very obvious to the respondent. The study with the use of a dyading rather than triading method within the repertory grid technique was conducted and validated by Alexander et al. (2010) and Crudge and Johnson (2007). Based on the comparison of two ways of soliciting constructs, participants of this study that explores online trust cues are asked to compare and contrast any two web sites to develop a construct and its contrasting feature.

During the data collection step based on the repertory grid technique, researchers usually give an example that illustrates the process of soliciting constructs or characteristics that define the objects under study. Two types of examples are used to explain to respondents what is expected of them. One type of example is factual (comparing shapes, colours or materials) while other type is personal (comparing personal feelings).

Reeve, Owens, and Neimeyer (2002) studied how the type of example given during the introductory session could impact the nature of the constructs elicited in an interview. They conducted two studies using the same elements (people) in the repertory grid matrix. In the first case, a personal example of a construct such as 'warm and open vs. cold and reserved' (Reeve, Owens and Neimeyer 2002, p. 123) was used, while in the other study a factual example 'tall vs. short' (Reeve, Owens and Neimeyer 2002, p. 123) illustrated the construct. The results showed that those respondents who were given a factual example tended to create more factual constructs, and those who were given a personal example came up with more personal constructs. Their study showed that although the purpose of the repertory grid technique is to solicit constructs developed by each respondent, this subtle way of influencing respondents might affect the building of a concept map (Reeve, Owens and Neimeyer 2002). To avoid this, two examples (one personal and one factual) are used in this research project to show respondents that a wide scope of constructs could be used in evaluating the web sites.

- Step Four: Data collection

A brief summary of the research, expected participation, and intended consent form is distributed online with the assistance of the local interviewers trained in the repertory grid technique. A repertory grid form that listed six websites for evaluation and identification of online trust constructs is provided to those willing to review the websites. The completed forms are returned as attachments. Since, in the majority of cases, the constructs are typed in, respondents cannot be identified by their handwriting. The respondents are asked to use either their native language or English, whichever they prefer. The guidelines emphasized

that grammar and spelling did not matter, as the focus is on developing a construct, not on how linguistically correctly that construct is expressed.

- Step Five: Data analysis

Once all the repertory grids are filled by respondents and collected by the researcher, the analytical stage of the study begins. As the purpose of the study is to examine to which extent the cultural background of the customers affects their online trust, analysis of the data provides trends and/or discrepancies between solicited constructs. A trend analysis shows relationships between different aspects of building online trust. It also reflects if and how culture affects building online trust. This approach is within the set of principles suggested by Goulding (2005) as guidelines to qualitative analysis.

In addition to analysing individual grids submitted by respondents within a cultural group, the repertory grid technique makes it possible to analyse a collective or multi-grid. Following the previously validated procedure for group analysis (Tan and Hunter 2002), all constructs developed by respondents within the same cultural group are compiled into one file and then analysed.

Taking into consideration all the previously validated ways of analysis discussed in section 3.4.4, the following types of analysis are used for this research of online trust cues as identified by customers of diverse cultural backgrounds:

- Construct content analysis and distribution of constructs in categories (all constructs get divided into content groups and those groups are analysed) (Curtis et al. 2008, Goffin, Lemke and Szwejszewski 2006).
- Frequency of constructs used by respondents with the same cultural background (Boyle 2005, Goffin and Koners 2011).
- Comparison of constructs' frequencies between three cultural groups
- Importance of constructs (Fogg 2003, Tomico et al. 2009). Based on the order of the solicited constructs, priorities for different cultural groups are compared and possible trends identified.

- Hierarchical placement of constructs – basic, evaluative or core – identified for each group of respondents and compared across cultures (Crudge and Johnson 2009)

Normally all of the above mentioned types of analysis are applied to an individual grid in one group of participants. Then the results of individual grids are compared to reach a conclusion about a group of respondents. Since this is a cross-cultural study, a comparison should be made not only between individual grids within one group but also between groups of grids. When conducting cross-cultural research that compares data obtained from several groups, a challenge is to aggregate this information from individual into a collective or group grid without destroying the unique characteristics of each individual's construct. Following the previously validated procedure of a 'construct inventory' for the group analysis (Tan and Hunter 2002, p. 9), all constructs developed by respondents within the same cultural group are compiled into one file. Thus, a collective grid is created for each cultural group preserving distinctive constructs and then analysed as if it were an individual grid.

The main challenge of construct content analysis is to objectively review the context of all constructs submitted by respondents and to place the constructs into categories based on their meaning. Since qualitative research produces a large amount of data, coding (assigning constructs to categories) is essential for analysis and data interpretation (Sekaran and Bougie 2010). To overcome this challenge, two independent reviewers are asked to group the constructs into categories, and their results are compared for coding quality control (Ashleigh and Nandhakumar 2007).

- Step Six: Reporting research findings

Reporting research findings involves not only sharing the results but also confirming their validity. Sekaran and Bougie (2010) suggested that validity in qualitative research can be determined by ensuring representativeness of cases and the inclusion of deviant cases that might contradict the theory as well as triangulation.

Since the study of the effect of cultural background of customers on online trust development is done with the repertory grid technique, all constructs from the respondents' personal construct systems are included in the analysis of findings.

Fransella and Bannister (1977) stated that for the repertory grid research method to be valid, the grid should have elements familiar to all respondents and those elements should be representative of the set. To ensure the validity of the repertory grid technique in the study of how culture affects online trust development, all respondents are given an opportunity to explore the web sites and get familiar with the e-vendors in the natural environment of their homes (Tan, Tung and Xu 2009). All respondents participating in the study are familiar with online shopping and submitting private information to online stores. All the web sites sell the same product and the design of the web sites is typical of the design found on other commercial web sites.

Summary

The discussion of research methodology offered in this chapter explained why interpretivism and the inductive approach were selected for the study of how the cultural background of customers affects identification and interpretation of online trust cues embedded in the design of a commercial web site. One of the challenges that this study faces is that it involves examination and comparison of customers' perceptions. It is centred on an individual online shopper but at the same time it is aimed at analysing a group representing a particular culture. Thus, selecting a research method that meets the design and purpose of the study is crucial for its successful implementation.

This chapter offered justifications for selecting Kelly's (1963) personal construct theory and the repertory grid technique as the research methodology for this study. As applied to this study of consumers' perceptions of online trust cues, the personal construct theory (Kelly 1963) suggests that online buyers develop their personal constructs when they compare and contrast web sites while determining which web site to trust and which web site not to trust. Another application of this theory to the study of online trust cues is that, although consumers develop these personal sets of constructs, their individual construct

systems reflect the social context of meanings because people construe their perceptions in a similar way (Easterby-Smith, Thorpe and Holman 1996) as explained by Kelly's 'Commonality Corollary' (Kelly 1963, p. 90).

As a methodological extension of his theory, Kelly (1963) introduced the repertory grid technique as a research method 'of extracting personal constructs in a systematic way' (Hassenzahl and Wessler 2000, p.444). This chapter described the original repertory grid technique as it was used by Kelly and offered a discussion of modern adjustments. Samples of studies in the area of trust and technology where this research method was used showed how the technique could be applied not only to explore personal perceptions but also to identify trends in creating meaning of a phenomena or an object among individuals. A thorough description of the repertory grid method implementation process was offered, including types of data analysis available for a researcher. The discussion of the reliability and validity, as well as the advantages and disadvantages, of the repertory grid technique substantiated the decision to use it for analysing consumers' perceptions of online trust cues.

Based on this chapter's discussion, a study design was suggested that meets the research objective. Exhibit 3.12 summarises the research design developed for this study.

Exhibit 3.12 Research Design Summary (Source: Present author).

<p>Purpose of the study</p>	<ul style="list-style-type: none"> • Analyse which online cues are identified by customers as signals of trust • Compare customers' perceptions of the trust signals embedded in websites
<p>Method of data collection</p>	<ul style="list-style-type: none"> • Repertory grid technique
<p>Research study sample</p>	<ul style="list-style-type: none"> • Purposive sampling • 15 respondents from each of the three different national cultures
<p>Data Collection</p>	<ul style="list-style-type: none"> • Online
<p>Data Analysis</p>	<ul style="list-style-type: none"> • Distribution of constructs in categories • Frequency of constructs • Importance of constructs • Hierarchical placement of constructs
<p>Reporting results</p>	<ul style="list-style-type: none"> • Contribution • Limitations • Implications

Chapter 4 Main Study

Introduction

The literature review of academic research findings that creates a theoretical foundation for this cross-cultural study of online trust cues offered in chapter 2, and a discussion in chapter 3 of epistemology and methodology resulted in a research design that focuses on online shoppers' perceptions of web site trustworthiness. As it has been previously shown, the repertory grid technique was selected as the research method to explore those perceptions. Since the repertory grid technique has never been used before in the study of online trust, it was vital to test, and refine the procedure for collecting the data if necessary, before conducting the main study.

The value of the pilot project cannot be underestimated as its significance is two-fold: first, testing a procedure and protocols before conducting a main study helps to discover any errors in the design and, second, it also provides training for the researcher in conducting a study in a specific environment under specific conditions that differ for each study design (Cooper and Schindler 2014).

This chapter describes the research procedure and protocols completed within the pilot study, discusses its results and lessons learned from it, then moves to the main study. There it presents the sample, data collection, categorization of all constructs, reliability table results, the four types of the analysis used in the study, and concludes with a discussion of the research findings.

4.1 Pilot study and its results

A pilot study was conducted in October-November 2012 to test the proposed design of the main study and review three software programs available for the data analysis (Enquiry Within, Idiogrid, and RepGrid IV). To be able to run a pilot project involving students of one of the private universities located in the Western region of the USA, two preparatory steps had to be completed:

- The researcher had to take an online course on how to meet ethical requirements of the research involving human beings. The course was successfully completed on October 31, 2012 (Appendix 1).
- The research project was reviewed and approved by the participating US university's institutional review board on November 7, 2012 (Appendix 2).

After the research study had been approved, students enrolled in a marketing management class from at a university in the United States were asked to participate in evaluation of six book web sites selected for this study. Graduate and undergraduate students, who have the authority to make an online purchase, were identified as potential participants in the study. Students comprise a valid sample for this study because they belong to the 'Affluent Millennials' generation of Americans aged 18-29 who spend more than 40 hours a week online (Kraus and Shulmann 2012).

The Statistics Portal for Market Data, Market Research, and Market Studies published a chart with a forecast of the age distribution of online shoppers that shows that the largest group (19.5%) of online shoppers in 2012-2016 will be buyers between 25-34 (Statista). American students who are currently over 21 years old will fit both profiles as they are among those who spend more than 40 hours a week online, and they are expected to be among the most frequent online buyers. Since online shopping is based on the individual preferences, and no work experience is required, and since buying online books reflects real life experience, students present a valid sample (McKnight, Choudhury and Kacmar 2002a).

The following six web sites were used in the pilot study as noted by the research design outline in the previous chapter:

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/>

Once volunteers were identified, a brief summary of the research and expected participation, as well as an informed consent form (Appendix 3) were distributed online. All the participants had time to browse the six web sites in preparation for evaluation. The evaluation process was explained to them in a briefing memo (Appendix 4). A blank repertory grid form that listed six websites for evaluation and identification of online trust cues was also provided (Appendix 5).

The basic demographic of participants consisted of sixteen non-traditional students (who take evening university classes designed for the military and their families) who were asked to evaluate web sites. There were eight male and eight female participants. Eleven out of sixteen grids submitted were found usable for a 68.75% response rate. The eleven grids were submitted by seven female and four male students, the youngest of whom was a 21 year old female participant and the oldest was a 43 year old male participant. The eleven valid grids yielded 111 constructs.

The data from those eleven grids were entered into three software programs: Enquire Within, Idiogrid, and RepGrid IV. The three software programs were then compared in terms of the type of analysis available, type of visual analysis outcome offered, and ease of use.

The result of the comparison is presented in the Exhibit 4.1 below.

In addition to comparing these three programs, a fourth, proprietary, program was mentioned by Heine (2009). Dr. Klaus Heine of EMLYON Business School, France, used a traditional application of the repertory grid method for his research (Heine 2009), but conducted a complementary study to explore the possibilities of using an online grid designed specifically for that research. This author contacted Dr. Heine with a request to share his experience about the use of the online grid based on that software. In his e-mail response, Dr. Heine recommended against the use of that particular software as 'outdated' (Heine 2013, personal correspondence).

Exhibit 4.1 A comparison of the software programs

(Source: present author)

Software Feature	Enquire Within	Idiogrid	RepGrid IV
Viewing an individual record with all elements and ratings	No, only constructs for one element at a time can be viewed	Yes, all constructs and elements' ratings can be viewed	Yes, all constructs and elements' ratings can be viewed
Types of analysis available	Cluster Analysis	Cluster Analysis and Principal Component Analysis	Cluster Analysis and Principal Component Analysis
Visual presentation	A dendrogram without numerical or textual data	A dendrogram with numerical and textual data	A dendrogram with numerical and textual data Better visual appeal
Ease of use	Not user-friendly interface Repetitive and multiple steps to enter the data for an individual grid	Medium level of effort is required	User-friendly interface Easy steps for entering the data into an individual grid

Based on the result of the comparison, the RepGrid IV software package was selected for the pilot study and the main study analysis.

In accordance with the research design of the study discussed in chapter 3, two types of analysis were used in the pilot study:

- Construct content analysis and distribution of constructs in categories (Curtis et al. 2008; Goffin, Lemke and Szwejszewski 2006).
- Frequency of constructs used by respondents with the same cultural background (Boyle 2005; Gofin and Koners 2011).

Preparation for construct content analysis involved two steps, the core categorization and the reliability check as described by Jankowicz (2004). For the first step (core categorization procedure), all 111 emergent constructs were combined into one file which was reviewed by the researcher and two independent reviewers, AEB and JGB. The researcher and independent reviewers grouped all the constructs into categories based on their understanding of meanings expressed by those constructs. All three people worked independently and their efforts produced the following results: the researcher came up with eleven categories, independent reviewer AEB identified eight categories, and independent reviewer JGB developed seven categories.

