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Three Research Essays on the Effects of Charity Website Design on Online Donations

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THREE RESEARCH ESSAYS ON THE EFFECTS OF CHARITY WEBSITE DESIGN ON ONLINE DONATIONS

by

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ABSTRACT

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This dissertation, which comprises three essays, examines the effects of charity website characteristics on people's attitudes and online donation behaviors based on the Elaboration Likelihood Model of persuasion (Essay 1), the halo effect (Essay 2), and self-schema, congruity, and visual rhetoric (Essay 3).

***Essay 1**: The Elaborating Role of Personal Involvement with Charity Giving and Helper's High on the Effects of Website Quality: Multiple Roles of Variables*

Although the Elaboration Likelihood Model (ELM) has been utilized for decades, researchers have not leveraged its full capabilities and richness in understanding the multiple roles postulate and employing the central and peripheral routes to persuasion. The central theme of this study is that cues can assume multiple roles, serving as central or peripheral cues, depending on an elaboration state. Moreover, this study asserts that a variable cannot be determined as a central or peripheral cue without consisting the elaboration state and associated theoretical explanations. This study theorizes and empirically tests the multiples roles postulate in the context of charity website and online donations. Using websites as a persuasion channel, this study investigates the effects of

charity website quality, consisting of information content quality and system quality, on attitude toward the charity website, which in turn influences willingness to donate to the charity website. In keeping with the multiple roles postulate, this research investigates two charity-specific motivational constructs, personal involvement with charity giving and helper's high as elaboration states, proposing that people with high personal involvement are more likely to be persuaded by information content, including financial, performance, and donation information. Likewise, individuals who reflect greater helper's high, will rely more on system quality characteristics (including navigability, download delay, visual aesthetics, and security) in evaluating and forming their attitudes toward the charity websites. The results of structural equation modeling supported all hypotheses. This study extends the ELM by supporting the multiple roles postulate that has not received adequate attention in prior research and introducing charity-specific elaboration motivations.

Essay 2: Beautiful is Good and Good is Reputable: Multi-Attribute Charity Website Evaluation and Reputation Formation under the Halo Effect

The halo effect has been extensively employed to understand how people make judgments of quality about an object. However, there is little research on how people evaluate multi-attribute objects and what types of salient halos exist in their evaluation. In addition, little research has investigated the initial reputation formation of an unknown object. Based on these two research lacuna, the purposes of this study is to identify if there are evidences of various salient halos in evaluating multi-attributes objects and to theorize initial reputation formation. To accomplish these research objectives, this study

employs charity websites as a multi-attribute donation channel consisting of three dimensions of information content (mission, financial, and donation assistance information) and four dimensions of system functionalities/features (i.e., navigability, download speed, visual aesthetics, and security). This study proposes collective halo, aesthetics halo, two-sided quality halo, quality halo, and reputation halo in the context of charity website evaluation. The results of structural equation modeling and other analyses show evidence of the proposed halos.

Essay 3: The Effects of Schema Congruity and Visual Consistency on Social Judgment of Charity Websites

Effectively designed websites can positively enhance the donors' perceptions so as to facilitate online donations. Drawing on extensive research on self-schema, congruity, and visual rhetoric, this study examines the effects of schema congruity (SC) and visual consistency (VC) on the perceived warmth and competence of charity websites. This study theorizes schema-visual congruity, an interaction between SC and VC. Using a controlled lab experiment, this study finds significant main effects of schema congruity and visual consistency on perceived warmth and competence. Also, there is a positive interaction between SC and VC, supporting the need for schema-visual congruity as a determinant of perceived warmth and competence. Consistent with prior eCommerce and donation research, this study finds that positive perceptions of charity websites (i.e., warmth and competence) increase attitude toward donation to the website, which in turn influences donation intention.

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To

my parents

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CHAPTER 1

INTRODUCTION: THREE RESEARCH ESSAYS ON THE EFFECTS OF CHARITY WEBSITE DESIGN ON ONLINE DONATIONS

"Everybody can be great because everybody can serve"

Martin Luther King, Jr.

The pervasiveness of the Internet is one of the most prominent phenomena in today's information society. As of June 2012, there were estimated to be over 2.4 billion Internet users in the world including 245 million in the U.S., 518 million in Europe, and 1.1 billion in Asia (Internet World Stats 2013). The rapid development of Internet technologies along with the growing number of Internet users have led a large number of businesses to choose websites as a multi-purpose channel for advertising a brand, transacting with and servicing customers and investors, or developing public relations (Agarwal and Venkatesh 2002; Subramaniam et al. 2000). Retailers' websites play an especially important role in selling products to and interacting with customers (Bellizzi 2000; Song and Zahedi 2005). Since firms utilizing websites can reach many more customers, contact them more frequently, effectively facilitates sales, and even pioneer new business opportunities, researchers and business practitioners cannot emphasize enough the importance of websites.

Websites are as important to charity organizations as they are to for-profit businesses. Like for-profit business websites, charity websites play various roles such as publicizing projects and financial reports (e.g., IRS Form 990), fundraising, recruiting volunteers, reporting performance, and interacting with the general public as well as

potential contributors (Gomes and Knowles 2001; Hodgkinson and Nelson 2001; Sargeant et al. 2007; Schneider 2003; Waters 2007). Online fundraising continues to grow, and charity websites play an important role in online fundraising. In 2013, according to Network for Good (2014), most charitable online donations through Network for Good platform (networkforgood.org) is made through charity websites (61%), followed by peer-to-peer giving (e.g., Facebook) (18%), and giving portals (e.g., Charity Navigator) (12%). To facilitate online donations, a number of charity organizations have spent considerable effort on their websites by improving navigability for information search, personalizing communication with donors, and providing various features and information (Barton and West 2011). In September 2010, for example, the Christian Foundation for Children and Aging opened a new website that provides profiles of the children supported by the charity and allows donors to choose the children they would like to help. The personalized website improved the charity's online fundraising such that the average online donations went up about 10 percent from $71 to $78, and total online funds increased 15.7 percent over the year (Barton and West 2011). Almost 1.1 million charity organizations exist in the U.S. (Internal Revenue Service 2012), and an increasing number of charity organizations will be forming and investing in their websites.

A rich body of success stories in online fundraising and charitable projects through websites have influenced many charities to actively utilize websites. However, the performance of charities in realizing online contributions still has some important issues to be addressed. Although online fundraising has been increasing, only a handful

of charities raised at least 10 percent of their donations through the Internet[1] (The Chronicle of Philanthropy 2011). In addition, the success stories (e.g., online fundraising) and developed Internet website technologies (e.g., customization) are generally limited to large, well-known charities. Moreover, according to a satisfaction survey of websites, satisfaction with charity websites is fairly low; survey respondents gave the average charity website a rating of only 73 out of 100, even lower than government websites and 10 points lower than online banking websites (Jensen 2009). Thus, more research on charity websites is needed to better understand how charity website design elements influence people's perceptions and attitudes toward the charity websites and online donations.

Given the importance of charity websites, this dissertation, which consists of three essays, investigates the effects of charity website design on people's perceptions, attitudes, and online donation behaviors (e.g., online monetary donation and volunteering) based on various theoretical foundations. Essay 1 theorizes and empirically tests the multiples roles postulate of the Elaboration Likelihood Model. In particular, Essay 1 investigates two charity-specific motivational constructs, personal involvement with charity giving and helper's high as elaboration states. Drawing on the halo effect, Essay 2 examines various salient halos in evaluating multi-attributes objects and theorizes initial reputation formation. Finally, Essay 3 which is based on self-schema, congruity, and visual rhetoric examines the effects of schema congruity and visual consistency on the perceived warmth and competence of charity websites; and theorizes schema-visual

[1] See Table 2.6 for detailed information

congruity, an interaction between schema congruity and visual consistency. An overview (Figure 1.1) the three essays are given below.