After an initial review of all categories suggested in the three reviews and a brief analysis of the overall picture, the researcher performed a reliability check. The process started with coding all the constructs for easy identification. The code comprised of the respondent's initials and the number of the construct. For example, a respondent AM had submitted 10 constructs, which were marked as AM01, AM02, AM03,..., AM09, and AM10. An Excel worksheet was created to compare results of categorization done by the two independent reviewers and the researcher.

The next step was to calculate how many constructs fell within the same category. For that purpose, construct codes were replaced by numbers that showed the total number of constructs in a cell.

As per the reliability check process (Jankowicz 2004), an agreement percentage was calculated as follows:

The number of constructs placed in identical categories:

$10+4+14+6+3=37$ was expressed as a percentage of all the constructs in the table:

$$37/111 \times 100\% = 33.33\%$$

A discussion of the results and clarification of definitions of categories as suggested by the researcher and one reviewer AEB revealed that a better fit would result from the use of twelve categories. The list was modified as follows: security, privacy, assistance, contact, transparency, ease of use, guarantee, perception of quality, design, services, sales, and reputation. A 100% agreement was reached on using those twelve categories for grouping 111 constructs. The first reliability check was finished.

After a full agreement had been reached with the first independent reviewer, a discussion with the second reviewer, JGB, was held to conduct the same type of reliability check. A new table was created using the twelve categories developed from the earlier consensus between the researcher and the first reviewer AEB. Those categories were listed in the first column of a matrix. The second reviewer JGB's categories were listed along the top row as illustrated in Exhibit 4.2.

Based on the definitions of categories provided by the second reviewer JGB and discussion of constructs, it became clear that the second reviewer JGB tried to use a broad approach to categorization. For example, that reviewer's category titled 'Trustworthy' was defined as 'Security and privacy, protection, good credentials that make me believe that I can rely on the company to do business online' and 39 out of a total 111 constructs (35.14%) were placed in that category. After a discussion of all constructs and interpretations of their meanings, the researcher and the second independent reviewer JGB considered the twelve categories that had been agreed to by the researcher and the first reviewer AEB. The table below illustrates the result of the final reliability check: highlighted cells on the diagonal of the worksheet showed the number of constructs in categories that were considered synonymous in meaning.

Exhibit 4.2 Final reliability check of codes in the pilot study.

(Source: present author)

Tonya and AEB	JGB	Security	Privacy	Assistance	Transparency	Contact	Ease of use	Guarantee	Perception of quality	Design	Services	Sales	Reputation	Total Tonya and AEB
Security		10												10
Privacy			5								1			6
Assistance				4			1							5
Transparency					8					1				9
Contact						2								2
Ease of use							15			1				14
Guarantee								9						9
Perception of quality									10					10
Design						1				9				10
Services											9			9
Sales								1					17	18
Reputation										1			8	9
Total JGB		10	5	4	9	3	14	9	18	10	9	17	8	111
Formula		10	5	4	9	3	14	9	18	10	9	17	8	111

The number of constructs placed in synonymous categories was calculated:

$$10+5+4+8+2+13+9+10+9+9+17+8=104$$

The reliability check was expressed as a percentage of the number of constructs placed in synonymous categories to the number of all the constructs in the table:

$$104/111 \times 100\% = 93.69\%$$

Thus, the final reliability check yielded 93.69% agreement between three reviewers and twelve categories of constructs were accepted for the content analysis.

After the preparation for construct content analysis had been completed, the frequency of constructs' usage was calculated as a per cent of all constructs within a specific category to the number of all constructs solicited from the respondents. Although it is recommended that categories with less than 5% of

the constructs in them be eliminated and re-arranged (Jankowicz 2004), the researcher decided to analyse all categories as proposed by all three reviewers. Analysing all categories (even those that had only one or two constructs), provided a more holistic picture of the initial reaction to a certain web site's characteristic that affected online trust.

The most frequently used constructs appeared in the 'Sales' category (pricing and types of a product, for example). Since the main purpose of online shopping is to purchase an item from the convenience of home, one should not be surprised to see that respondents evaluate a web site based on what type of a 'deal' they can get.

'Ease of use', 'Perception of quality', 'Security', 'Design', 'Transparency', and 'Guarantee' categories were identified as the top categories.

The result of the final calculation of the frequency of constructs is illustrated in Exhibit 4.3 below.

Exhibit 4.3 Frequency of constructs in categories

Category	Definition	Number of constructs	%	Ranking
Sales	Pricing, promotions and variety of books that are competitive within the industry	17	15.32%	1
Ease of use	Design and layout that allows a customer to complete a transaction easily	14	12.61%	2
Perception of quality	Design is professional, inspires confidence	13	11.71%	3
Security	Protection of the product selection and payment processes	10	9.01%	4
Design	Layout, colours, fonts and professional images of products	10	9.01%	4
Transparency	Company is open with information on itself and policies	9	8.11%	6
Guarantee	Company stands behind its policies that reduce shopping risks	9	8.11%	6
Services	What a company provides to facilitate a shopping experience and make it pleasant	9	8.11%	6
Reputation	Reflects company's integrity and popularity	8	7.21%	9
Privacy	Protection of a customer's personal information	5	4.50%	10
Assistance	Help with technical or product related issues	4	3.60%	11
Contact	How to contact a company representative for assistance or guidance	3	2.70%	12
	Total	111	100.00%	

The pilot project helped to evaluate the operationalization stage of the main study. It tested not only the repertory grid technique as the research method but also provided preliminary data to evaluate three computer software programs for the use in the data analysis.

A couple of adjustments were made to the main study design based on lessons learned during the pilot project:

- The blank grid form designed for the pilot project had ten rows. It seems that students felt they had to fill in all the rows. That attitude elicited an identical number of constructs per person. Clarification was needed to stress that the number of constructs depends on however many characteristics respondents could identify. There is no particular number of constructs that should serve as a goal.
- During the rating stage of the pilot study, respondents should be directed to use the maximum number of points (seven) for an element that is closest to an emergent rather than implicit pole. Since the emergent pole is the one that seems to be more noticeable or prominent, it should be assigned the highest score.

Some other observations from the pilot project are worth mentioning:

- Some grids were filled in by hand, scanned and submitted. Those were not always easy to read; however, asking all respondents to type in their observations might place some of them outside of their comfort zone.
- Respondents commented on the fact that they never really considered evaluating a web site they use to make a purchase but rather went with their 'gut' feeling and intuition.
- Further data analysis, especially during the main study, could provide a better picture of the priorities that online shoppers have in terms of recognizing trust signals.

Overall, the pilot project proved that it is possible to collect data online as long as there is a group of respondents who are willing to put time and effort into this process. The method itself worked well to collect rich data. The results of the

pilot project proved that the repertory grid technique met the objective of this research as it helped to understand consumers' perceptions of online trust signals that commercial web sites use to attract customers.

After the completion of the pilot project, the main study was conducted to explore the role that cultural background of online shoppers plays in identifying and interpreting online cues that signal trust. The following section describes the main study from the initial stage of collecting the data to its final stage of analysing the data based on the repertory grid technique discussed in chapter 3 of the thesis. The main study followed the research design discussed at the end of chapter 3 and incorporated the lessons learned from the pilot project described above.

4.2 Main study sample and data collection

The goal of this study was to use explore perceptions of online trust cues recognized by buyers with different cultural backgrounds. Since the entire population of online shoppers is not known and cannot be identified, statistical probability sampling cannot be used. Typical purposive sampling rather than statistical sampling was suggested in the research design (see section 3.7). Students of a private university in the western region of the USA, a vocational college in a northern region of Germany, and volunteers among students in three Russian cities (Khabarovsk, Moscow, and Saint Petersburg) were asked to participate in this study of online trust. Students in the American and German colleges represented different geographical areas within their native countries, and, since Russian students are not as mobile as their foreign counterparts (Hatova 2013), an effort was made to select participants from different Russian locations to match the structure of the other two samples. The participants from each country were raised in that country and are still residing there. On this basis, respondents could be considered 'valid representatives of their country' (Hertzum and Clemmensen 2012, p. 29).

Local interviewers in two locations - Germany and Russia - were asked to assist with data collection. To ensure that the procedure was properly followed, these

local interviewers received a set of instructions, followed by phone and online training. The use of the Skype software program with the 'share desktop' option allowed a demonstration of how two web sites could be reviewed and observations written down on a repertory grid. In follow-up sessions the local interviewers explained how they understood the procedure and then completed practice grids to ensure consistency of data collection. The local interviewers met with study participants in different locations and elicited constructs based on the training received from the researcher. This type of data collection had been previously validated by Hertzum and Clemmensen (2012).

Based on the earlier discussion of the repertory grid technique in section 3.4, and lessons learned from the pilot project discussed in section 4.1, some modifications to the original repertory grid were made. For example, an emergent construct (a characteristic of a web site's trust cue identified by a participant as the most noticeable characteristic or trust cue) was placed in the left column of the form and its contrasting feature was described in the column next to it. This design made developing constructs easier than having the contrasting pole located on the far right side of the form.

A seven point ordinal scale was used to evaluate elements based on the constructs developed by the respondents. An emergent construct was valued at a maximum of seven points while the contrasting construct was worth one point. Similar modifications were made and validated by Hertzum and Clemmensen (2012). Per validated practice of Crudge and Johnson (2007) and Curtis et al. (2008), respondents were encouraged to provide additional comments to better express their perception while answering two questions: 'Why is it important for you?' and 'What did you mean by...?' whenever it was possible. Based on the constructs listed by the respondents, all six web sites were evaluated.

Since online shopping is based on individual preferences, for which no work experience is required, students present a valid sample (Chang, Cheung and Tang 2013, McKnight, Choudhury and Kacmar 2002a). Buying online books is a real life student activity and allows researchers to study online consumer behaviour in a natural environment. 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. The use of English was not mandatory. The respondents were told that grammar and spelling did not matter for the purpose of this study. Participants did not have any incentives (financial reimbursement or academic credit) to contribute to the study. They volunteered their time and effort as they got interested in the topic of the research.

The basic demographic of all participants is presented in the table below:

Exhibit 4.4 Demographics of the respondents in the main study

Age group	American participants		German Participants		Russian Participants	
	Male	Female	Male	Female	Male	Female
18-19 years old	0	0	9	0	2	3
20-25 years old	1	5	11	2	2	12
26-30 years old	4	4	4	0	0	0
31-35 years old	4	0	0	0	0	0
36-39 years old	1	2	0	0	0	0
40+ years old	0	1	0	0	1	0
Total	10	12	24	2	5	15

A repertory grid form that listed six websites for evaluation was provided to those who agreed to participate. As mentioned in the Methodology chapter, the number of elements in a grid is usually less than ten (Crudge and Johnson 2007; Easterby-Smith, Thorpe and Holman 1996; Hassenzahl and Trautmann 2001). Dyading was selected as an acceptable method of soliciting constructs for the repertory grid (Easterby-Smith, Thorpe and Holman 1996, Fransella and Bannister 1977): respondents were asked to compare and contrast any two web sites out of the six selected for the study and to develop a construct and its contrasting feature as a result of this comparison.

Constructs were expressed either in the form of one word, a phrase or a complete sentence, whichever came naturally to the respondent and was most

convenient. Once a construct had been created, all six web sites were evaluated based on that construct. Then the participant moved on to develop another construct as per the procedure validated by Metzler, Gorden, and Neimeyer (2002) and discussed in section 3.4.3.

To analyse online shoppers' perceptions of trust cues displayed on a web site, five web sites selling books were carefully chosen for respondents' evaluation. A sixth web site was added as a control web site because it compares prices but does not sell books (Bookspot). It was added to ensure that respondents pay attention to what they evaluate. The web sites had different levels of brand recognition: Amazon was the most frequently recognized brand name while others (Alibris, Books-A-Million, Biblio, and Powell's Books) were not necessarily well known to respondents in the United States, Germany or Russia. These are the same web sites that were used in the pilot study described earlier in this chapter. A repertory grid matrix with a list of six web sites was prepared and distributed to the participants. Since online shopping is usually done from the comfort of one's home using a computer that one is familiar with, respondents reviewed web sites from their own locations which created a natural setting for this study. Completed grids were returned as attachments. Overall, sixty eight respondents from the three countries returned grids containing a total of 427 constructs. The number of participants exceeded expectations as the research design proposed that fifteen people from each cultural group submit results of their observations. Exhibit 4.5 displays the breakdown of constructs across the three samples.

Exhibit 4.5 Number of constructs collected for the main study.

	USA sample	German sample	Russian sample
Number of participants	22	26	20
Number of constructs elicited	140	188	99
Average number of constructs per participant	6.36	7.23	4.95

As was noted earlier, the RepGrid IV software had been selected for this research (section 4.1). However, between the time of the pilot project and the main study, an upgrade to the software had been made. A newer version, RepGrid V, was used for the main study. In preparation for the analysis, the data for all individual repertory grids were entered into the RepGrid V software. First, each repertory grid was reviewed using both a qualitative and quantitative approach to better interpret the personal perceptions of the online shoppers to get an overall picture of constructs used by the study participants. After all seventy grids had been individually analysed, a collective grid for each country was created (see section 4.3) as per the validated practice of Tan and Hunter (2002).

Exhibit 4.6 below shows one of the individual repertory grids used in this study. It was completed by a German respondent FP and is used to illustrate a computer printout of an individual record.