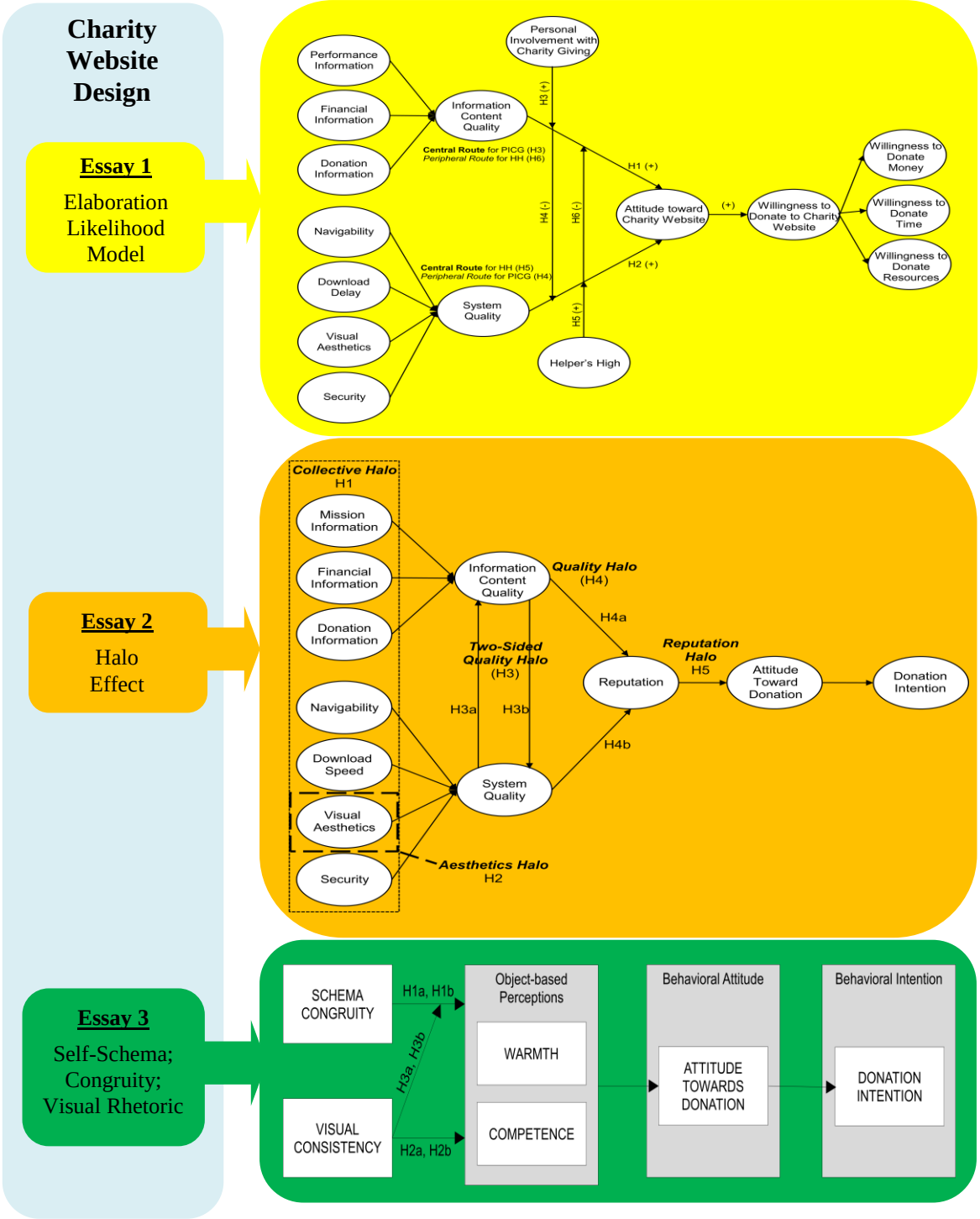


Figure 1.1. Overview of Three Essays

The remainder of the dissertation is organized as follows. In the following sections, we review domains (chapter 2) relevant to this dissertation. In particular, charity organizations and (online) donations are explained in detail. This is followed by Essays 1, 2, and 3 which provide in greater detail motivations and research objectives, theoretical foundations, research models and hypotheses, methods and data analyses, summaries of results, and discussions.

CHAPTER 2

DOMAIN

"Online volunteerism creates new opportunities for people who have too often been excluded from participation—such as older volunteers, people with disabilities, individuals living in remote areas, and those with pressing domestic responsibilities or very limited means"

Ad de Raad

This chapter mainly discusses individuals' donation behaviors, and charity organizations, and charity organizations' use of the Internet to set the stage and highlight the significance of examining individuals' online donations through charity websites.

2.1. Donation Behaviors

A review of literature reveals that donation behaviors have been extensively studied, especially in social psychology and marketing. Extant research has employed several terms to reflect donation behaviors such as prosocial, altruistic, helping, charitable-giving, volunteering, contribution, and donation (see Table 2.2). Prosocial and altruistic are somewhat broad terms and a few researchers have used them to represent proenvironmental behaviors such as energy conservation or garbage reduction (e.g., Tyler et al. 1982), which are beyond the scope of this dissertation. It is also important to make distinction between prosocial and altruistic behaviors. According to Eisenberg and Miller (1987), prosocial behavior refers to "voluntary, intentional behavior that results in benefits for another" while altruistic behavior is defined as "a subtype of prosocial

behavior—as voluntary behavior intended to benefit another, which is not performed with the expectation of receiving external rewards or avoiding externally produced aversive stimuli or punishments" (p. 92). Thus, the other terms donation, contribution, and volunteering are preferred over prosocial and altruistic.

Although there are similarities and variations in the way donation, contribution, and volunteering are conceptualized and defined, and these terms have been sometimes used interchangeably across social sciences, this dissertation predominantly uses donation for three reasons[2]. First, donation is generally defined as gifts or contribution for charitable purposes to benefit other people, groups, or organizations. It takes various forms, including cash, time, goods, resources, and body parts (i.e., blood and organs) (see Bendapudi et al. 1996 for more information). Consequently, donation can capture charitable giving of money, time, and resources being examined in this dissertation. Second, volunteering generally indicates time donation. For example, Wilson (2000) defined volunteering as "any activity in which time is given freely to benefit another person, group, or organization" (p. 125). The other definition of volunteerism suggested by Dutta-Bergman (2003) is "a formalized, public, and proactive choice to donate one's time and energy freely to benefit another person, group, or organization" (p. 355). In the same vein, Sherr (2008) defined volunteerism as "making a choice to act in recognition of a need, with an attitude of social responsibility and without concern for monetary profit" (p. 11). Third, several IS researchers have examined contribution behaviors to

[2] However, this dissertation also uses volunteering along with time donation because most studies have used the term volunteering to represent time donation as shown in Table 2.2. In greater detail, when we indicate specific types of online donations, we use online monetary donation, online resource donation, and online volunteering.

explain knowledge sharing (Ma and Agarwal 2007; Olivera et al. 2008; Wasko and Faraj 2005), and thus using contribution may cause confusion with knowledge sharing.

Aside from literature on online/technology mediated contribution behaviors relating to knowledge sharing (Ma and Agarwal 2007; Wasko and Faraj 2005) and online prosocial behaviors (Sproull et al. 2005), there is hardly any research examining the effect of charity websites on online donation behaviors in the IS discipline. As a result, the three essays in this dissertation hold willingness to conduct online donations (money, resources, and time) as a dependent variable along with individuals' attitude as a mediator link between website design elements and willingness to donate online.

It is necessary to describe three online donation behaviors (i.e., online monetary donation, online resource donation, and online volunteering) for a better understanding of our dependent variables. Online monetary donation is rather straightforward term, referring to the charitable giving of one's money online. Compared to online monetary donation, online resource donation and online volunteering[3] is poorly practiced and not well-known. Online resource donation is defined as the charitable giving of one's resources online. Examples of online resource donation are donating idle computing power from donors' PCs to help scientific research and providing software that donors have written to open-source software communities (Sproull et al. 2005). UN Volunteer (2014) defines online volunteering as "a form of social behavior, undertaken freely over the Internet which benefits the community and society at large as well as the volunteer, and which is not driven by financial consideration" and an online volunteer as "an individual who commits her/his time and skills over the Internet, freely and without

[3] Other terms of online volunteering is virtual volunteering, cyber volunteering, ICT (information communication technology) volunteering, cyber service, telementoring, teletutoring, and e-volunteering (See Peña-López, 2007 for detailed information).

financial considerations, for the benefit of society." Based on previous definitions of volunteerism (Dutta-Bergman 2004; Sherr 2008; Wilson 2000, UN Volunteers 2014), this dissertation defines online volunteering as voluntary choice to contribute one's time and mental energy freely on the technological platform to benefit oneself, another person, group, or society. This definition does not preclude volunteers' use of financial resource (e.g. volunteer's purchasing a computer to give online education to uneducated people).

Online volunteering is not a new concept. It has been expanded with the advent of the Internet. One of the earliest examples of formal online volunteering is *Project Gutenberg*, which started in the 1970s and motivated online volunteers to produce electronic versions of public domain books (Cravens 2010). Online volunteering is conducted on the technological platform, i.e. Internet. Needless to say, online volunteers have or can access basic IT tools (computer, Internet, e-mail, and instant messenger). While various opportunities to volunteer online without any special knowledge exist (e.g., fundraising campaign), many online volunteers contribute their knowledge (e.g., charity website development, translation). From the stories of online volunteering awardees (UN Volunteer 2014), we derive two types of online volunteering based on the utilization of knowledge of IT artifacts: technical online volunteering and social online volunteering. Table 2.1 offers examples of technical and social online volunteering.

Table 2.1. Examples of Two Types of Online Volunteering

Type	Example
Technical Online Volunteering	Web development and management Edit and design e-newsletter Database design and management Open source systems development
Social Online Volunteering	Translation, Advising business plan, Writing books, Marketing, Grant writing, Research, Campaign reporting, Fundraising Campaign

We argue that online donations are a very timely research topic because it is an integrated area between two huge, mature research domains, offline donations and eCommerce. We also examine online donations based on a well-developed theoretical perspective of the elaboration likelihood model of persuasion (Essay 1), the halo effect (Essay 2) and self-schema, congruity, and visual rhetoric (Essay 3). Figure 2.1 represents the conceptual research domain of online donations being used in this dissertation and Table 2.2 provides prior research on donation behaviors.

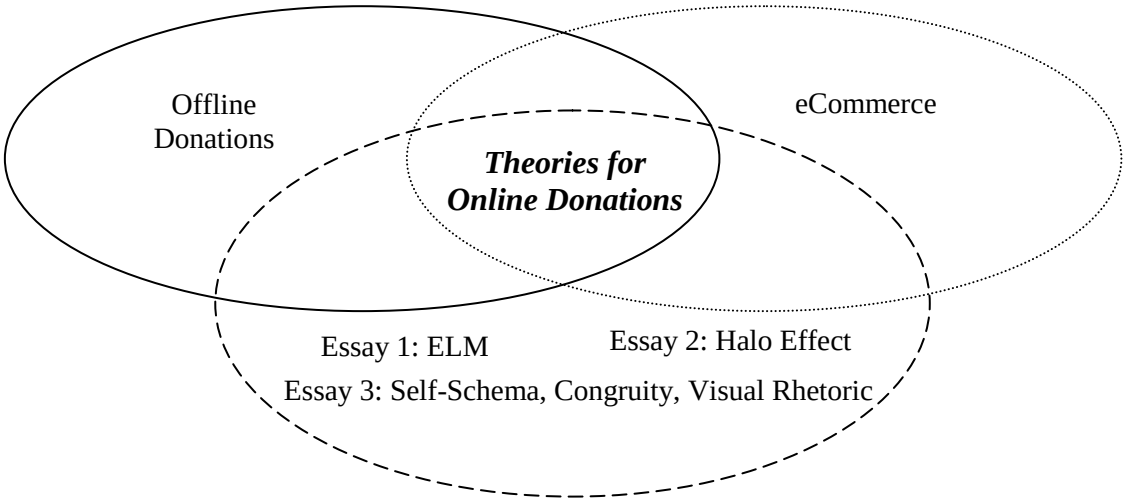


Figure 2.1. Conceptual Research Domain of Online Donations in the Dissertation

Table 2.2. Selected Research on Donation Behaviors

Reference	*Journal*	Used Term	Topic Examined
	Key Independent Variable	(Intermediary) Dependent Variable	Key Finding
Pomazal and Jaccard (1976)	*J. Personality and Soc. Psych.*	Altruistic, Donation, Helping	Informational approach to altruistic behavior (blood donation)
	Beliefs, Attitudes, Moral obligations	Intentions Actual blood donation	- The relationship between actual donation and donation intention is mediated by ability and reliance on other people or events.
Pessemier et al. (1977)	*J. Consumer Res.*	Donation	Determinants of willingness to donate body parts (blood, skin, marrow, anatomical gifts, kidney)
	Demographic (sex, age, etc), Monetary incentives, Attitude (aging value, religiosity, etc)	Willingness to donate body parts	- Demographic and attitudinal variables have impacts on each measured aspect of donation intention. - The influence of monetary incentives is largely negative but a nontrivial proportion of potential donors are positively affected by monetary incentives.
Zuckerman and Reis (1978)	*J. Personality and Soc. Psych.*	Altruistic, Donation	Comparing three models (TRA, Schwartz's model, and Snyder's model) of blood donation intention
	Attitude, Social norm, Moral norms, Self-monitoring	Blood donation intention	- Significant results were found for TRA (attitude and social norms) and Schwartz's model (moral norms) but not Snyder's model (self-monitoring).
Schwartz and Fleishman (1982)	*Personality and Soc. Psych. Bull.*	Helping, Volunteering	Effects of personal norms and denial of responsibility on volunteering intention
	Personal norms, Responsibility denial	Intention to volunteer	- Women with negative personal norms show less helping intention in response to an appeal than those with no norms. - There is a moderating effect of responsibility denial of the influence of positive personal norms on volunteering intention, but not the effect of negative norms.
Gorsuch and Ortberg (1983)	*J. Personality and Soc. Psych.*	Donation	Importance of moral obligation in blood donation
	Moral and non-moral situation, Attitude, Social norms, Moral obligation	Blood donation intention	- In moral situations, the moral obligation is more highly associated with blood donation intention than TRA constructs while it is not in non-moral situations.
Dawson (1988)	*J. Health Care Marketing*	Charitable giving	The motivations of monetary giving
	Career advancement, Income advantages, Self-esteem	Monetary donation	- Reciprocity, income, assets, and age are significant determinants but self-esteem, career, and education are not.

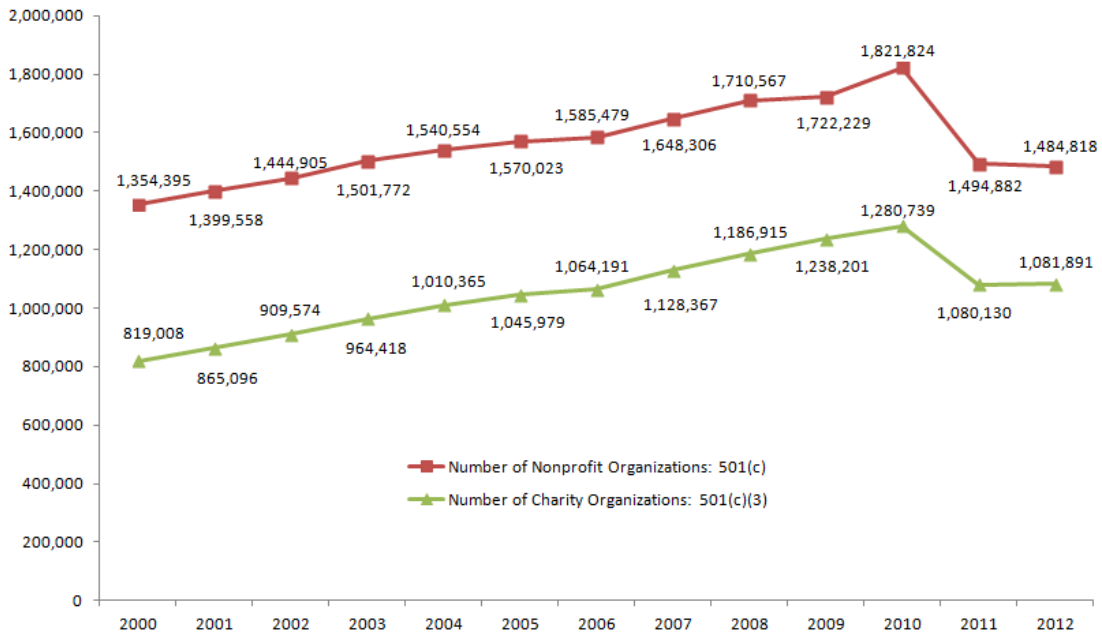
Reference	*Journal*	Used Term	Topic Examined
	Key Independent Variable	(Intermediary) Dependent Variable	Key Finding
Dovidio et al. (1990)	*J. Personality and Soc. Psych.*	Helping	The effect of empathic concern on helping other people
	Observational set (imagine or observe), Problem (same or different), Order of problem presentation	Helping	- For the same problem, imagine-set respondents helped more often than do observe-set respondents but not for a different problem. - Only empathic concern is significantly related to the specific problem associated with helping.
Constant et al. (1994)	*Inform. Systems Res.*	Prosocial	The impact of prosocial attitude and organizational norms in information sharing in organization
	Self-interest, Reciprocity, Work experience, Work training, Self-expression, Self-consistency	Prosocial attitudes, Organizational ownership norm Information sharing	- Attitudes toward information sharing rely on the type of the information
Fisher and Ackerman (1998)	*J. Consumer Res.*	Helping, Donation, Volunteering	The role of recognition and group need on donated time
	Group success, Promised recognition	Expectations of social approval, # of hours donated, Personal feelings, Volunteer commitment	- Promotional appeals based on group need and promised recognition are effective only when they are used in combination.
Lee et al. (1999)	Social Psychology	Giving, Donation	Similarities and differences among time, money, and blood donation
	Others' expectations, Modeling, Past receipt, Personal norm	Past behavior, Role identity Donation intention (time, money, blood)	- Although the model fit of three types of donation is similar, the effects of certain variables are different with respect to different forms of donation.
Sargeant (1999)	*J. Marketing Management*	Charitable giving, Donation, Gifts of cash, Gifts of time, Gifts in kind	Conceptual model of donor behavior
	Input (charity appeal, brand), Perceptual reaction, Extrinsic determinant (age, gender)	Outputs (gifts of cash, gifts of time, gifts in kind, size of gift, loyalty)	- Development of a comprehensive model of donor behavior.