Exhibit 4.6 A sample of an individual grid used in the study

(RepGrid V)

Different forms of payment	1 1 5 5 1 6	Only credit card
Shipping rates are all inclusive	2 1 1 1 1 7	Shipping price is per item or weight
Free return policy and you get the whole refund back	6 2 4 3 1 2	Returning must be paid and refund is less than price paid
Product pictures	3 5 2 2 1 2	No product pictures
Log-in security by SSL	7 7 7 7 1 7	Signing-in not available
Order status can be seen, can track the shipping	7 7 5 5 1 7	No order status, tracking the shipping not available
Description and extract of the book is available to read	5 6 4 5 1 2	No extracts, no description
Website design is easy to use	6 5 7 4 1 7	Complicate using
		Powell's Books
		Bookspot
		Biblio
		BAM! Books-A-Million!
		Amazon
		Alibris

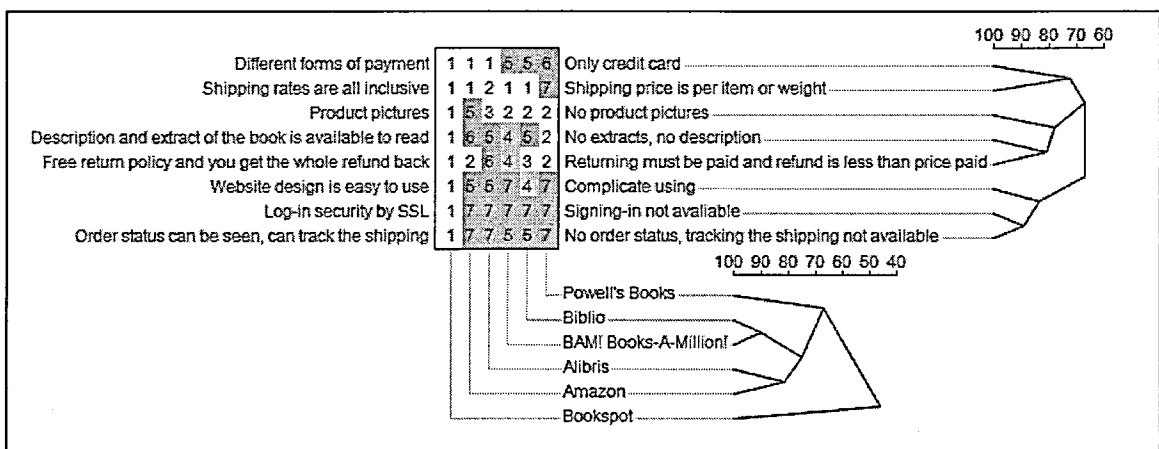
An overall view of an individual grid showed a list of constructs and a range of meanings extracted by each respondent from comparing and contrasting web site elements that signalled an e-vendor's trustworthiness. This type of an 'eyeball analysis' (Jankowicz 2004) was a part of the qualitative approach to interpreting the data.

The RepGrid V software had the option to run a cluster analysis in order to review the similarities scores between elements or between constructs (Curtis et al. 2008). The similarities scores for elements are based on the evaluation numbers that appear in a column for each element, while similarities between constructs are found by analysing the numbers that appear horizontally as the scores for constructs appear in rows of the repertory grid matrix. Visually the result of the analysis is presented graphically in a tree structure (a dendrogram) and is known as the 'focus' analysis (Björklund 2005).

The Focus Display option of the RepGrid V software re-arranges constructs and elements in such a way that similarly rated elements and similarly rated constructs are located close to each other and are connected by lines forming the shape of a tree with branches. The values are presented on a scale 0 – 100%. The higher the percentage of a matching relationship between the elements, the more likely they are to share similar ratings. The higher the percentage of a match between constructs, the more likely they are to discriminate between the elements in a similar way (Dillon and McKnight 1990). Below is an example of a computer printout for the cluster analysis of a repertory grid completed by German respondent FP for this study.

Exhibit 4.7 A sample of the cluster analysis printout

(RepGrid V)



Observations of clusters or groupings for each record helped to confirm initial interpretations of respondents' personal constructs and what web site elements

signal a vendor's trustworthiness. For example, 'Free return policy and you get the whole refund back' (German respondent FP, construct FP03) and 'Description and extract of the book is available to read' (German respondent FP, construct FP07) were shown as statistically correlated (see Exhibit 4.7). This could be explained by the fact that if a buyer does not have an opportunity to read an abstract from a book, but still decides to take a risk and buy it online, that buyer wants to have some guarantees for receiving money back in case the book is not what the customer expected.

This review of each individual repertory grid based on statistical analysis, along with the content interpretation, offered rich data for the analysis of all constructs. However, since the research objective for this study was to explore customers' perceptions rather than statistically validate previous findings, the individual grids were combined in collective grids and reviewed only from the qualitative perspective explained in section 3.7 of this thesis.

4.3 Results and data analysis

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 multi-grid, 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 analysed.

In preparation for the data content analysis, two steps were completed: core categorization, and a reliability check. For the first step – the core categorization procedure - all emergent constructs from participants of each country combined into one file, were reviewed for the purpose of grouping similar constructs into categories (Curtis et al. 2008). This process was completed by three people; by the researcher and two independent reviewers. Neither of independent reviewers had studied trust. One reviewer was a retired English writing teacher and another reviewer was a retired assistant professor of humanities. Both reviewers provided their own objective evaluation of the constructs meanings.

The researcher and two independent reviewers worked separately, grouping all of the constructs into categories.

Once all the constructs were assigned to categories, a reliability check for each sample was performed based on the technique described by Jankowicz (2004) and validated by Goffin and Koners (2011) and Micheli et al. (2012) among others. Reliability tables were prepared for comparing groupings as suggested by the researcher and one reviewer (a table with 13X7 cells for Germany, 14X6 for Russia, and 17X9 for USA) and then by the researcher and the second reviewer (a table with 13X13 cells for Germany, 14X13 for Russia, 17X18 for USA). The researcher's categories were listed in the first column while the reviewer's categories were listed in the first row. Codes of constructs used in categories were placed in the cells where a category's column and row intersected. The number of constructs in the categories which were identical or very similar were counted and calculated as percentage of all elicited constructs. For a detailed description and illustrations of this procedure refer to the pilot study discussion in section 4.1 of this chapter.

The initial agreement rate for the American sample between the researcher and the first reviewer was 60.0% while the initial agreement level between the researcher and the second reviewer was 63.57%. The researcher and independent reviewers then discussed definitions, which led to development of additional categories and re-categorization of the constructs until a 93.6% agreement was reached. As a result, 14 categories were used to analyse 140 constructs submitted by American participants: ease of use, sales, guarantees, reputation, design, physical location, scalable, security, customization, customer feedback, company information, customer support, services, and social media.

The same process was repeated for the German and Russian samples. The initial agreement percentage for the German sample was 46.28% with the first reviewer and 69.15% with the second reviewer. After discussion, a 92.6% agreement level was achieved wherein 188 constructs submitted by German participants were divided into 14 categories: ease of use, sales, customer feedback, ease of payment, design, services, reputation, language, customer

support, guarantees, security, delivery, company information, and social network.

For the Russian sample, the initial agreement percentage was 46.46% with the first reviewer and 69.69% with the second reviewer. A 94.9% agreement rate was reached after several discussions among all three parties. As a result, fourteen categories were used to analyse 99 constructs: company information, customer feedback, customer support, customization, delivery, design, ease of use, guarantees, language, location, reputation, sales, social network, and transparency.

As the agreement rate higher than 90% has been found to be acceptable (Goffin and Koners 2011; Jankowicz 2004), this categorization of constructs in all three samples is valid. Coincidentally, the number of categories for each group of study participants was the same, although the labels and definitions differed.

After categorization was completed, the analysis of the contents of the solicited grids began. As suggested by the research design described in section 3.7, content analysis used in this study was based on the distribution of constructs in categories (Curtis et al. 2008; Goffin, Lemke and Szwejszewski 2006), frequency of construct usage (Boyle 2005; Goffin and Koners 2011), importance (Fogg 2003; Tomico et al. 2009), and hierarchical placement of constructs (Crudge and Johnson 2007). These four types of analysis were used to triangulate the exploratory findings of the main study.

4.3.1 Distribution of constructs in categories

The first type of analysis focused on the distribution of constructs in categories (Curtis et al. 2008; Goffin, Lemke and Szwejszewski 2006). Exhibit 4.8, Exhibit 4.9, and Exhibit 4.10 show the number of constructs by category. The most frequently used constructs from all three countries are found in the following three categories: 'Design', 'Sales', and 'Ease of Use', in this order of significance for all three samples.

Exhibit 4.8 Constructs' categories and frequency in the USA sample.

Category	Category definitions	Number of constructs	% of the total number of constructs
Design	Layout, colours, 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%

Exhibit 4.9 Constructs' categories and frequency in the German sample

Category	Definition	Number of constructs	% of the total number of constructs
Design	Layout, colours, 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%

Exhibit 4.10 Constructs' categories and frequency in the Russian sample

Category	Category definitions	Number of constructs	% of the total number of constructs
Design	Layout, colours, fonts, images, and tools used on a web site	29	29.29%
Sales	Pricing, promotions and variety of books that are competitive within the industry	24	24.24%
Ease of use	User-friendly layout that allows a customer to find a product and complete a transaction easily	19	19.19%
Customer feedback	Web site's ability to solicit and display customer opinions about their experiences dealing with the company	7	7.07%
Guarantees	Company stands behind its policies that reduce shopping risks: product guarantees, return policies, after-sales assistance	4	4.04%
Social network	Easy accessible links to social networks from the web site	4	4.04%
Delivery	Shipping information about delivery options, times, and prices	3	3.03%
Customer support	Availability of and access to customer services, help with technical or product related issues	2	2.02%
Location	Company's physical presence	2	2.02%
Reputation	Public opinion about a company and quality of its products and services	1	1.01%
Company information	The web site displays company's goals, history, address, phone numbers, e-mail address	1	1.01%
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	1.01%
Language	The web site uses a buyer's native language - either via a separate web site or offers a translation tool	1	1.01%
Transparency	Public display of a web site's purposes	1	1.01%
Total		99	100.00%

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 colours, 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 described in section 2.5, and the findings of the Fogg et al. (2003) research on how online customers evaluate a web site. In their study, 46.1% of all comments related to the appearance of the web site (Fogg et al. 2003). Although in this study the percentage of the comments related to the design look of a web site was not as high (25.71% in the USA sample, 18.62% in the German, and 29.29% in the Russian sample), this category of constructs holds the top place in all three countries. As shown by previous research (Chen et al. 2010, Schlosser, Barnett White and Lloyd 2006), the web site's design reflects a company's investment in it, and indicates a company's commitment to e-commerce. The web site design not only offers aesthetic appeal but 'signals that a firm's ability can be trusted' (Schlosser, Barnett White and Lloyd 2006, p. 144). This investment is rewarded, as the design features of the web sites were noted by all respondents. However, the degree of prominence differs: the Russian respondents reacted better to the design features (29.29%) than did the German customers (18.62%).

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. This finding aligns with the results of the Nielsen Global Survey (2013) which showed that 57% of Russian consumers consider price to be an issue and 66% are willing to shop around for a better price or discount.

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.

The popularity of this category was expected based on the Technology Acceptance Model (TAM) developed by Davis (1989). The TAM theory states that the willingness to accept and use new technology is based on its perceived usefulness and perceived ease of use. In this case, it is the ease of use that is being emphasized by the respondents of all three countries. The perceived ease of use was defined by Davis (1989) as 'the degree to which a person believes that using a particular system would be free of effort' (Davis 1989, p. 320). And, indeed, the 'Ease of Use' category included comments like 'A simple and easy navigation supports enjoying the website while searching and ordering' (construct JM08 in the German sample), 'Web site navigation is easy and simple' (construct TK01 in the Russian sample), 'Ease of maneuverability through website' (construct MA03 in the American sample).

This fact that respondents noticed the ease of using a web site could also be due to the type of the design interface. If the design of the web site is typical for the industry and online retailers, then consumers feel comfortable in that environment and treat it as typical and standard, providing 'situational normality' (Gefen, Karahanna and Straub 2003, p. 64). This assurance of a standard situation makes customers believe that a transaction will be successful (Gefen, Karahanna and Straub 2003). Previous studies showed that the ease of web site navigation reflects a web site's usability and is found to be one of the antecedents of online trust (Chen and Dibb 2010; Zhu et al. 2009). This research supports those conclusions.

Since the main purpose of online shopping is to purchase an item from the convenience of home, one should not be surprised to see that respondents evaluate a web site based on how easily and quickly they could find a good 'deal' for the product they sought.

Although there were other common categories found across all three samples (customer support, customer feedback, guarantees), those categories were not identical and reflected cultural differences in either importance, frequency or

meaning. There were also categories that were not listed in all three samples. For example, content analysis of groupings revealed that the 'Security' category does not appear in the Russian sample. There could be three possible explanations for that:

- Russians have been relatively recently introduced to online shopping and not all of them understand risks of virtual shopping (Hawk 2002)
- Russian 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 the security of their operations. Furnell, Tsaganidi, and Phippen (2008) also concluded that the majority of Internet users, especially novices, believe that companies that offer online products are responsible for computer security.
- Security of transactions was not found to be a determinant of online trust (Bart et al. 2005) and results of comments received from the Russian respondents support these findings. Related to security is the presence of trusted third party seals of approval that assure the security and privacy of transactions. Although the trust seals are designed to promote a company's compliance with security transactions within an industry, Kimery and McCord (2002) did not find a correlation between consumers' trust in online merchants and the presence of a third party assurance seal on the web site.

The 'Language' category does not appear in the USA sample as all the web sites were in their native language; 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)' from German

respondent CB, construct CB03, and 'No Russian language support' from Russian respondent MI, 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' from Russian respondent TK, 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.

A reference to the store's physical presence was found in the Russian and USA samples but not in the German sample. 'Availability of a complete physical address of a store and even several offices in different regions' (construct KM02 in the Russian sample), 'Store location in my home town' (construct HL02 in the American sample), and 'Has a real, brick-and-mortar address' (construct SH07 in the American sample) indicate that some customers still feel more comfortable with stores that have both a traditional and online presence. This could be explained by the fact that the physical presence of a store addresses the intangibility issue of an online retailer: if there is a brick-and-mortar store, a customer knows that it is real and there are people who you can talk to if there is an issue with a product, payment or delivery. Even though customers provide personal and financial information online, the physical existence of a store reduces apprehension (Zwarum 2007).

The 'Reputation' category had constructs directly describing public opinion about a company: how a company takes care of its customers, what quality of products and services it offers, and whether customers recognize its brand name (Chang, Cheung and Tang 2013). Since Amazon is ranked as the tenth most recognized brand in the United States, and is listed among the most valuable 100 global brands (Nielsen 2013), it is possible that its popularity triggered respondents to think about how the other five web sites compared with respect to name recognition. Overall, reputation as a category was an expected result. Recent research (Chang, Cheung and Tang 2013, San-Martín and Camarero 2012) confirmed that a company's reputation positively affects developing online trust because a positive reputation of a company provides assurances of a company's integrity, ability to complete a transaction, and goodwill towards its customers.

Related to the 'Reputation' category are the 'Customer Feedback' and 'Social Media' categories as customers' sharing of their experiences either on a company's web site or via the social networks adds to or creates a company's reputation. Customer feedback and reviews were more important to the Russian respondents than were third party reviews. This finding is reflected in the highest number of constructs as compared to the other two samples in this category.

This review described in this section presented only one of the aspects of the overall analysis used in this study, and to validate it, other types of analysis had to be used.

4.3.2 Frequency of construct usage

Once all the constructs were grouped into categories, they were analysed 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).

Jankowicz (2004) recommended that only those constructs that were mentioned by at least 5% of the participants should be analysed, while Goffin, Lemke, and Szejcowski (2006) proposed to review only those constructs that had been mentioned by 25% of participants, as those are more important for the analysis. Constructs with a lower frequency count could be dropped from the analysis; however, since this study is explorative in nature, the decision was made to keep all the constructs, even those that have been mentioned only once. This was done in an attempt to find similarities and differences in what online shoppers identify as trust cues.

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. Exhibit 4.8 below compares the most frequently used constructs in each country.

The top five constructs used by American respondents emphasized the structure of a web site's layout, its colour 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, they also emphasize the structure of the web page. Since all the web sites were in English, it is understandable why German customers noticed that other languages were not available and a frequent comment (46.15% of all respondents) was that there is only one language used which is not their native language. As a result, it is difficult to evaluate and understand a company's policies, terms of payment and/or guarantees.

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.

An overall review of Exhibit 4.11 reveals that twelve constructs were mentioned by more than 25% of German participants as compared to five constructs in the USA sample and four in the Russian sample. One should be careful when drawing conclusions, but it would appear that German consumers have developed a universal checklist of requirements for an online store to which they refer. That checklist includes both aesthetic and functional expectations with the focus on processing an order: contact information for customer support, a variety of product categories, an affordable price, return policy, delivery time, and payment options. Russians, on the other hand, seem to notice the amount of advertisement placed on the web site. The most frequently used construct was expressed as 'No excessive advertisement is present' (construct MI04 in the Russian sample) or 'There are no commercials or any other distracting materials. This encourages a quick search for a book' (construct KM04 in the Russian sample). This fact confirms the continuing trend among Russian shoppers to skip advertisements as they get annoyed by the volume of advertising (Demidov 2012).

The other three frequent constructs in the Russian sample were about colours used on the web page, availability of a search tool, and customer reviews. The construct about the company's return policy was mentioned by German and USA respondents but not by Russian respondents. Previous research showed that a company's return policy 'assures a less risky environment that will increase trust' (Chang, Cheung and Tang 2013, p. 440). This guaranteed compensation offered by an e-vendor is aimed at reducing risk for consumers; however, only 4 respondents in the Russian sample (or 3.81%) mentioned availability of a return policy while evaluating web site trustworthiness. This could be explained by the fact that a company's promise to accept a returned product is believable only if a company has a good reputation (Chang, Cheung and Tang 2013). The 'Reputation' category was more strongly represented in German and USA samples just as a company's return policy was mostly noted by German and USA respondents.

Exhibit 4.11 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"	35%
"Customer reviews"	40.90%	"Clearly structured layout"	57.69%	"Web site colours"	30%
"Website colours"	31.82%	"Contact data for customer support"	50.00%	"Customer reviews"	30%
"Company contact information"	31.82%	"Languages used by a web site"	46.15%	"Search engine"	25%
"Convenient, 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%		
		"Colours"	30.77%		
		"Several payment options"	26.92%		

The decision to analyse all categories, even those that listed only one or two constructs, provided a better picture of what the initial reaction was to certain web site characteristics that could affect building online trust. It helped to notice not only what was included, but also what was not included. For example, securing personal information did not appear among the frequently used constructs. Only one Russian respondent mentioned security in one construct together with other web site's features ('Security and privacy, return policy, money back guarantee speaks of business responsibility' – Russian respondent FM, construct FM03). Four out of 188 German constructs were about security of transactions (2.13%) and eight out of 140 (5.71%) American constructs were security related. Although security and privacy issues have been listed as the main reason for shoppers not trusting e-commerce (Antoniou and Batten 2011; Clarke 1999), this study does not support that finding, but rather agrees with the Fogg (2003) and Fogg et al. (2003) prominence-interpretation theory that was mentioned in section 2.5, and will be discussed in more depth in the next section.

4.3.3 Construct importance

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 than constructs listed at the end of the grid. This proposal is in line with the prominence-interpretation theory (Fogg 2003), which posits that when people evaluate a web site, two things happen:

- (1) they notice an element of a web site (Prominence part)
- (2) they make a judgment about it (Interpretation part)

For web site evaluation to occur, both elements have to happen. If an element is not noticed, then it has no effect on the evaluation of web site's credibility (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.

Exhibit 4.12 below compares top constructs' categorization between three samples. The same three categories - 'Design', 'Sales', and 'Ease of Use' - dominate the list across all three countries. The most important category of constructs for all countries was the 'Design' category. This finding supports Yoon (2002) research conclusions that 'web-site trust is more susceptible to the image variables associated with web-site properties' (Yoon 2002, p. 59).

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, delivery 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.

Exhibit 4.12 Distribution of the top constructs

USA sample			German sample			Russian sample		
Categories	Number of constructs	Percentage of all top constructs	Categories	Number of constructs	Percentage of all top constructs	Categories	Number of constructs	Percentage of all top constructs
Design	6	27.27%	Design	7	26.92%	Design	10	50.00%
Ease of use	5	22.73%	Sales	6	23.08%	Ease of use	3	15.00%
Sales	3	13.64%	Ease of use	3	11.54%	Customer feedback	2	10.00%
Reputation	3	13.64%	Customer support	2	7.69%	Sales	1	5.00%
Security	2	9.09%	Ease of payment	2	7.69%	Guarantees	1	5.00%
Services	1	4.55%	Guarantees	2	7.69%	Language	1	5.00%
Guarantees	1	4.55%	Language	2	7.69%	Delivery	1	5.00%
Customer support	1	4.55%	Reputation	1	3.85%	Social media	1	5.00%
			Services	1	3.85%			
Total	22	100.00%	Total	26	100.00%	Total	20	100.00%

4.3.4 Hierarchical placement of constructs

One more grouping of constructs was done to differentiate between constructs that related to basic description, evaluative description or core evaluations of trust cues (Crudge and Johnson 2007).

This type of construct analysis was suggested based on Kelly's (1963) personal construct theory which contends that a system of personal constructs has a hierarchy that could be represented as a pyramid with the most important or core value constructs on the top of the pyramid, and basic constructs on the bottom of the hierarchy. In their study, Crudge and Johnson (2007) categorized all constructs into three groups: basic description (low level constructs describing attributes of elements), evaluative description (middle level constructs reflecting consequences of attributes), and key evaluations (high level constructs showing core values).

As applied to this study, constructs assigned to the basic description group related to tools and the functionality of web sites. Those features either appear or do not appear on a web site. For example, drop down menus, advanced search tools, pictures of products, different payment options, and a list of books for recommended reading. Constructs in the evaluative description group reflected those features of web sites that are used by consumers as differentiation characteristics that help to develop a person's perception of a web site. These constructs represent features of a web site that are evaluated differently by different consumers depending on their individual perceptions. This group contained constructs such as easy to navigate, a good return policy, easy access to customer service, simple layout. The last group of constructs, the key evaluation group, contained statements that reflected abstract values. Those included such constructs as fun and excitement, user friendly, reputation, and connection with social media.

Exhibit 4.13 Hierarchical placement of constructs

Category of constructs	The United States sample		German sample		Russian sample	
	Number of constructs in a category	Percentage of the total	Number of constructs in a category	Percentage of the total	Number of constructs in a category	Percentage of the total
Basic	34	36.56%	68	36.17%	34	34.34%
Evaluative	45	48.39%	83	44.15%	39	39.39%
Core	14	15.05%	37	19.68%	26	26.26%
Total	93	100.00%	188	100%	99	100.00%

The description of a construct served as a filter for identifying it as basic, evaluative or core. For example, a construct pair 'Different ways for paying' as contrasted to 'Only one way for paying' (construct code MA05 in a German sample) or 'Product pictures' - 'No product pictures' (construct code FP04 in a German sample) were evaluated as 'Basic' as they stated a fact, an item on the check list that either exists or does not exist. Evaluation of web sites based on basic constructs was extreme – either 7 points for having a characteristic or 1 point for not having it.

Evaluative constructs contained words such as 'easy', 'clear', 'simple', 'complicated', 'confusing', 'fast', and 'too much' that signalled the result of a respondent's evaluation of a certain construct. It was reflected in a web site's rating, done on a continuum between one and seven points. For example, 'Fast loading speed' (construct MG06 in the German sample) or 'Clear return policy' (used by several respondents in all three samples) show the gradual degree of speed (fast, medium or slow) or policy explanation (anywhere on the range from really confusing and long to short and simple) in the perception of a customer.

This semantic approach of analysing a construct, considering not only what was said but also how it was described, was useful in situations that, at first glance, involved a similar construct. For example, the construct 'Available advance search' (emerging construct code BR05 in the USA sample), was marked 'Basic' as it stated a fact that the tool is available. As a result, all web sites were evaluated by respondent BR as either 'Yes. It has it' or 'No, it does not have it' with corresponding scores of either 7 points or 1 point. On the other hand, the construct 'Easily spotted search bar' (construct TI04 in the American sample) was identified as 'Evaluative' as it expressed a respondents evaluation of a search tool location on the web site with a score assigned on the continuum between 1 and 7 points to show what that respondent found 'Easily spotted' as compared to 'Have to look for a search bar' (contrasting pole of the TI04 construct in the American sample).

An abstract construct was marked as a 'Core' construct if it expressed a more subconscious level of evaluating a web site. For example, 'I would buy a book from their website based on first appearance' (construct EL07 in the American sample) or 'Immediate attention grabber' (construct MA04 in the American sample).

The majority of German core constructs (nine out of 37 or 24.32%) were about the web site's popularity and recognition. Respondents noted 'Recognition value I like to use popular web sites' (construct SA08 in the German sample), or 'Popularity' as opposed to 'Not very well known => skeptical' (construct UD06 in the German sample). The German respondents also revealed some new aspects. An interesting view was expressed by German respondent SA as 'Interaction' (construct SA06 in the German sample) as contrasting to 'I can only see and do nothing myself' (construct SA06). Customer's interaction such as posting reviews, reading free pages of a book a customer may want to buy, and learning more about the author appears to be a part of the online shopping experience.

Among Russian core constructs a number of characteristics with references to colour were expressed in abstract terms. For example, 'Visual segregation of information' was contrasted to 'Not my favorite color, graphics' (construct BE01 in the Russian sample) or 'The web-site is bright, colorful. It lifts my mood up' as contrasted to 'Not so bright. I feel bored when I visit such sites' (construct LT01 in the Russian sample).

Numbers of evaluative and core constructs used by American and German respondents put them closer to each other and separate from the Russian sample. This could be explained by the fact that Russian e-commerce is the youngest when compared to American and German (Hawk 2002). As such, Russian consumers might not have a clear picture of both the advantages and the disadvantages of virtual shopping, and refer to abstract constructs more often than American and German buyers do. As American and German shoppers have

gained more experienced, they look for specific features that they expect of a commercial web site, thus using more basic and evaluative constructs.

While reviewing Exhibit 4.13 on p.174, one should keep in mind that although all 26 German respondents, and the majority of Russian respondents (16 out of 20), submitted their grids in English, not in their native language, the percentage of basic constructs is about the same across three samples. The only significant difference is in the percentage of core constructs in the Russian sample: it is 11.21% higher than in the USA, and 6.58% higher than in the German sample. Since Russian consumers show a trend of relying on their friends' opinions of a company's reputation, it could explain why the number of key constructs relating to reputation, social media and customer feedback are more important for Russians (Nielsen 2013).

4.4 Discussion

The most important result of this study is that it offers an analysis of customers' perceptions of what web site elements signal an e-vendor's trustworthiness. The use of the repertory grid technique helped to identify how a subjective perception of online trust is created in the minds of online shoppers. The major advantage of this method is that it combines elicitation of subjectively construed opinions, and both qualitative and quantitative analyses of those opinions (Clases, Bachmann and Wehner 2003; Tan, Tung and Xu 2009). Since the purpose of this study was to examine what impact the cultural background of online consumers has on how they identify and interpret online trust cues, the focus of analysis was on the qualitative side of the repertory grid technique. Due to the exploratory nature of this study, a pluralistic approach (Frost et al. 2010) to analysing the data was used to review web elements recognized by online customers as online trust cues.

Specifically, content analysis of elicited constructs incorporated:

- Construct content analysis and the distribution of constructs into categories. In this approach to analysing the data, all constructs were divided into groups based on the meaning expressed in those constructs and those groups were analysed (Curtis et al. 2008; Goffin, Lemke and Szwejszewski 2006).
- Frequency of constructs used by respondents with the same cultural background. This type of data review involved totalling all constructs with similar meanings (Boyle 2005; Goffin and Koners 2011).
- Comparison of constructs' frequencies between three cultural groups.
- Importance of constructs. Based on the order of the solicited constructs, priorities for different cultural groups were compared and possible trends identified (Fogg 2003; Tomico et al. 2009).
- Hierarchical placement of constructs. The meanings expressed by constructs were analysed and identified as basic, evaluative or core for each group of respondents. The results were then compared across cultures (Crudge and Johnson 2009).