Reference	*Journal*	Used Term	Topic Examined
	Key Independent Variable	(Intermediary) Dependent Variable	Key Finding
Armitage and Conner (2001)	*J. Applied Soc. Psych.*	Donation	Predictors of blood donation
	Attitude, Subjective norm, Self-efficacy, Perceived behavioral control, Moral norms, Self-identity	Blood donation intention	- Examined independent variables are well supported as predictors of blood donation intention.
Bennett (2003)	*Int'l. J. of Nonprofit and Voluntary Sector Marketing*	Giving, Donation, Volunteering	Factors of donation to particular types of charity
	Personal values, Organizational values	Preference to donate certain charity types	- Personal values and inclinations are strongly associated with charity selections.
Bock et al. (2005)	*MIS Quart.*	Contribution	Determinants of employees' knowledge sharing in organizations
	Anticipated extrinsic rewards, Anticipated reciprocal relationship, Sense of self-worth,	Attitude, Subjective norm Intention to knowledge sharing (extrinsic and implicit)	- All hypothesized relationships are found to be significant except the relationships between anticipated extrinsic rewards and attitude and between sense of self-worth and attitude.
Finkelstein et al. (2005)	*Soc. Behavior and Personality*	Helping, Volunteering	Determinants of the amount of time spent volunteering at a hospice
	Motives, Role identity, Prosocial personality, Perceived expectations	Time spent volunteering, Length of service	- Identity and perceived expectations are the strongest determinants of both time spent volunteering and length of service.
Sproull et al. (2005)	Book Chapter	Altruistic, Prosocial, Helping, Donation, Contribution, Volunteering	Online prosocial behaviors
	N/A	N/A	- Provide descriptions and theoretical foundations of online prosocial behaviors
Wasko and Faraj (2005)	*MIS Quart.*	Contribution	Factors of online community knowledge contribution using network, archival, survey, and content analysis data.
	Reputation, Enjoy helping, Centrality, Self-rated expertise, Tenure in the field, Commitment, Reciprocity	Knowledge contribution	- Perception of professional reputation, experience to share, and centrality are significantly associated with knowledge contribution. - Without regard to anticipations of reciprocity from other people or high degrees of commitment, people contribute their knowledge.

Reference	*Journal*	Used Term	Topic Examined
	Key Independent Variable	(Intermediary) Dependent Variable	Key Finding
Boezeman and Ellemers (2007)	*J. Applied Psych*.	Volunteering	Commitment and cooperative intention among volunteers
	Pride in being a member of the volunteer organization, Volunteer organization respect	Normative and affective organizational commitment Behavioral intent on behalf of the volunteer organization	- Normative organizational commitment mediates the relationship between pride and respect and the intention to remain a volunteer
Ma and Agarwal (2007)	*Inform. Systems Res.*	Contribution	IT based feature for knowledge contribution in online community
	Virtual copresence, Persistent labeling, Self-presentation, Deep profiling,	Perceived identity verification Satisfaction, Knowledge contribution	- The positive influences of community IT artifacts on perceived identity verification are found. - Perceived identity verification is strongly associated with member satisfaction and knowledge contribution.
Liu and Aaker (2008)	*J. Consumer Res.*	Contribution, Helping, Giving, Donation, Volunteer	Two distinct mind-sets that influence consumers' willingness to donate to charitable causes (monetary donation and volunteer time)
	Time ask, Money ask, Emotional mindset, Value maximization mindset	Giving leads to happiness Actual contribution	- Asking people to consider about "how much time (vs. money) they would like to donate" to a charity facilitates the amount of donation to the charity. - This effect results from different mindsets caused by money versus time.
Farrow and Yuan (2011)	*J. Computer-Medicated Comm.*	Volunteering, Charitable giving (gift)	Effects of alumni network ties in Facebook on charitable giving
	Number of university alumni groups active in on Facebook, Frequency of communication with other alumni, Emotional closeness to alumni	Attitude toward volunteerism and charitable giving Actual volunteer and charitable giving	- Active participation in Facebook groups is positively associated with strength of network ties.

2.2. Charity Organizations

Tax-exempt nonprofit organizations (501(c)) in the U.S. are defined and regulated mainly under the federal tax code. Among a variety of nonprofit organizations, 501(c)(3) organizations (religious, charitable, and similar organizations) are of interest to this dissertation. 501(c)(3) organizations are different from other types of 501(c) organizations in that they emphasize philanthropic objectives. The total nonprofit sector has grown steadily in the last three decades. According to Internal Revenue Service, IRS (2012), almost 1.5 million nonprofit organizations were registered with the IRS in 2012; and charity organizations, the largest category of nonprofit organizations, included over 1 million organizations. The number of registered charity organizations grew from 819,008 in 2000 to 1,081,891 in 2012, an increase of 24 percent[4] (See Figure 2.2).



Source: Combined from Internal Revenue Service (2003, 2005, 2007, 2010, 2011, 2012)

Figure 2.2. The Number of 501(c) and 501(c)(3) Organizations, 2000-2012

[4] According to Internal Revenue Service (2011), the number of 501(c)(3) organizations decreased from 1,280,739 in 2010 to 1,080,130 in 2011 because the tax-exempt status was revoked for failing to file the Form 990 for three years in a row as required by the Pension Protection Act of 2006.

In 2009, U.S. charities reported 1.40 trillion dollars in revenue, 1.40 trillion dollars in expenses, and 2.53 trillion dollars in assets (Roeger et al. 2011). Between 1999 and 2009, particularly, revenues, expenses and assets increased 36 percent, 49 percent, and 33 percent, respectively, after adjusting for inflation (Roeger et al. 2011). Charities have played a considerable role in the U.S. economy. In 2010, there were 10.7 million paid workers, accounting for 10.1 percent of total private employment in the U.S. (Salamon et al. 2012). The nonprofit employment is the third largest among U.S. industries, behind only retail trade (14.5 million) and manufacturing (11.5 million) (Salamon et al. 2012). Furthermore, more than 40 % of nonprofits plan to hire workers in 2012 (Di Mento 2012). The nonprofit sector accounts for 8.3 percent of wages and 5.2 percent of gross domestic product (GDP) in the U.S. (Urban Institute 2007). The significant increase in both the number of charities and the non-profit workforce suggests the magnitude of importance of charities to social, political, and economic life of the U.S. (Massar 2007).

U.S. charity organizations have provided remarkable and various kinds of programs to improve individuals and society by prevailing over poverty (e.g., MercyCorps), protecting animals (e.g., Animal Welfare Institute) and environment (e.g., Sea Shepherd), developing poor children (e.g., Save the Children), and providing food to people in need (e.g., Hunger Task Force). The classification of charities suggested by the National Taxonomy of Exempt Entities – Core Codes (NTEE-CC) system and Charity Navigator, a nonprofit organization that evaluates U.S. charities is presented in Table 2.3. To show how large many of U.S. charities are, the list of top 10 super-sized charities is

illustrated in Table 2.4. In addition, the list of top 10 celebrity-related charities is presented in Table 2.5.