To ensure research validity, the design of this study included the analysis of all constructs, contrary to the recommendations of Jankowicz (2004) to analyse only those constructs mentioned by at least 5% of the respondents, or Goffin's (2006) proposal to review only constructs that have been mentioned by at least 25% of the participants. All constructs elicited from participants of the same cultural background were compiled into one collective grid. This method of 'construct inventory' (Tan and Hunter 2002, p. 9) is used when the purpose of a study is to analyse not only findings of the individual grids within a group of people but also to compare results between those groups.

In compliance with the construct inventory method, three collective files were created, one for each country. For example, all 188 constructs submitted by participants from Germany were combined into one list and then analysed using the methods proposed for this study. The same was done for the other two

groups of participants. Thus, a comprehensive list of online trust cues was created for each group. The list by itself presents a practical contribution to businesses which design web sites and seek some specific suggestions in terms of what web site elements are noticed and valued by customers.

The use of four types of content analysis yielded the results previously discussed in the sections appropriate to each type of analysis selected for this study. Findings from those four types of analysis helped to determine some common trends in evaluating web site trustworthiness. The findings also identified specific culture-based concepts and revealed some cues that are currently understudied by previous research as discussed in chapter 2 of the thesis. One should keep in mind, though, that not all research findings about online trust cues are included in the literature review on this topic.

As the content analysis proceeded, it showed that there are some categories of constructs that are representative of one, two or all three cultures. 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 first type of analysis, the content analysis of construct distribution between categories, three categories – 'Design', 'Sales', and 'Ease of Use' - accounted for the highest number of constructs. The order of construct distribution in these categories was the same across all three countries. 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 offered in sections 4.3.2 and 4.3.3.

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 Fogg's (2003) findings that counter traditional assumptions on buyers' concerns about privacy and security of online transactions, and that

design is what consumers notice and consider while evaluating web sites. This study is in line with Fogg's (2003) research as it 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 20 in the group used a construct that mentioned security and, that was included with privacy, return policy, and money back guarantees as one concept. When asked to clarify why it is important to have all these aspects in one, the respondent said that 'only all together they are one thing and that "thing" creates a feeling of not being cheated' (Russian respondent FM, construct FM03). Security also scored low with the German respondents as only four, or 2.13%, of participants mentioned security related constructs, as did eight, or 5.71%, of the respondents from the USA sample.

A 'Language' category was missing in one of the groups but present in two others. German and Russian respondents made comments about the availability of web sites in their native language. Since American respondents did not have a language problem browsing English-language web sites, this was to be expected. When consumers are shopping online, they seek information about a product and its warranties. Product presentation is usually offered through visual or textual methods (Blanco, Sarasa and Sanclemente 2010). Visual methods such as pictures, graphs, and animation, do not require special language skills to understand the image of a product. Textual or verbal descriptions of the product assume a consumer's knowledge of the language in which the description is provided. This explains why American respondents did not comment on the language of a web site while evaluating an online bookstore. This result suggests the value of offering several language options which reflect a company's benevolence while accommodating the needs of customers from other countries.

The German participants noted the importance of different types of payment options available to online buyers. It was important for them as it signals that a seller respects the customer's options to use a variety of payment methods. One German respondent noted that 'Not everybody in my age group (20-25 years old)

has a credit card' (German respondent MT, in a note to construct MT06). If a vendor can accommodate different types of payment, it shows the company's ability to handle a variety of secure financial transactions. Another reason for multiple payment options was expressed as 'I prefer buying via bill by mail, because I don't want the firm to know my account data and I want to pay the product after I get it' (German respondent JM, construct JM05). This expectation of having different ways to pay for a product was characteristic of the German group.

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 delivery for Russians.

Constructs regarding the physical location of a store were also found in the American sample, but the constructs expressed by American respondents related more to the contrast of 'local' vs 'foreign' concept: 'It's a US originated web site' (American respondent JU, construct JU03) and 'Store location in my home town' (American respondent HL, construct HL02). It might appear that Americans are more comfortable buying from a store within their country, or they are concerned about the foreign currency exchange rate, or both. Further clarification showed that respondent JU supports a 'Buy American' campaign, while the HL respondent is more comfortable with the traditional face-to-face environment and prefers shopping in a physical store.

Since German participants did not mention a store's physical presence in a specific location, this observation 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' (Fisher and Chu 2009, p. 557).

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' ('Staying in Touch' or '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 behaviour 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.

A thorough review of all constructs revealed some features that to date, have been rarely mentioned in studies of online trust, but could be worthy of further research. For example, two respondents from the USA noted that the viewing area of a web site should be either scalable or automatically adjusted to any size screen – a desktop, laptop, or the display on a smartphone or a tablet (respondent PA, construct PA02 and respondent BR, construct BR03). This feature signals both a company's technical ability to accommodate any electronic device connected to the Internet. It also reduces the level of customer frustration while browsing the web site. It was interesting that the focus was on reducing the level of frustration rather than increasing the level of satisfaction. It seems almost as though some customers expect to be frustrated while switching from one type of a device to another while shopping online.

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. This finding supports the results of the study conducted by San-Martín and Camarero (2012), who concluded that although 'there seems to be a "virtual culture" shared by consumers everywhere' (San Martín and Camarero 2012, p. 81), online vendors should consider cultural differences of consumer shopping patterns.

The second type of content analysis, the frequency of construct usage, supported findings of the content analysis of categories. The count of how many respondents used the same, or nearly the same, construct helped to identify trends across three groups of respondents (Tan and Hunter 2002). Constructs used by 25% or more of the respondents were considered frequently used as suggested by Goffin, Lemke, and Szwejczewski (2006). Exhibit 4.11 showed that the Design category leads the list; however, analysis of constructs within that category reflects differences. An interesting observation was that the top two most frequently used constructs were listed by the same number of people. For example, 40.90% of the respondents from the United States listed the 'a web site is easy to navigate' construct. Another construct with the same frequency of 40.90% in that group was 'customer reviews'. In the German sample, 57.69 % used the 'a web site is easy to navigate' construct while the same number of German customers, 57.69%, used the 'clearly structured layout' construct as the two most frequently used constructs.

Respondents from Russia seem to be concerned about the amount of advertisement as 35% of study participants listed the construct 'amount of advertisement on the web site'. It appears that excessive advertisement is seen by Russian respondents as a sign that a company is more interested in making money by promoting other companies than helping a customer to buy a product (Russian respondent KM, as a comment to the construct KM04). In the Russian sample 30% of participants commented on the colour scheme of the web sites. The 'easy to navigate' construct was listed by 20% of the Russian respondents and did not make it to the list of frequently used constructs. This finding supports the preliminary conclusion that although there are some categories and constructs that are common across samples, cultural differences are seen in how customers perceive online trustworthiness.

The analysis of construct frequency showed that the German respondents had the longest list of the most frequently used constructs, followed by the American and Russian participants. It appears that the functionality of a web site and the

buying process itself is what the German buyers focus on. Russian buyers frequently notice the amount of advertisement and colours on a web site, while for American shoppers the favourites were easy navigation and customers' recommendations.

A third type of content analysis was performed in accordance with the process suggested and validated by Tomico et al. (2009). They postulated that the perceived importance of a construct to a respondent is shown by its elicitation order. The constructs that appear on the top of the elicitation list are considered more important for an individual than constructs listed at the end of the grid. Based on this assumption built on the prominence/interpretation theory (Fogg 2003), all the constructs listed as the top constructs by respondents within each cultural group were compiled into one record, analysed, and compared. Exhibit 4.12 shows the results, which support the earlier statement that the 'Design', 'Ease of Use', and 'Sales' categories are universal, as constructs within those categories were listed as the top constructs across three samples.

The universal character of those constructs is supported by a review of the contrast poles used by respondents from different countries. For example, one of the most commonly used constructs by respondents was 'easy to navigate'. Its contrasting pole was expressed by respondents from the United States as 'The website is hard to navigate throughout' (BL05), 'difficult to navigate and find what you are looking for' (EL05), 'confusing layout/difficult searching' (KL01), or 'layout on website is difficult to use' (QU06). German participants used 'navigation is not easy on the website' (CBW08), 'confused navigation' (SA03), 'difficult navigation' (KM03), while Russian respondents listed 'I feel myself lost' (KK02), 'there are some difficulties to find a book' (PT04), 'confusing interface, difficult to use' (SE01) as contrasting poles to the same construct 'easy to navigate'. As seen from the customers' perspective, the same concept of the ease of navigation is perceived to be contrasted by confusing and difficult navigation. Across all three samples, the words used to describe the contrasting poles were similar.

The last type of the analysis reviewed the nature of a construct's meaning as suggested by (Crudge and Johnson 2007) in order to differentiate between constructs that related to basic description, evaluative description or core evaluations of trust cues. The findings of this type of analysis are shown in Exhibit 4.10. It seems that the results reflect the longevity of e-commerce in each country. As online shopping was initially introduced in the United States, respondents from that group are more likely to identify basic features and then to compare and evaluating them, than are other participants. Respondents from the United States also showed the least percentage of core or abstract constructs which could indicate that respondents from the United States are more familiar with online shopping and think about that experience in more specific and concrete terms.

The Russian participants showed the most number of core constructs expressed in abstract terms, 26.26%. One could argue that due to later introduction and availability of e-commerce, Russian buyers do not have sufficient experience with online purchases, and thus treat those on a more abstract basis.

Since trust is defined as willingness of one party to be vulnerable and to rely on the actions of another party (Mayer, Davis and Schoorman 1995), evaluations of the other party's actions become the basis for judging how trustworthy the other party is (Altinay, Saunders and Wang 2014). These judgments reflect three aspects, or dimensions, of online trust as identified by Mayer, Davis, and Schoorman (1995). These are benevolence, ability and integrity. Benevolence is a company's positive attitude to a trustor and its goodwill to enter into a mutually beneficial transaction (Doney and Cannon 1997; Pennanen 2011). Ability is a company's set of skills and experience that enable it to complete a transaction (Jarvenpaa, Tractinsky and Vitale 2000; Pennanen 2011). Integrity is a company's honesty, transparency, and fair treatment of its customers (McKnight, Choudhury and Kacmar 2002; Pennanen 2011).

Although it would appear that some respondents in this study evaluated web sites based on the 'I like' approach to evaluation of web site trustworthiness, rather than 'I trust', one could argue that it is a part of affective trust. As was discussed in section 2.1, Lewis and Weigert (1985) proposed two types of trust: cognitive, based on rational reasoning, and affective, developed by positive feelings towards an object of trust. Though presented as opposites, these types of trust tend to co-exist as they are intertwined (Zajonc 1980). Therefore, the phrase 'I like' expressed on a grid could be viewed as an indication of affective trust formed by an emotional reaction. Another way of looking at the 'I like' expression is to apply findings on affective reactions as expressed by Zajonc (1980), who postulated that '*affective reactions are primary*,' influenced by context and are more holistic in nature (Zajonc 1980, p. 154, emphasized in the original). As affective reactions are mostly binary reactions (Zajonc 1980), they fit the design of bipolar constructs of the repertory grid.

Even though some constructs were developed on a 'like-dislike' rather than a 'trust-distrust' basis, three aspects of respondents' evaluations could be identified that are traceable to trust: a company's ability (web site design, sales, ease of use), benevolence (guarantees, security, customer support, services), and integrity (reputation, customers feedback, social media).

Participants in the study developed constructs that also reflect cognitive, emotional and behavioural trust dimensions (Wang and Emurian 2005) along with interpersonal and institutional aspects of trust. The theory of 'cultural tiles' (Chao and Moon 2005), described in section 2.6, 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, Saunders and Wang 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 and 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, Saunders, and Wang (2014), whose research showed that trust is 'sustained by all three categories of cultural tiles' (Altinay, Saunders and Wang 2014, p. 16).

The final part of this discussion is a review of Exhibit 4.14 which summarizes the results of web sites' levels of perceived trustworthiness as evaluated by all participants of this study. The number was calculated as an average of the ratings on the seven-point Likert scale within each sample.

It appears that the Russian participants were more cautious about evaluating book stores as the difference in the range of the evaluation varies from 2.85 – 5.04 when compared to the USA respondents (2.38 – 5.95), or the German contributors (2.77 – 6.12).

The final result is the same for two out of three samples. On the continuum from the web site perceived by the respondents to be the most trustworthy to that perceived to be the least trustworthy, the online stores used in the study are ranked in the same order by USA and German participants: Amazon, followed by BAM! Books-A-Million! These two were followed by Alibris, Powell's Books, Biblio, and Bookspot. The Russian respondents rated BAM! Books-A-Million the highest, then Alibris, Amazon, Powell's Books, Biblio, and Bookspot.

Exhibit 4.14 Results of the of web site evaluations.

Web site	USA sample (average score on the seven-point scale)	German sample (average score on the seven-point scale)	Russian sample (average score on the seven-point scale)
Alibris	4.68	4.32	4.99
Amazon	5.95	6.12	4.93
BAM! Books-A-Million!	5.22	4.33	5.04
Biblio	4.44	3.99	4.57
Bookspot	2.38	2.77	2.85
Powell's Books	4.62	4.07	4.86

Since the evaluation of online trust cues was done from both the rational and the affective aspects (see section 2.1) and the results are the same across three samples, one could conclude that an online store's trustworthiness is signalled by a mix of functional and emotional cues recognized by a shopper; and that there is a mix of universal trust cues as well as culture-specific signals of online trust.

The findings of this study are validated by its research procedure as it incorporated the following ways of ensuring the quality of a study as proposed by Kassarian (1977), Sekaran (1983), and Silverman (2010):

- A research method appropriate for the study of consumers' perceptions was used to gather subjective descriptions of web site trustworthiness. The repertory grid technique used in this research is an extension of the personal construct theory developed by Kelly (1963) for the analysis of how people construe meaning and make sense of the phenomena occurring in their personal lives.
- This cross-cultural study involved three countries rather than traditional two (Sekaran 1983).
- The inter-coder agreement between two independent reviewers and the researcher achieved a level above 90% for categorization of constructs in all three samples, which is found to be acceptable (Jankowicz 2004).
- Triangulation of four types of analysis offered different ways of reviewing the elicited data to ensure that all constructs were analysed. This approach of plurality (Frost et al. 2010) considered various aspects of constructs related to perceived trustworthiness of web sites as described by the study's participants.

As perceived trustworthiness of a web site is expressed via its visual and functional aspects, then according to Atkinson and Delamont (2008, p. 291), 'we need to not only "read" the visual but also understand ethnographically how it is read by members of the social world or culture in question.' This research attempted to view individual subjective perceptions of online trustworthiness and reflect upon how customers interpret online trust signals and create beliefs about a company's ability, benevolence and integrity.

Summary

The importance of this study is that it ties interpersonal and system trust into one phenomenon supporting Lewis and Weigert's (1985) statement that 'an adequate sociological theory of trust must offer a conceptualization of trust that *bridges* the interpersonal and the systemic levels of analysis' (Lewis and Weigert 1985, p. 974, emphasized in the original). While evaluating the perceived trustworthiness of a web site, as the object of their trust, respondents used constructs related to both interpersonal and institutional trust. This supports Kroeger's (2011) findings that both an object and subject of trust move between the micro and meso levels. Since a web site assumes the role of salesperson, it signals trust to a buyer on a personal, micro level, but the environment is provided by an institution on the meso level.

There is extensive research into web site trustworthiness that is based on surveys, semi-structured interviews or laboratory experiments (Clases, Bachmann and Wehner 2003). Those studies measure customers' attitudes towards trustworthiness of virtual retailers in general, or specific elements of online stores, that signal or relate to online trust. All of them contribute to studies of online trust and its implications on developing international business strategies. In contrast, this study uses the repertory grid technique that is 'designed specifically to elicit the subjective meanings—as *personal constructs*—that actors attach to a certain concept' (Clases, Bachmann and Wehner 2003, p. 11, emphasized in the original). In this research, an inductive approach was used to analyse customers' personal identification of what constitutes trust cues in their own perceptions. This study extended the use of the repertory grid technique to online trust research. It returned rich data about consumers' perceptions of what elements they recognize as trust cues while shopping online.

According to Lewis and Weigert, 'trust in everyday life is a *mix* of feeling and rational thinking' (1985, p. 972, emphasized in the original). Indeed this study suggests that online consumers make a decision to trust or not to trust involving both rational and emotional aspects of their behaviour.

This study provides empirical support to the view that there are indications that on the one hand, a virtual culture of online shopping is being created by customers across different cultures. These customers are seeking web sites designed to reduce the complexity of shopping and decision-making. The ease of use, structured and not cluttered design, clear information about the product and sales terms serve that purpose. Exploration of warranties (such as consumers' research of return policy or money-back guarantee), reduces perceived level of risk, and stimulates the development of trust (Pennanen 2009). On the other hand, cultural differences determine the emotional appeal of a web site based on language, colours, images, and social media.

This study provides direction for the development of a management strategy centred on a customer or customers in different countries. If a web site incorporates cues that are identified by customers themselves as trust cues, it will attract more shoppers to that site. Trust starts with a customer's trust in a company's web site that develops into trust in a company, and then reaches the high level of long-term trustworthy relationships which might turn customers into a company's advocates who promote that company (Urban, Amyx and Lorenzon 2009).

Chapter 5 Conclusion

Overview

Companies cannot ignore the significant role that trust plays in their business operations. Building trust is viewed as a strategy of long-term investment in loyal customers as loyal customers spend more money, enhance a company's reputation through word of mouth, and are less likely to switch to a competitor (Frost, Goode and Hart 2010). Trust is especially important in an online environment, where buyers are dependent on unknown e-vendors who may behave in an opportunistic way and take advantage of buyers' vulnerability (Gefen and Straub 2003).

The evolution of online trust research discussed in chapter 2 of this thesis showed that academic studies of the concept of online trust encompass areas ranging from investigating the impact of privacy and security on trust and behavioural intention to examining the role of web site appeal on developing initial trust leading to a consumer's initiation of an interaction. Regardless of the focus of the investigation, studies and models of trust emphasize that a consumer's decision to trust or not to trust is based on evaluation of other party trustworthiness (Dietz, Gillespie and Chao 2010). In the case of positive evaluation, a trusting relationship develops between an e-vendor and an online buyer which is likely to lead to repeat purchases and long-term continuing benefits (Frost, Goode and Hart 2010).

Since web sites act both as a company's storefront and business platform (Gefen, Benbasat and Pavlou 2008; Hampton-Sosa and Koufaris 2005), they communicate a company's trustworthiness via trust cues embedded in their design. Over the years, scholars and practitioners have compiled a list of web site features that reflect web site trustworthiness; however, due to the inconsistency of findings reported by previous studies, it is not yet known 'which indicators of trustworthiness work best or are valued more by consumers' (Belanger, Hiller and Smith 2002, p. 246).

This study set out to explore customers' perceptions of online trust cues incorporated into the design of a commercial web site. It sought to answer two research questions:

- Which online cues are recognized by customers as online trust cues?
- Are those online trust cues universal or culture-specific?

Unlike the majority of studies of online trust which are conducted using quantitative methods, this research employed a qualitative research framework. The theoretical foundation for this framework was built on several theories developed across multiple disciplines. For example, the theory of information asymmetry between transacting parties (Akerlof 1970) and the economics signalling theory (Spence 2002) explained why signals of trustworthiness are formed and communicated. The psychological theory of personal constructs (Kelly 1963) shows how perceptions are construed. The prominence-interpretation theory (Fogg 2003) provides a basis for identification of cues and their importance. Symbolic interactionism (Blumer 1980; Denzin 1969) and value-congruity relationship theories (Kumar 2013) focus on consumer behaviour. The commitment-trust theory of marketing management (Morgan and Hunt 1994) emphasizes the role of consumer trust in keeping customers satisfied, and the significance of strategic planning for gaining and retaining customers.

Previous research found that customers do not expend much time and effort evaluating perceived trustworthiness of a web site (Lindgaard et al. 2006; Weinreich et al. 2008). Online consumers base their decisions to stay on a web site or to leave it on visual appeal (Metzger, Flanagin and Medders 2010). Web site design elements serve as signals of a company's abilities (Wang et al. 2014). In the online environment, where customers cannot evaluate the physical attributes of a product prior to its purchase, consumers have to rely on those signals to create perceptions about a vendor's ability, benevolence, and integrity. These signals are defined as 'trust signals' or trust cues (Warrington, Abgrab and

Caldwell 2000, p. 163). While shopping online, customers develop mental models or patterns for recognizing those trust cues displayed by e-vendors. Those patterns guide consumer online behaviour resulting in either staying on a web site and making a purchase or leaving the web site.

To obtain and analyse online buyers' subjective opinions about web site trust cues, and to reveal individual patterns, this study utilized the repertory grid technique. That technique had not previously been used in studies of online trust cues. This was done in response to the call for more qualitative studies of trust (Mollering 2006), where research methods look into and evaluate the respondents' experiences and perceptions rather than a researcher's expectations.

The repertory grid technique has been introduced by Kelly (1963) as an extension of his personal constructs theory. Kelly's (1963) theory is based on two major assumptions:

- (1) people act as scientists who explore the world around them, develop constructs in an attempt to create meaning and make sense out of events, and use those constructs to anticipate future events in their lives. If those constructs are not validated, then people change constructs;
- (2) relations between constructs are organized in an interpretation system that, on the one hand, helps to understand an event but, on the other hand, restricts people's behaviour.

As applied in the context of identifying and interpreting online trust cues, Kelly's (1963) personal constructs theory describes an online consumer behaviour pattern: customers explore online stores and, based on their shopping experiences, develop constructs that are organized into a system that guides their future behaviour. Therefore, the theoretical foundation and methodological framework selected for this study meet the goals of customer-focused research into the online trust building process, filling another gap as described in section 2.8.

The main advantage of Kelly's (1963) research method is that 'the repertory grid is designed to elicit the meanings of phenomena' (Ginsberg 1989, p. 422) as it reflects the personal opinions of respondents and allows researchers to get into the internal world of customers (Björklund 2008). As a 'phenomenological and bottom up approach' (Ashleigh and Nandhakumar 2007, p. 609) this novel method focused on the users' side of an online transaction and analysed what web site elements are recognized as trust cues by consumers from three different cultures.

The repertory grid technique represents an independent and unbiased way of collecting data about customers' perceptions of web site trustworthiness, as a researcher does not interfere in the process of selecting what is important and what is not (Ashleigh and Nandhakumar 2007; Boyle 2005). This technique has been found especially effective in the studies of individual reflections and perceptions (Alexander et al. 2010), and as such, this research method fits the objective of this explorative study better than other research approaches as was shown in Chapter 3 which addressed research methodology.

Since the main empirical findings were presented and discussed in Chapter 4, this chapter synthesizes the results of research to answer the study's two questions:

- Which online cues are recognized by customers as online trust cues?
- Are online trust cues universal or culture-specific?

Sixty eight volunteers from three countries, Germany, Russia, and the United States, contributed to a qualitative exploratory study of online trust cues embedded in a commercial web site. Using a repertory grid and evaluating six online bookstores, participants shared their own perceptions of which web site elements and properties they identified as trust signals. As a result of the study, 427 constructs were elicited and analysed. Two independent reviewers contributed to the first stage of the analysis – categorization and a reliability check of the grouping all constructs into categories. It was established in the

main study (Chapter 4 of this thesis) that signals that are identified by online shoppers as trust cues could be divided into 14 categories. Although the number of categories for each country was the same, the variety of categories was different. For example:

- The United States sample consisted of: ease of use, sales, guarantees, reputation, design, physical location, scalability, security, customization, customer feedback, company information, customer support, services, and social media.
- The German sample consisted of: ease of use, sales, customer feedback, ease of payment, design, services, reputation, language, customer support, guarantees, security, delivery, company information, and social network.
- The Russian sample consisted of: company information, customer feedback, customer support, customization, delivery, design, ease of use, guarantees, language, location, reputation, sales, social network, and transparency.

The answer to the first research question identified specific categories of trust cues as recognized and described by online consumers. This comprehensive list of 427 constructs, grouped into fourteen categories, by itself offers a practical contribution to businesses with an online presence. It shows which web site elements are noticed and valued by customers, thus allowing for a more customer focused approach in web design.

To answer the second research question and determine whether online trust cues are universal or culture specific, this study has reviewed perceptions of trust cues shared by customers of three different countries: the United States, Germany, and Russia. In preparation for data analysis, all constructs solicited from respondents were independently categorized by this researcher and two reviewers. This provided objective groupings of the online trust cues identified by the respondents. To triangulate the data, four types of content analysis were applied: distribution of constructs in categories (Curtis et al. 2008; Goffin, Lemke

and Szwejszewski 2006), frequency of construct usage (Boyle 2005; Goffin and Koners 2011), importance (Fogg 2003; Tomico et al. 2009), and hierarchical placement of constructs (Crudge and Johnson 2007).

Utilizing several qualitative approaches to analysing constructs shows different aspects of creating meaning out of the collected data. This pluralistic approach increases transparency in academic research (Frost et al. 2010) and allows a researcher to consider multiple approaches to interpreting data in order to achieve a 'holistic and multi-perspective insight' to individual experiences (Frost et al. 2010, p. 443).

The result of this analysis and comparison of online trust cues revealed that there tend to be some signals that are universally recognized as trust cues by respondents of all three cultures, while other signals of online trust cues were culture specific. Three categories identified as 'Design', 'Sales', and 'Ease of Use' were mentioned by all respondents across all three cultural groups and thus, could be identified as universal. These categories were not only the most frequently used by all respondents but also were found to be more prominent and more important for online consumers than other groups of constructs.

The 'Design' category included constructs related to the overall layout of a web page, flash animation, and the aesthetic appeal of a web site's design through the use of colours, font styles, and pictures. The 'Sales' category had constructs related to the process of buying books online, for example, product choices across different literature genres, available book types (hard copies, electronic books, newly published books as well as used books, textbook rentals), prices, discounts, and shipping. The 'Ease of Use' category reflected the functionality of a web site, its user-friendly navigation, a customer's ability to easily find a product and make a purchase. This category included, for example, an autocomplete search box, and accessibility and visibility of the shopping cart. This finding is in conformance with the Technology Acceptance Model (TAM) theory developed by Davis (1989), and prominence/interpretation theory (Fogg 2003).

In addition to the universal cues, a set of signals was found to be recognized by respondents of each cultural group as specific to that group. For example, the 'Ease of and variety of payment options' construct appeared to be unique to the German participants, as neither American nor Russian respondents mentioned it. And Russian respondents tended to put more weight on the use of recommendations posted by social media rather than the generic customer feedback tool incorporated into a web site. Consumers from the United States focused on additional services that e-retailers provided and the security of transactions.

The results of this study provide empirical evidence and explain previous inconsistencies in earlier findings by suggesting that two groups of online trust cues coexist in customers' perceptions: universal and culture-specific. Online customers review universal online trust cues first, and if satisfied with the result, move on to the culture-specific cues. As this study showed, customers from three countries exhibited this trend. In addition to the empirical contribution, the cross-cultural nature of this study filled another gap identified in section 2.8, a lack of cross-cultural studies of online trust involving more than two countries.

Based on respondents' comments, it would appear that some participants in this study evaluated web sites based on 'like-dislike' rather than 'trust-distrust' basis; however, all evaluations reflect three dimensions that are characteristic of trust: a company's ability, benevolence, and integrity, as was shown in the discussion of results in Chapter 4.

This study contributes a small piece to the mosaic of a much larger holistic picture of online trust research. Based on one's cultural background, a customer recognizes trust signals embedded in a web site, evaluates a web site, and makes a decision to trust or not to trust an electronic vendor before completing a purchase. If a customer decides to trust the vendor, he or she then takes a risk and purchases an item. If the customer's online experience meets that customer's expectations, that person is more likely to return to the site and develop loyalty to the vendor (as summarized in Exhibit 5.1 below).

Exhibit 5.1 Culture and customer online loyalty.



The above exhibit visually puts all the elements discussed earlier together into one process: a customer's cultural background affects which trust cues he or she identifies and how those cues are interpreted.