Table 2.3. Classification of Charity Organizations

NTEE-CC	Charity Navigator		Definition by Charity Navigator
Category	Category	Major Group	
Art, Culture, Humanities	Arts, Culture, Humanities	Libraries, Historical Societies and Landmark Preservation	"Art, culture, Humanities charities promote artistic and cultural excellence and preserve artistic and cultural heritage. Whether on stage, over the airwaves, or in exhibition halls, they ensure that our artistic and cultural past and present continues to be accessible, enjoyed, and preserved."
		Museums	
		Performing Arts	
		Public Broadcasting and Media	
Education	Education	Universities, Graduate Schools, and Technological Institutes	"Education charities make learning possible for students of all ages, from pre-school to graduate school. They also provide other educational services and opportunities that help make schools more effective and more accessible to students of all backgrounds."
		Private Elementary and Secondary Schools	
		Private Liberal Arts Colleges	
		Other Education Programs and Services	
Environment and Animals	Environment	Environmental Protection and Conservation	"Environment charities work to preserve and protect the environment and to promote environmental research, conservation and appreciation."
		Botanical Gardens, Parks, and Nature Centers	
	Animals	Animal Rights, Welfare, and Services	"Animals charities protect, defend and provide needed services to domestic and wild animals. These organizations preserve wildlife habitats and protect endangered species, and seek ways to sustain and promote those habitats and species over time."
		Wildlife Conservation	
		Zoos and Aquariums	
Health	Health	Diseases, Disorders, and Disciplines	"Health charities cure diseases, treat and support our sick and disabled, seek improvements in medical treatments, and promote public understanding and awareness of particular health risks, diseases and disabilities."
		Patient and Family Support	
		Treatment and Prevention Services	
		Medical Research	
Human Services	Human Services	Children's and Family Services	"Human services charities provide networks of direct services to people in need. They feed our hungry, strengthen our communities, shelter our homeless, care for our elderly, and nurture our young."
		Youth Development, Shelter, and Crisis Services	
		Food Banks, Food Pantries, and Food Distribution	
		Multipurpose Human Service Organizations	
		Homeless Services	
		Social Services	

NTEE-CC	Charity Navigator		Definition by Charity Navigator
Category	Category	Major Group	
International, Foreign Affairs	International	Development and Relief Services	"International charities work throughout the world to defend human rights, to promote peace and understanding among all nations, and to provide relief and development services where they are needed the most."
		International Peace, Security, and Affairs	
		Humanitarian Relief Supplies	
		Single Country Support Organizations	
Public, Societal Benefit	Public Benefit	Advocacy and Civil Rights	"Public benefit charities protect, improve and invest in our communities and our country by defending civil rights, conducting research in science and public policy, and promoting philanthropy and social action."
		Fundraising Organizations	
		Research and Public Policy Institutions	
		Community Foundations	
		Community and Housing Development	
Religion Related	Religion	Religious Activities	"Religion charities promote and support particular religions and religious activity and worship."
		Religious Media and Broadcasting	
Mutual/ Membership Benefit	N/A		
Unknown, Unclassified	N/A		

Source: Charity Navigator (2014)

Table 2.4. Top 10 Super-Sized Charities in the U.S.

Rank	Charity (Web Address)	Category (Major Group)	Total Expense (Fiscal Year)
1	American Red Cross (www.redcross.org)	Human Services (Multipurpose Human Service Organization)	$3,329,153,707
2	Feeding America (feedingamerica.org)	Human Services (Multipurpose Human Service Organizations)	$1,559,486,335
3	Smithsonian Institution (www.si.edu)	Art, Culture, Humanities (Museums)	$1,146,692,789
4	World Vision (www.worldvision.org)	International (Development and Relief Services)	$1,061,958,787
5	American Cancer Society (www.cancer.org)	Health (Disease, Disorders, and Disciplines)	$985,776,801
6	Dana-Faber Cancer Institute (www.dana-farber.org)	Health (Medical Research)	$982,077,009
7	City of Hope (www.cityofhope.org)	Health (Treatment and Prevention Services)	$898,752,866
8	ALSAC – St. Jude Children's Research Hospital (www.stjude.org)	Public Benefit (Fundraising Organizations)	$896,335,006
9	Food for the Poor (www.foodforthepoor.org)	International (Humanitarian Relief Supplies)	$896,102,015
10	The Nature Conservancy (www.nature.org)	Environment (Environmental Protection and Conservation)	$756,406,814

Source: Charity Navigator (2014)

Table 2.5. Top 10 Celebrity-Related Charities in the U.S.

Rank	Charity (Web Address)	Category (Major Group)	Celebrity
1	Michael J. Fox Foundation for Parkinson's Research (www.michaeljfox.org)	Public Benefit (Fundraising Organizations)	Michael J. Fox
2	Tony La Russa's Animal Rescue Foundation (www.arf.net)	Animals (Animal Rights, Welfare, and Services)	Tony La Russa
3	New York Restoration Project (www.nyrp.org)	Environment (Botanical Gardens, Parks, and Nature Centers)	Michael Kors; Bette Midler
4	National Constitution Center (constitutioncenter.org)	Arts, Culture, Humanities (Museums)	George H.W. Bush; Bill Clinton; Sandra Day O'Connor
5	Christopher & Dana Reeve Foundation (www.christopherreeve.org)	Health (Medical Research)	Christopher Reeve
6	The Children's Health Fund (www.childrenshealthfund.org)	Health (Treatment and Prevention Services)	Paul Simon
7	USA for UNHCR (www.unrefugees.org)	International (International Peace, Security, and Affairs)	Angelina Jolie
8	People for the Ethical Treatment of Animals (www.peta.org)	Animals (Animal Rights, Welfare, and Services)	Pink; Pamela Anderson; Alec Baldwin; Woody Harrelson; Alicia Silverstone
9	The Imus Ranch (www.imus.com)	Health (Patient and Family Support)	Don Imus
10	Operation Lookout (www.operationlookout.org)	Public Benefit (Advocacy and Civil Rights)	Dyan Cannon

Source: Charity Navigator (2014)

2.3. Donation to Charities and Related Research

According to Giving USA (2013), total charitable donation by donor source in 2012 was estimated to be $316.23 billion. Individuals (72%) are the largest source of contributions for the year 2012, followed by foundations (15%), bequests (7%), and corporations (6%). Regarding the type of recipient organization, the religion subsector received the biggest share of charitable dollars (32%), followed by education-related organizations (13%) and human services organizations (e.g., Relief for Haiti) (13%), grant-making independent, community, and operating foundations (10%), health organizations (e.g., American Cancer Society) (9%), public-society benefit subsector

such as United Way (7%), international affairs (6%), art, culture, and humanities organizations (5%), environment and animals (3%), unallocated (2%), and individuals (1%).

The largest portion of contributions made by individuals suggests the importance of investigation of individual donation behaviors compared to corporations' social responsibility and contributions. The examination of why and how people contribute to charity has been extensive and has found a vast array of variables affecting the donation behaviors (Bendapudi et al. 1996; Bennett 2003; Lee et al. 1999; Penner and Finkelstein 1998; Sargeant 1999; Wymer 1997). We briefly discuss types of donation, antecedents of donation decision, and factors of people's preference of donation to specific types of charity.

Although many forms of donation behaviors exist, researchers have in general studied three forms: body parts, money, and time (or volunteering). Blood donation accounts for the majority of research of body part donation (Andaleeb and Basu 1995; Armitage and Conner 2001; Ferrari and Leippe 1992; Lee et al. 1999; Pomazal and Jaccard 1976; Zuckerman and Reis 1978), and some researchers have investigated other types of body part donation such as skin, marrow, anatomical gift upon death, and kidney (Briggs et al. 1986; Pessemier et al. 1977). Two other widely examined types of donations are monetary donation (Dawson 1988; Lee et al. 1999; Liu and Aaker 2008) and volunteering (Lee et al. 1999; Liu and Aaker 2008; Schwartz and Fleishman 1982; White and Peloza 2009).

In examining antecedents of donation decision, Sargeant (1999) developed a comprehensive model of donation behavior, incorporating various theoretical constructs

such as input (e.g., charity appeal/brand), perceptual reaction (e.g., perceptual noise), extrinsic antecedents (e.g., demographic), intrinsic antecedents (e.g., empathy and fear), processing antecedents (e.g., past experience), and output (e.g., gift in cash, time, and kind). A large body of research has identified demographic variables (e.g., age, gender, education, income, social class, marital status) as predictors of donation intention (Briggs et al. 1986; Dawson 1988; Dovidio et al. 1990; Pessemier et al. 1977; Wymer 1997). Zuckerman and Reis (1978) examined relative utility of three models (Theory of Reasoned Action (TRA), Schwartz's Model of Norm-Activation, and Snyder's Theory of Self-Monitoring) in blood donation by examining attitudes, social norms, moral norms, ascription of responsibility and self-monitoring. The results supported TRA and Schwartz's Model but no significant results were found for Snyder's Model, suggesting that intentions of altruistic behavior are a function of attitudes, social norms and moral norms.

Dawson (1988) investigated career advancement, income advantages, reciprocity and self-esteem as determinants of monetary donation to medical charities; and found that only reciprocity and income advantage are statistically significant. In addition, Andaleeb and Basu (1995) suggested that trust and health risk are important factors of blood donation. Penner et al. (1995) developed prosocial personality scales comprised largely of two factors: other-oriented empathy and helpfulness; and subsequent researchers have validated the scales (Borman et al. 2001; Finkelstein et al. 2005). Applying functionalist theory to the motivations of volunteerism, Clary et al. (1998) proposed six functions served by volunteerism: values, understanding, social, career, protective, and esteem enhancement. According to Clary et al., volunteerism offers an opportunity for people to

express values associated with altruistic concerns for others (values), provides the new learning experience to improve knowledge, skills, and expertise (understanding), reflects motivations regarding relationship with other people such as meeting new friends (social), allows people to obtain career-related benefits from volunteering work (career), relieve psychological distress (protective), and improves self-esteem (esteem enhancement).

The realization that charities have been challenged to fund-raise enough money and recruit adequate numbers of quality volunteers has led researchers to examine why people prefer to donate/volunteer to specific charities (Bennett 2003; Wymer 1997). The poor tend to donate to the homelessness and children's charities for the needy whereas the rich are more willing to environmental and ecological charities (Radley and Kennedy 1995; Reed 1998). Child development, hunger, environmental, and Third World charities are popular for young generations (18-24 year olds), who prefer less charities for the elderly (Reed 1998). Wymer (1997) found that differences in personal values significantly distinguish between individuals who decide to volunteer for different types of organizations. Bennett (2003) noted that personal values and inclinations have impacts on the choice of specific charities.

2.4. Charity Organizations and the Internet

Given their heavy reliance on individual donors, charities have engaged in a variety of different fundraising tactics employing not only *traditional media* such as capital campaigns, telemarketing, direct mail, face-to-face canvassing, press and radio advertising, door-to-door distribution, and direct response television (Massar 2007;

Sergeant 1999) but also *new media* such as website, portal, and social network (Hart et al. 2007).

Incorporating the Internet media in fundraising activities helps charities reach far more potential monetary donors and volunteers than was previously realistic with the traditional media (Massar 2007). Online donations are on the rise. Cumulative online fundraising through Network for Good indicates 14% annual growth (Network for Good 2014). Although positive consequences of the Internet on the fundraising effectiveness have been extensively reported, there are two issues to discuss. First of all, not many charities can considerably and consistently raise their donations from the Internet media. According to *The Chronicle of Philanthropy* (2011), there are only a few charities that raised at least 10 percent of their donations online (see Table 2.6), implying that traditional fundraising methods are still dominant. Second, charities for disaster reliefs (e.g., Tsunami and Katrina) can successfully raise large amounts of money in a relatively short period, but the retention rate of impulsive donors for disaster giving is generally low (Network for Good 2014).

We argue that investigating websites should be prioritized over giving portals and social network sites because the majority of charitable online giving is via charity websites (61%) (Network for Good 2014). Particularly on charity websites, recurring donation is a powerful driver of giving (e.g. monthly donation as a sponsor for an Ethiopian child from World Vision) (Network for Good 2014). Table 2.6 shows the list of charities that raised at least 10 percent of donations online.

Table 2.6. Charities that Raised at Least 10 Percent of Their Donations Online[5]

Charity (Web Address)	% of Donations Raised Online	Online Donations	Total Donations
National Multiple Sclerosis Society (www.nationalmssociety.org)	33.8%	$73,475,000	$217,450,000
Leukemia & Lymphoma Society (www.lls.org)	33.2%	$78,949,225	$237,774,850
American Lung Association (www.lung.org)	22.3%	$3,886,714	$17,401,122
Doctors Without Borders USA (www.doctorswithoutborders.org)	19.4%	$51,471,242	$264,801,697
American Red Cross (www.redcross.org)	18.7%	$188,622,721	$1,006,698,378
Partners in Health (www.pih.org)	18.4%	$28,000,000	$151,958,130
Mercy Corps (www.mercycorps.org)	14.0%	$11,104,423	$79,285,209
Cystic Fibrosis Foundation (www.cff.org)	13.8%	$16,395,691	$118,551,376
Alzheimer's Association (www.alz.org)	12.5%	$22,545,782	$180,888,278

Source: The Chronicle of Philanthropy (2011)

In sum, Chapter 2 mainly discussed the key domains of this dissertation: charity organizations and donations. In particular, we provided definitions of donation behaviors and a rationale why we chose the term donation. In addition, we reviewed charity organizations focusing on its consistent growth and economic importance. Furthermore, we offered a summary of literature on individuals' donation behaviors and stressed the examination of individuals instead of corporations. Finally, the magnitude of importance in investigating charity websites was suggested.

[5] See online at http://philanthropy.com/article/Charities-that-Raised-at-least/127311

CHAPTER 3

ESSAY 1: THE ELABORATING ROLE OF PERSONAL INVOLVEMENT WITH CHARITY GIVING AND HELPER'S HIGH ON THE EFFECTS OF CHARITY WEBSITE QUALITY: MULTIPLE ROLES OF VARIABLES

"We make a living by what we get, but we make a life by what we give."

Winston Churchill

3.1. MOTIVATIONS AND RESEARCH OBJECTIVES

Current theories in attitude change and persuasion have introduced the notion that persuasion can be the consequence of two qualitatively distinct processes. Dual-process theories, the Elaboration Likelihood Model, or ELM (Petty and Cacioppo 1981, 1986) and the Heuristic-Systematic Model, or HSM (Chaiken 1980), posit that attitudes can be formed and changed following either a careful, effortful, and diligent consideration of a message or a less cognitively effortful inference and associative process. In the ELM (and HSM), the former type of processing is referred to as central (systematic) processing and the latter type of processing is referred to as peripheral (heuristic) processing. The ELM has received much attention in IS research as compared to the HSM (Angst and Agarwal 2009) (See Appendix A1). This is in part due to its demonstrated success in other disciplines including social psychology, marketing, consumer behavior, and communication, as well as its intuitive appeal in explaining why a specific persuasion process can lead to differential consequences across different individuals in a given behavioral setting (Bhattacherjee and Sanford 2006).

One of the unique, distinctive features of the ELM is the postulate[6] that a variable can play multiple roles (i.e., it can be a central or peripheral cue). More importantly, what determines the route to persuasion is the extent of elaboration likelihood, not the variable itself (Petty and Wegener 1999). Petty and Wegener noted that

> "One misunderstanding of the ELM is the mistaken belief that the model holds that source (and other nonmessage) variables are peripheral but message variables are central. Because of this misunderstanding, some have interpreted the ELM to say that source factors must invariably decrease in impact as the elaboration likelihood is increased. Yet, there are multiple ways in which source (and other nonmessage) variables can increase in impact as a person moves up the elaboration continuum" (p. 51).

The strength of the ELM is that it offers an insight that the same variable can influence persuasion via multiple roles, depending on the degree of elaboration likelihood (Angst and Agarwal 2009; Petty and Cacioppo 1986). In addition, the current study asserts that a variable cannot be determined as a central or peripheral cue without elaboration states and relevant theoretical explanations. However, there is still research which presents a variable as a central or peripheral cue without elaboration states (e.g., Chen and Lee 2008; Li and Ku 2011; Tang 2009) and provides weak theoretical justifications in determining the route to persuasion (e.g., Bansal et al. 2008). Although many ELM studies do provide elaboration states and strong theoretical reasoning in identifying central or peripheral cues (e.g., Angst and Agarwal 2009; Bhattacherjee and Sanford 2006; Sussman and Siegel 2003), there is hardly any research that examines if a variable can simultaneously serve as a central cue and a peripheral cue. Some studies do not even consider both cues; for example, Angst and Agarwal (2009) included only a

[6] The Multiple Roles Postulate: Variables can affect the amount and direction of attitude change by (a) serving as persuasive arguments, (b) serving as peripheral cues, and/or (c) affecting the extent or direction of issue and argument elaboration (Petty and Wegener 1999, p. 48).

central cue. Others use different cues for the central and peripheral route (Bhattacherjee and Sanford 2006). In addressing the research lacuna, the central theme of this study is that a *variable can serve as a central or peripheral cue (i.e., multiple roles), depending on the elaboration state*.