Trust cues are used to evaluate a web site and create perceptions of its trustworthiness. Customers who have positive perceptions of an online vendor are more likely to develop trust in that vendor and intent to use its web site. The direct impact of trust on the intention to use a web site was empirically confirmed by studies conducted by Eastlick, Lotz, and Warrington (2006); Hampton-Sosa and Koufaris (2005); Kim, Ferrin, and Rao (2008); and McKnight, Choudhury, and Kacmar (2002b) among others. Once initial trust is developed and positive experience acquired, a customer might develop a long-term relationship with, and loyalty to, that business (Flavian, Guinaliu and Gurrea 2006; Gupta and Kahadayi 2010; Urban, Amyx and Lorenzon 2009).

Thus, the significance of this study is that it sheds light on the very first step of the strategic planning process of gaining and retaining online customers. It shows which web site elements are identified as online trust cues by customers with different cultural backgrounds. Once trust cues are identified and known to a company, different appeals could be used online to create a positive emotional response in web site visitors from different cultures. Depending on a consumer's values, a positive emotional appeal might trigger an impulse to purchase. Purchase as the result of participation in an online exchange is beneficial for an online vendor's short-and long-term goals as it creates profits for the short-term

and might build a long-term trusting relationship, the ultimate goal of any business.

5.1 Contribution and implications

The majority of studies of trust in e-commerce focus on an object of trust – either technology, a web site, or a company- and how its attributes affect consumers' decision to buy; while the number of studies that focus on the consumers' side of building online trust is somewhat limited. This research offers exploration of customers' perceptions of online trust cues, focusing on the consumers' side of developing online trust in the context of e-commerce. Studying online consumers' perceptions of web site trustworthiness helps to expand a picture of online trust.

This study contributes to the existing literature in three ways:

1) Empirical contribution

This study contributes conceptually to research literature on online trust by examining what online signals are identified as trust cues by consumers with different cultural backgrounds and by comparing results across three different cultures. It shows that along with somewhat universal and globally recognized trust cues there are culture specific web site elements that customers perceive as signalling a web site's trustworthiness. A list of those trust cues was compiled based on the results of the qualitative study conducted with the repertory grid technique. This study offers empirical evidence that customers from three different countries recognize the categories of web design, easy navigation, and sales as universal cues that reflect an e-vendor's perceived trustworthiness. Along with these three common categories of trust cues, there are culture specific signals recognized by each cultural group.

The result of this study adds another piece to the mosaic of literature on online trust by examining the visual representation of a web site's trustworthiness. This research extended the postulation previously suggested by Long (2004) that trust is established initially through visual clues by offering a list of specific trust cues recognized by customers. Included in those online trust cues are universal as well as culture specific trust signals.

This study also answers the call for cross-cultural research in building online trust (Ribbink et al. 2004; Saunders, Skinner and Lewicki 2010; Schoorman, Mayer and Davis 2007) as it compares perceptions of trust cues as expressed by customers representing three national cultures. Results of this study support the research findings of San-Martín and Camarero (2012) who concluded that online trust is developed based on the signals that a web site sends to its visitors. Among those signals are those that are shared by all cultures along with culture-specific cues.

2) Methodological contribution

Cross-cultural studies of online trust cues very often take a quantitative approach where researchers develop surveys to validate what they find to be important trust signals. The number of qualitative studies in this area seems to be lacking. To fill the gap, this project implemented a qualitative methodological framework which emphasized exploring online customers' perceptions of trust cues from the customers' point of view, while minimizing researcher bias.

Most of the studies analysing the impact of web design on online trust rely on either retrospective consumer behaviour, where respondents share their opinion of past experiences (Belanger, Hiller, and Smith 2002; Ganguly et al. 2010) or participation in lab experiments (Bente, Baptist, and Leuschner 2012; Cyr et al. 2009). This research is different as it elicits online buyers' perceptions of web site trustworthiness at the time while respondents are visiting and reviewing a specific

web site from the comfort of their homes, while completing a rubric in their natural shopping environment.

As of the time of submission, this is the first study of online trust that uses the repertory grid technique for cross-cultural research of online trust. It analyses web site signals which are identified and recognized by online consumers as online trust cues in the customers' natural environment. This study counteracts the weakness of the previous quantitative research as it offers the customers' perspective of which cues signal trust online without involving potential researcher bias.

The use of the repertory grid technique in the area of online trust research provided a novel approach as no studies have been found so far that have used this method for studying online trust cues.

Most previous studies that used the repertory grid technique in traditional trust, management and information technology areas, applied one or two types of data analysis: for example, Ashleigh and Nandhakumar (2007) and Hunter and Beck (2000) used content analysis to discuss major themes expressed by elicited constructs, Clases et al. (2003) focused on the analysis of a subjective meaning space; Lemke, Clark, and Wilson (2011) identified key constructs based on frequency and variability, while Moynihan (1996) analysed frequency of constructs.

This research joins a small group of studies (Ding, Ng and Cai 2007; Heine 2009; Wright and Cheung 2004) that applied a plural approach to analysis of the elicited constructs, as it used four types of qualitative analysis: construct content analysis and distribution of constructs in categories, frequency of constructs, importance of constructs, and hierarchical placement of constructs.

The results have produced richer insight into the phenomenon of online trust cues embedded in a commercial web site. Although time consuming and labour intensive, this method gives a more in-depth look into customers' perceptions of online trust (Ashleigh and Nandhakumar 2007). This study supports the view that

qualitative research methods are valuable in exploring new aspects of complex concepts such as online trust.

3) Practical contribution

As companies benefit from the commercial capabilities of the Internet, their potential customer base is becoming more global. Dealing with customers and stakeholders across multiple cultures requires a better understanding of the role of culture in the consumer decision making process (Laroche and Park 2013) and how culture and trust interact online (Doney, Cannon and Mullen 1998). Since e-commerce separates customers and retailers both in time and space (Riegelsberger and Sasse 2001), customers have to trust a web site before they submit credit, private, and financial information while paying for a tangible product before receiving it. This makes online trust more strategic than traditional trust. Online trust starts with initial trust in a web site that might turn into trust in a company, and then goes on to building long-term trustworthy relationships where customers become advocates who help promote that company (Urban, Amyx and Lorenzon 2009).

Building customer relationships based on trust and commitment was found to be a successful business strategy (Morgan and Hunt 1994). Managers of businesses with commercial web sites should understand that efforts towards making a web site trustworthy in consumers' minds are necessary to establish long-term customer relationships (Pennanen 2011).

Using online trust cues, as identified in this study, in the design of commercial web sites will assist practitioners in attracting new, and retaining current, online customers. The overall usability and quality of a commercial web site was found to increase the level of trust in that web site (Casalo, Flavian and Guinaliu 2011).

Urban, Amyx, and Lorenzon (2009) gave two reasons why the overall design of a web site is important for building trustworthy relationships with customers:

- 'A good-looking' web site helps to create trust as it projects professionalism of the company that is behind of the well-designed web site.
- Satisfactory experience of browsing a web site keeps customers on that web site longer, increasing probability of developing trust in the web site.

On the other hand, since customers are actively involved in building online trust, vendors should give them an opportunity to test and evaluate a company's trustworthiness (O'Reilly 2005; Pennanen 2011). This study shows that examining customers' perceptions could identify new approaches to developing online trust.

Implementing a set of online trust cues identified by consumers helps businesses to achieve what Long (2004) described as online reciprocity. If a web site appears to be something that a customer wants, the customer initiates an action by clicking a button. If that action produces an expected result, then a customer continues using the web site. If the system responds in an unexpected way, a customer may stop using it. For example, if during a process of buying an airline e-ticket for a trip, a customer sees a button that says 'Assign Seats', he/she expects to see a seating map after clicking that button. If a web site shows something different, the customer might leave that page and find a different vendor.

Fisher and Chu (2009, p. 543) noted that trust serves as a 'critical precondition to online purchasing behavior' and 'a basis and necessity for consumers' decision to make online purchases' (Pennanen 2009, p. 165). As such, online trust relates directly to a company's sales and business success as trust is a pre-condition to the intention to purchase from a web site (McKnight, Choudhury and Kacmar 2002b).

Having examined the effect of a consumers' cultural background on recognizing online trust cues, this study made a threefold contribution: empirical, methodological, and practical.

5.2 Study limitations and future research

As in any academic research, there are a few limitations to this work that should be noted. 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. Although evaluation of web sites 'occurred naturally in the everyday existence' (Blumer 1980, p. 412), 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 behaviour 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 behaviour, a gap may exist which requires further investigation (Cho, Kwon and Lee 2007). Also, as no purchase was made, this type of research situation 'may limit transferability of the findings to actual e-commerce situations' (Cyr 2013, p.10).

Another limitation relates to the study sample. Since this exploratory study is based only on samples limited to one geographical location within each country, with the exception of the Russian group which represented three different cities, it might not be generalizable. Future samples should be expanded to include multiple regions within a country.

While efforts were made to include a diverse population in the sample, the age range of respondents was predominantly 18 - 25 since most of the participants in the study were undergraduate students. 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.

From a methodological perspective, a single qualitative method, the repertory grid method, of collecting the data was used; however, future research might use a combination of the repertory grid and eye-tracking techniques, interviews, or questionnaires. For example, a separate survey could be designed for each of the participating countries based on online trust constructs elicited from representatives of that country's national culture. This method would help to collect more data to ensure that the findings of this research are not unique to this particular group of respondents. Another option could be the use of eye-tracking equipment to record what elements of a web design attract a buyer and follow-up with an interview discussing those web elements. These and other combinations of research methods might provide a better understanding of how online buyers with different cultural backgrounds identify and interpret trust cues.

Analysis of the individual repertory grids was done based on the researcher's interpretation of the data. Although two independent reviewers assisted with the construct categorization, the researcher offered personal perspective of the phenomenon. This perspective does not fully explain how online trust cues are identified and interpreted but rather offers a different individual perspective of analysing the phenomenon. Thus, generalization is an issue here but that also applies to all qualitative studies of an exploratory nature (Gordon 2011). This research is no exception. Since the grounded theory approach of the interpretivist research philosophy had been used in this study, a challenge to generalizing the data was expected. Per Atkinson and Delamont (2008), grounded theory uses 'abductive logic' (Atkinson and Delamont 2008, p. 300) as it represents a compromise between purely deductive and purely inductive logic.

Purely deductive logic does not recognize any deviations from a process and does not include somebody's experience in the process of learning, while purely inductive logic has a problem with combining individual observations and experiences into generalizations.

Another limitation of this research relates to the number of respondents. Although the sample size for this exploratory qualitative study was relatively large and the sample characteristics satisfied the research requirements, a larger sample size might show other trends based on the latest developments in e-commerce, especially when all the constructs are being analysed, including those that represent less than 5% of the total number of constructs (Jankowicz 2004).

This study used web sites selling books online for exploring the effect of cultural background on a customer's identification and interpretation online trust cues. Although books are found to be appropriate products for online trust research (Chen and Barnes 2007; Fisher and Chu 2009; Gefen, Karahanna and Straub 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 behaviour 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.

The data analysis showed that online solicitation of repertory grids delivered rich data about consumers' perceptions of what trust cues are recognized while shopping online. It also raised a question about the relations between trust and appeal, 'I trust' vs. 'I like'. Quite a few respondents in all three samples used 'I like' or 'My favourite' phrases in their constructs. One could argue that this is an expression of the 'emotional bond' (Lewis and Weigert 1985, p. 971) between the

parties involved in an online transaction, which reflects an affective component of trust, a potential topic for future research.

5.3 Concluding remarks

Globalization and technological developments created a virtual market place that does not recognize physical borders and provides growing opportunities for e-commerce. Due to the relative ease of development and low cost, the number of commercial web sites keeps growing at a high rate.

Success of e-commerce in this highly competitive environment depends on traffic flow (the number of visitors) and the volume of online transactions (Chen et al. 2010). 'Consumer stickiness' is a term coined to describe a consumer frequent visits and purchases from a particular web site based on 'a deeply held commitment to reuse the Web site consistently in the future, despite situational influences and marketing efforts that have the potential to cause switching behavior' (Li, Browne and Wetherbe 2006, p. 106). In the context of e-commerce, stickiness is essential to the survival of e-vendors in a highly competitive virtual environment (Chen et al. 2010); however, stickiness is impossible without trust and commitment.

Although online shopping might be a relatively new practice, there is a growing generation of young buyers for whom making an online purchase is a natural act. Getting these customers to stick to a specific web site early in their online shopping experience might extend consumer life value and provide an e-vendor the potential for increasing its count of loyal customers. The process of acquiring new, and retaining existing, online customers requires a business strategy that involves more than just translating a web site into different languages. As the findings of this research show, there are universal and culture-specific trust cues that are recognized by online shoppers. Those cues are used by customers to assess the perceived trustworthiness of an e-vendor and to develop online trust.

As technology constantly evolves, so does e-commerce. From the early days of Internet shopping using desktop computers, it moved to laptops and now is accessible on mobile devices such as smartphones and tablets. Although the electronic tools for shopping changed, the virtual nature of e-commerce remains the same, carrying the issue of trustworthiness with it anywhere it goes, thereby making this study relevant and applicable to new technologies.

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Completion Report of the Online Course on Responsible Research

Completion Report

<https://www.citiprogram.org/members/learnersII/crbystage.asp?strKeyL...>**CITI Collaborative Institutional Training Initiative (CITI)****Social and Behavioral Responsible Conduct of Research Curriculum
Completion Report
Printed on 10/31/2012**

Learner: Antonina Bauman (username: [REDACTED])
 Institution: [REDACTED] University
 Contact Information [REDACTED]

Social and Behavioral Responsible Conduct of Research: This course is for investigators, staff and students with an interest or focus in **Social and Behavioral** research. This course contains text, embedded case studies AND quizzes.