This study theorizes and empirically tests the multiple roles of variables in the context of charity websites and online donations. Previous research has found significant effects of websites on people's online behaviors, especially in online shopping (e.g., Jiang et al. 2010; Pavlou and Fygenson 2006). The effectiveness of charity websites is not unlike those of eCommerce websites, suggesting that visitors will donate money, time, or resources to charities if they trust or form positive attitude toward their websites. In a similar vein, the nonprofit website satisfaction survey conducted by ForeSee showed that website visitors who rate themselves as "highly satisfied" with a charity's website are almost 50 percent more likely to donate to the charity (Jensen 2009). While many researchers have investigated how people's cognitive and/or emotive perceptions of website design elements influence online behaviors (e.g., Cyr et al. 2009; Lee et al. 2012), extant research remains relatively limited in examining websites as a communication channel of attitude change and persuasion. Only recently have researchers considered websites as an external cue to influence users' behaviors (Bansal et al. 2008; Parboteeah et al. 2009; Wells et al. 2011a, 2001b). Thus, website research and practice can benefit from application of the ELM to explicate how central and peripheral cues influence visitor attitudes toward websites using personal motivators as elaboration states.

Using websites as a persuasion channel, this study investigates the effects of information content quality (ICQ) and system quality (SQ) on attitude toward the charity

websites, which in turn influences the willingness to donate. To evaluate the study's central theme, this research examines two charity-specific motivational constructs, personal involvement with charity giving (PICG) and helper's high (HH) as elaboration states. This study proposes that potential donors with higher PICG are persuaded more by ICQ (i.e., financial, performance, and donation information); donors with greater HH more by SQ (i.e., navigability, download delay, visual aesthetics, and security), in evaluating charity websites. On the other hand, donors with higher PICG will be less persuaded by SQ, and donors with greater HH will rely less on ICQ.

As will be highlighted later, this study makes several contributions to both research and practice. From a theoretical perspective, this research supports the most misunderstood postulate of the ELM by showing that the same variable such as SQ can play multiple roles, depending on the degree of PICG and HH. Second, this study also extends the ELM by introducing two charity-specific elaboration motivations that affect attitude formation and behavioral intentions in the context of online donations. Third, we conceptualize and validate ICQ and SQ of charity website quality consisting of multiple sub-dimensions in controlled lab experiment settings. Fourth, the study highlights and establishes the need for a suitable anchor prior to introducing treatment interventions in experiment-based research to avoid drawing inferences from results based on incorrect judgments of participants. Lastly, the findings from this study can provide pragmatic insights that can be used to design and manage change websites to effectively persuade visitors to donate.

The organization of this essay is as follows. In the next section, relevant prior literature is examined to establish a theoretical foundation for studying online donations

through charity websites. This is followed by a presentation of a research model and associated hypotheses. Next, the research design and analyses for two experiments are described. Finally, this study concludes with a discussion of implications for research and practice, limitations, and future research extensions.

3.2. THEORETICAL FOUNDATIONS AND RELATED LITERATURE

Website research and the ELM represent the theoretical foundations for this study. The literature on websites mainly discusses design elements of websites and impacts of websites on online consumer behaviors. The ELM offers a conceptual lens for investigating multiple roles of a variable in persuasion and attitude formation. This section reviews website and ELM literature to derive relevant variables associated with websites and elaboration states, respectively.

3.2.1. Prior Website Research and Dimensions of Charity Websites

Website design, quality, and usability have received extensive attention in the IS research. Early research on websites attempted to better understand the underlying dimensions and measurement scales of website quality (Barnes and Vidgen 2001; McKinney et al. 2002) and website usability (Agarwal and Venkatesh 2002; Palmer 2002). By striving to develop measurement scales that provided nomological validity, early research provided a foundation for further validation studies (e.g., Venkatesh and Ramesh 2006). This early website research stream is categorized as a *development stage*.

Later research focused on theory-based applications of websites to examine how website features influence online consumer behaviors, called an *application stage* in this study. The main research stream of the application stage is a *mind-based approach*[7] which comprises of mainly a *cognition focus* and an *emotion focus* (see Cyr et al. 2009). In this approach, cognitive/utilitarian and/or emotive/hedonic elements of websites were examined to identify online consumer behaviors using various theories such as trust

[7] The term 'mind' is adopted from Hilgard's work (1980): The trilogy of mind: cognition, affection, and conation.

(McKnight et al. 2002), TAM (Gefen et al. 2003), the theory of planned behavior (Song and Zahedi 2005), social presence (Gefen and Straub 2003), visual rhetoric (Cyr et al. 2009), and reversal theory (Deng and Poole 2010).

The *cue-based approach* is a relatively recent stream of website research compared to the *mind-based approach*. The cue-based approach views websites as external cues which affect consumers' beliefs, attitudes, and behaviors. For example, applying signaling theory, Wells et al. (2011b) found that website quality engenders perceived product quality, which in turn influences consumers' product purchasing intention. This finding suggests that website quality is a signal of product quality like common signals of retailer reputation (Chu and Chu 1994) in the context of traditional, offline commerce (See Wells et al. 2011b for research on eCommerce signaling).

It is important to note that website research is not strictly confined to these categories. For instance, studies in the early development stage emphasized cognition in developing measurement of website dimensions (Palmer 2002; Agarwal and Venkatesh 2002). Likewise, cue-based research has incorporated cognition (perceived usefulness) and emotion (perceived enjoyment) (Parboteeah et al. 2009). The main goal of this classification is not so much to provide a typology but to show how website researchers have focused on and changed their theoretical perspectives over time. The current study is in the line of the cue-based approach. Specifically, two dimensions of website quality—information content quality (ICQ) and systems quality (SQ) are investigated as central and peripheral cues for two reasons as explained next.

Information quality (IQ) and SQ were introduced in DeLone and McLean's IS success model (1992), and have been extensively studied in IS research (e.g., Rai et al.

2002). Nevertheless, these two constructs have not been examined as predictors of attitude in the context of online donations. More importantly, these have rarely been examined as 'cues' that are contingent on certain traits of the information processing entities/persons. Since ELM research generally employs one variable each to operationalize a central cue and a peripheral cue in order to identify people's information processing, it is important to prioritize ICQ and SQ simultaneously in examining websites as a persuasion channel.

Methodological considerations are the second reason for the choice of these two variables. Most persuasion studies in social psychology, marketing, and consumer behavior have employed artificially manipulated stimuli (e.g. high vs. low source credibility in advertisement). This study is among the first to examine ICQ and SQ as persuasion cues by manipulating charity websites. Although some prior ELM based website research has investigated IQ and SQ as persuasion cues (e.g., Bansal et al. 2008; Chen and Lee 2008; Tang 2009), these studies have not manipulated the websites to vary the magnitude/extent of these cues. As a result, the true effects of these cues are hard to tease out.

Because of the complex nature of real-world charity websites and given the literature review of website quality, we select financial information, performance information (Saxton and Guo 2011), and donation assistance information to measure charity website ICQ (detailed rationale is provided in Appendix A2). Navigability, download delay, visual aesthetics, and security are adapted to measure charity website SQ (Parboteeah et al. 2009; Wells et al. 2011b). There are other characteristics of charity websites that can be construed to be aspects of ICQ and SQ, such as tailored information

and consistent image (Loiacono et al. 2007). The objective of this research is not to offer an exhaustive list of dimensions of ICQ and SQ, but to select appropriate dimensions as external cues for persuasion. Table A1 in Appendix A lists a sample of prior website research relating to the website quality dimensions considered in this study.

3.2.2. Elaboration Likelihood Model of Persuasion

In the ELM, motivation and ability are hypothesized to determine routes to persuasion. The ELM articulates the notion that these two factors influence the *likelihood* that a person will *elaborate* persuasive information/messages (that is, the elaboration likelihood) (Petty and Cacioppo 1986). Variables, which influence motivation to elaborate, can derive from both individual differences and/or situational influences (Petty and Wegener 1999). As noted earlier, Petty and Wegener pointed out that the *Multiple Roles Postulate* is the most misunderstood one, emphasizing the roles of the postulate such that "it makes a distinction between the processes by which variables have an impact on persuasion" and "it suggests that any one variable can have an impact on attitude change by more than one mechanism" (p. 48). Specifically, the ELM hypothesizes that when the overall elaboration is low, a variable can influence persuasion by relatively less thoughtful processes (peripheral route). Under high elaboration likelihood, a variable can influence persuasion either by acting as an argument or by affecting the direction of issue-relevant considerations (i.e., the variable biases the direction of elaboration) (Petty and Cacioppo 1986; Petty and Wegener 1998a, 1999).