Stage 1. RCR Passed on 10/31/12 (Ref # 9090093)

Required Modules	Date Completed	Score
Introduction to the Responsible Conduct of Research	10/31/12	no quiz
Research Misconduct 2-1495	10/31/12	5/5 (100%)
Data Acquisition, Management, Sharing and Ownership 2-1523	10/31/12	5/5 (100%)
Publication Practices and Responsible Authorship 2-1518	10/31/12	5/5 (100%)
Peer Review 2-1521	10/31/12	5/5 (100%)
Mentor and Trainee Responsibilities 01234 1250	10/31/12	5/5 (100%)
Using Animal Subjects in Research 13301	10/31/12	8/8 (100%)
Conflicts of Interest and Commitment 2-1462	10/31/12	6/6 (100%)
Collaborative Research 2-1484	10/31/12	5/5 (100%)
Human Subjects 13566	10/31/12	5/5 (100%)
The CITI RCR Course Completion Page	10/31/12	no quiz
Elective Modules	Date Completed	Score
Case Study - Truth or Consequences 2-1217	10/31/12	3/3 (100%)
Case Study - Data Management - Share and Share Alike 2-1440	10/31/12	3/3 (100%)
Mentoring Case Study: The Business of Mentoring	10/31/12	4/4 (100%)

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Completion Report

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Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

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**██████████ University
Institutional Review Board
Project Application**

Please complete and submit the form to the IRB chair via email: to

██████████

Study title: The Effect of a Customers' Cultural Background on Developing Online Trust

Investigator:

Name: Antonina A. Bauman

(Please check one)

XXX Faculty Student Outside Investigator

Phone: 808 228-3836

Email: abauman@██████████

Sponsoring ██████████ Faculty Member:

(if Investigator is not an ██████████ faculty member)

Please attach a brief summary of the project. This should include an explicit statement of methods, data collection, and how confidentiality of subjects/data will be protected including consent form.

Category for Review:

Check one level of review (Exempt, Expedited, Full) for which you believe the project qualifies, and each criterion that your project meets.

___ Exempt from review (nil or minimal risk study, or already reviewed by an IRB)

___ Research involves ONLY investigation into or comparison of normal instructional strategies.

Tests, interviews, and surveys are unlikely to elicit emotion or place subjects at risk of civil/criminal liability or damage to their reputation, financial standing, employability, etc. AND information will not be recorded in such a way that subjects can be identified.

Research involves only the study or analysis of existing data, documents, records, or specimens that are publicly available or recorded in such a way that subjects cannot be identified.

If study involves ingestion of food: only wholesome food without additives in excess of USDA recommended levels is consumed.

Brief informed consent will be done (except in the case of existing data, etc.).

No use of vulnerable subjects (children, prisoners, pregnant women, mentally ill, etc.).

Has already been approved by IRB at _____.
(Include copy of signed IRB approval form.)

X Expedited review (minor risk study)

Research and data collection methods are unlikely to elicit strong emotion and deception is not involved.

Research involves only noninvasive, painless, and non-disfiguring collection of physical samples, such as hair, sweat, excreta.

No use of vulnerable subjects (children, prisoners, pregnant women, mentally ill, disabled, etc.).

Data are recorded using noninvasive, painless, and non-disfiguring sensors or equipment, such as EKG, weighing scales, voice/video recording.

Research involves only moderate levels of exercise in healthy volunteers.

Research does not involve ingestion of drugs or use of hazardous devices.

If existing data, documents, records, or specimens with identifiers are used, procedures are in place to ensure confidentiality.

Informed consent process will be done (attach copy of informed consent form).

Data will be kept confidential and not reported in identifiable fashion.

Full review required (more than minor risk)

Attach a statement that describes the use of vulnerable subjects or the study procedures and conditions that place subjects at risk. Describe the precautions that will be taken to minimize these risks. Attach a copy of the informed consent form that will be used.

Certification by Principal Investigator: The above represents a fair estimate of risks to human subjects.

Name/ Title/ Date

FOR IRB USE ONLY

Certification by IRB Chair: I have read this application and believe this research qualifies as:

- Exempt from IRB review
 Appropriate for expedited review, and
 approved
 disapproved
 Appropriate for review by the full IRB

/s/ [REDACTED] Chair

#560412111

11/7/2012

IRB Chair

Date

Note: Names are blocked for confidentiality purposes

INFORMED CONSENT DOCUMENT

Project Title: The Effect of the Customers' Cultural Background on Developing Online Trust

Investigator(s): Antonina A. Bauman

PURPOSE

This study involves exploratory research. The purpose of the research is to study people's perceptions of the trustworthiness of selected web sites'. Findings from participants of different cultural background will be compared to see if there is any trend in how perceptions of online trust develop between buyers from different cultures.

You are invited to participate in this research and share your perceptions of the trustworthiness of six web sites because it will help to determine what signals trust online. Your participation in this project will consist of one computer session of 40-45 minutes long that involves evaluating websites selling books online.

PROCEDURES

Those agreeing to participate can expect the following to occur:

- You will receive an evaluation form where six websites are listed.
- You will be asked to visit six web sites selling books: Alibris (<http://www.alibris.co.uk>), Amazon (<http://amazon.com>), BAM! Books-A-Million (<http://www.booksamillion.com>), Biblio (<http://www.biblio.com>), Bookspot (<http://www.bookspot.com>), and Powell's Books (<http://www.powells.com>).
- After getting familiarized with the web sites, you will be requested to select any two and compare and contrast them – what makes one web site more trustworthy than another? Write down that feature and why it is important for you, then think about the contrast to what you have written and write it down in the next cell. Based on the contrasting pair that you came up with, evaluate all web sites on the scale of 1-7 (7 points means that the web site is the closest to the

characteristic that signals trust and 1 point means that it is closest to its contrast).

- Once you list all the characteristics that signal trust and evaluate all six web sites, provide basic demographic information (gender, age group and cultural affiliation), then print out the form and turn it in.

RISKS

There are no foreseeable risks to participating.

BENEFITS

There will be no personal benefit for participating in this study. However it is hoped that in the future, society could benefit from this study by learning more about what consumers consider to be the most important and significant signals of a trustworthy web site.

COSTS AND COMPENSATION

There will not be any costs to the subject for participating in this research project. Subjects will not be compensated for their time and inconvenience for participating in this research project.

CONFIDENTIALITY

Records of participation in this research project will be maintained and kept confidential to the extent permitted by law. However, federal government regulatory agencies and the Hawai'i Pacific University IRB may inspect and copy a subject's records pertaining to the research, and these records may contain personal identifiers.

To ensure confidentiality, any information that might lead to identifying a respondent will be removed, identification numbers will be used to number the evaluation forms, secure storage area will be used for keeping the data. In the event of any report or publication from this study, the identity of subjects will not be disclosed. Results will be reported in a summarized manner in such a way that subjects cannot be identified.

VOLUNTARY PARTICIPATION

All participation is voluntary. There is no penalty to anyone who decides not to participate. Nor will anyone be penalized if he or she decides to stop participation at any time during the research project.

QUESTIONS

Questions are encouraged. Questions about this research project and questions about the rights of research subjects or research related injury may be addressed to the IRB Chair ([REDACTED])

Subject's name (printed): _____

(Signature of Subject)

(Date)

INVESTIGATOR STATEMENT

I have discussed the above points with the subject or the legally authorized representative, using a translator when necessary. It is my opinion that the subject understands the risks, benefits, and obligations involved in participation in this project.

(Signature of Investigator) (Date)

Note: Names are blocked for confidentiality purposes



Thank you for agreeing to participate in this research!

This is an exploratory research project whose purpose is to study the effect of cultural background of buyers on developing trust toward online vendors. Findings from participants of different cultural background will be compared to see if there is any trend in how perceptions of online trust develop between buyers from different cultures.

Imagine that you need to buy a book from an online store. You have a list of six web sites which sell that book at the same price. The choice is limited to online book stores only; those which do not have physical stores. Visit all six web sites, select any two, compare and contrast them – what makes one web site more trustworthy than another? Write down that feature and why it is important for you, then think about the contrast to what you have written and write it down in the next cell. Based on the contrasting pair that you came up with, evaluate all web sites on the scale of 1-7 (7 points means that the web site is the closest to the characteristic that signals trust and 1 point means that it is closest to its contrast).

The evaluation form for this project is located on the desktop of your computer. Please find and open it.

At this time, open six tabs on the browser, so that you can switch between six web sites. Copy and paste the address of the web site from the form into the browser – do it for all six web sites. Once all six web sites are open, please take ten minutes to get familiarized with the navigation.

Let me show you what you are expected to do: Select any two of the six web sites, let's say Alibris and Biblio. Go to each web site. What is the first thing that you noticed about Alibris? Would you purchase a book from it and trust it with your credit card information? Why? What is it that made you think so? Write it down in the cell. Now, think of a contrasting feature and write it down, too. For example, one web site uses your favorite blue color while another uses really bright green color. It is important for you to see blue color on the web site because you feel more comfortable surrounded by your favorite color. Once you have written it down, check other web sites to see if they have your favorite

color and evaluate them based on the scale 1 – 7, where 1 is assigned to the web site that has no blue color at all and 7 is assigned to the web site where blue is the dominant color.

The form has some other examples of the types of criteria that could be used for evaluation and blank cells into which you can type your own evaluation criteria. You can start evaluating the web sites now.

Do not worry about grammar or spelling. Your criteria could be explained in one word (for example, “navigation”) or one phrase (for example, “a very long and confusing return policy”). You can explain why it is important personally for you in one sentence or in one paragraph – there is no minimum requirement for that.

If you have any questions about this study, feel free to contact my PhD project supervisor, Professor Reinhard Bachmann at r.bachmann@surrey.ac.uk . If you have any questions about your rights as a research participant, please contact the [REDACTED] IRB Chair at [REDACTED].

Thank you for your time and cooperation

Antonina (Tonya) Bauman

Note: Names are blocked for confidentiality purposes

Appendix 5

Blank form



Thank you for agreeing to participate in this research! Your opinion is appreciated!

Six web sites which sell books online have been selected for evaluation. The choice is limited to online book stores only; those which do not have physical stores. Visit all six web sites, select any two, compare and contrast them – what makes one web site more trustworthy than another? Write down that feature and then think about the contrast to what you have written. Based on the contrasting pair that you came up with, evaluate all web sites on the scale of 1-7 (7 points means that the web site is the closest to the characteristic that signals trust and 1 point means that it is closest to its contrast). Below is an explanation of how the table should be filled in:

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
Here you write what you observed:	Here you write something that is in contrast with the statement in the left column:	Here you assign points to this web site based on the clear return policy characteristic	Here you assign points to this web site based on the clear return policy characteristic	Here you assign points to this web site based on the clear return policy characteristic	Here you assign points to this web site based on the clear return policy characteristic	Here you assign points to this web site based on the clear return policy characteristic.	Here you assign points to this web site based on the clear return policy characteristic

<p>Example: Clear return policy</p> <p>It is important for me because it reduces the risk of buying something that I don't like once I have examined it</p>	<p>Example: Confusing and long description of the return policy</p>	<p>Write any number between 7 (the highest, closest to the "clear return policy" comment) and 1 (the minimum, closest to the contrasting quality)</p>	<p>Write any number between 7 (the highest, closest to the "clear return policy" comment) and 1 (the minimum, closest to the contrasting quality)</p>	<p>Write any number between 7 (the highest, closest to the "clear return policy" comment) and 1 (the minimum, closest to the contrasting quality)</p>	<p>Write any number between 7 (the highest, closest to the "clear return policy" comment) and 1 (the minimum, closest to the contrasting quality)</p>	<p>Write any number between 7 (the highest, closest to the "clear return policy" comment) and 1 (the minimum, closest to the contrasting quality)</p>	<p>Write any number between 7 (the highest, closest to the "clear return policy" comment) and 1 (the minimum, closest to the contrasting quality)</p>
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This is what your table should look like: two examples of the characteristics that you might find helpful.

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
<p>Example:</p> <p>The web site uses my favorite color (7 points)</p> <p>It is important for me because it makes me feel good when I shop</p>	<p>Example:</p> <p>Not my favorite color (1 point)</p>	4	5	1	1	6	7
<p>Example:</p> <p>Good pictures of the books (7 points)</p> <p>I can see if this is the book that I have seen before and wanted to buy</p>	<p>Example:</p> <p>Not enough pictures (1 point)</p>	2	3	7	4	5	6

Now, it is your turn to fill in the form. Write down as many features as you can think of – you can add more rows if needed. At the end of the table please answer just three questions about yourself. **Thank you for submitting your evaluation!**

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

Please answer a few demographic questions below:

What is your gender? ___ Male ___ Female

What is your age group? ___ 17-19 ___ 20-25 ___ 26-30 ___ 31-34 ___ 35-39 ___ 40+

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

Example of a filled in form

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
1 <i>Specifically clear return policy</i>	Confusing and long description of the return policy	3	5	3	6	2	3
2 <i>Customer feedback</i> The website uses my favorite color (it is important for me) <i>Support help desk</i> Contact details I need something help and this is important for me	Websites design looks "copy" out of it was not done and read It was very difficult to find the support number	5	2	6	3	2	4
3 <i>Popularity is important</i> Because so I can trust this website	I didn't know about some books - otherwise I can trust them	3	6	4	5	3	4
4 <i>range of articles/categories</i> Too many articles on my good for quality or price	Too many articles of different same quality. It was very difficult to find the article that I want	2	7	4	2	2	2
5		6	6	6	6	6	6

Characteristic describing online trust and why it is important for you (7 points)	Contrasting quality (1 point)	Allbris http://www.allbris.co.uk/	Amazon http://www.amazon.com	BAMI Books-A-Million http://www.bosamillion.com	Biblio http://www.biblio.com/	Bookspot http://www.bookspot.com/	Powell's Books http://www.powells.com/
Clear terms of payment Not must clear, as I can pay the right way	that was good on all websites the same clear terms of payment	6	6	6	6	6	6
time of delivery/price is the selling must short	is the delivery time too long. I wouldn't buy anymore on this site	4	7	3	5	4	6
language/reference (Prag) I can only German and I need German language	on some websites I can't find the button to checkout language	3	4	4	3	3	4
price the price must be over and for a while I can't find the button I need German language	the price of all websites are in the same way	5	5	5	5	5	5
What is your gender?	X Male ___ Female	6	6	6	6	6	6
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						

different