Petty et al. (1993) illustrated such multiple roles for 'mood' under high- and low-thought conditions, highlighting how mood influenced the valence of thoughts that were

generated and that these thoughts in turn influenced attitudes rather than mood being used as a simple cue. In the context of IT adoption, Bhattacherjee and Sanford (2006) hypothesized negative moderating effects of job relevance (i.e., motivation elaboration) and user expertise (i.e., ability elaboration) on the effects of source credibility on attitude and perceived usefulness, suggesting source credibility to be a peripheral route to persuasion. However, the results showed positive moderating effects of job relevance. Although these researchers had not considered or argued for multiple roles postulate, they invoked it to reconcile the conflicting findings by suggesting that source credibility can serve as a central cue under high job relevance condition and as a peripheral cue under high user expertise condition. This illustrates that source credibility can be both central and peripheral depending on the elaboration states.

The ELM has been widely applied in the fields of social psychology (Haugtvedt and Petty 1992), marketing (Park and Young 1986), and consumer behavior (Miniard et al. 1991). It has seen only limited use in the IS discipline. IS researchers have applied the ELM in examining expert system design (Mak et al. 1997), agreement with incorrect expert system advice (Dijkstra 1999), knowledge adoption (Sussman and Siegel 2003), technology adoption (Bhattacherjee and Sanford 2006), and opt-in behavior toward electronic health record use (Angst and Agarwal 2009). Applications of the ELM to website research are even fewer, with some studies examining website personalization (Tam and Ho 2005) and privacy concerns and private information disclosure (Bansal et al. 2008).

ELM based website research has reported different, even contradicting conceptualizations of central cues and peripheral cues in terms of IQ and SQ. Bansal et al.

(2008) conceptualized understandability and adequacy of privacy-policy statements as central cues; and website information quality, website design quality, availability of company information, and third-party assurance seals as peripheral cues. However, Chen and Lee (2009) operationalized aspects of SQ (attractiveness, download time, and navigability) as a central cue. Tang (2009) posited IQ as a central cue and website design characteristics (navigability, load, and responsiveness) as a peripheral cue. As Petty and Wegener (1999) emphasized, the degree of elaboration likelihood, not the variable itself, determines the route to persuasion. Thus, to examine multiple roles of variables, this study introduces two charity-specific elaboration motivations, personal involvement with charity giving, and helper's high (Bennett 2009; Bennett and Gabriel 1999).

3.3. RESEARCH MODEL AND HYPOTHESES

Using the ELM as a theoretical framework and drawing upon eCommerce research, the research model of this study, presented in Figure 3.1, incorporates *personal involvement with charity giving* (PICG) and *helper's high* (HH) as elaboration likelihood states. The primary outcome of interest is attitude, which has been typically employed in ELM studies. In particular, we examine attitude toward the charity website. In line with a recent stream of ELM based IS research (e.g., Angst and Agarwal 2009), this study also includes willingness to donate to the charity website (i.e., behavioral intention) as an additional dependent variable for the sake of completeness. Detailed research hypotheses are developed below.

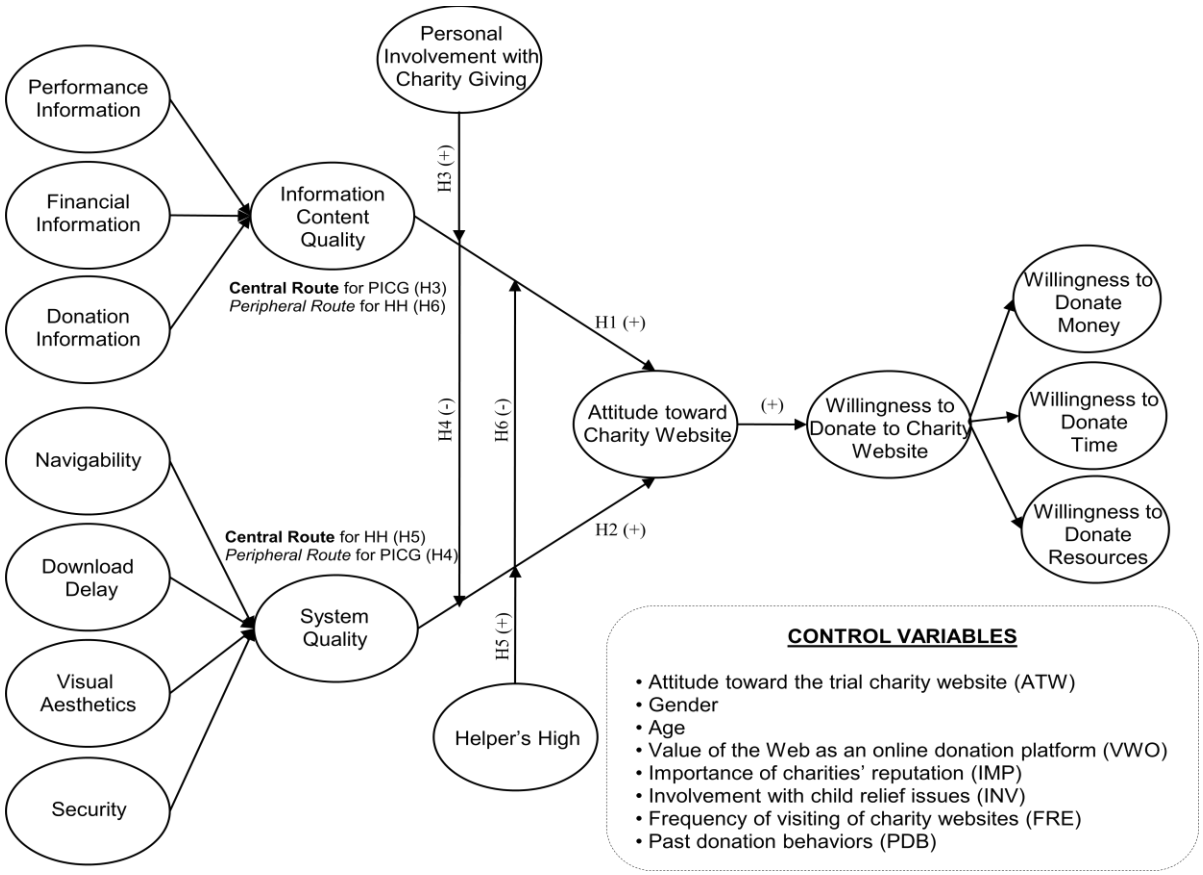


Figure 3.1. Research Model

3.3.1. Predictors of Attitude

The ELM suggests that argument quality (generally identified as the central cue) and peripheral cues (traditionally represented by source factors) are directly associated with attitude formation and change. Argument quality refers to a recipient's subjective perception that arguments and associated logic in the persuasive message are strong and cogent as opposed to weak and specious (Petty and Cacioppo 1986). Peripheral cues refer to environmental characteristics (or meta-information) of the persuasive message without a demanding process of interpreting message arguments (Bhattacherjee and Sanford 2006; Petty and Cacioppo 1986).

Based on the definitions of general website information quality (McKinney et al. 2002) and findings of information disclosure of nonprofit websites (Saxton and Guo 2009), this study defines *information content quality* (ICQ) as a website visitor's perception that the website discloses timely, complete, accurate, relevant, and sufficient performance, financial, and donation assistance information. Research to date has found that information quality plays a vital role in building trust, reducing risk, and increasing satisfaction and loyalty (Cyr 2008; McKinney et al. 2002; Nicolaou and McKnight 2006; Song and Zahedi 2007). Specifically, disclosure of performance and financial information has been increasingly suggested as critical aspects of nonprofit organizations' accountability (Brinkerhoff 2001; Melendez 2001; Saxton and Guo 2011). Disclosure of financial information seeks to show "financial accountability," which "concerns tracking and reporting on allocation, disbursement, and utilization of financial resources, using the tools of auditing, budgeting, and accounting" and "deals with compliance with laws, rules, and regulations regarding financial control and management" (Brinkerhoff 2001, p. 10).

On the other hand, disclosure of performance information is often employed to demonstrate performance accountability "in light of agreed-upon performance target" with its center of attention on mission, service, outputs, and effects (Brinkerhoff 2001, p. 10). Incidents of misuse of funds by charity organizations (e.g., The United Way scandals in the 1990s) have led the public to request that charities be more responsible for their missions and actions, and become more transparent and credible in how charitable gifts are being used (Waters 2007). In a similar manner, the emergence of a number of fake charity websites, coupled with the rise in phishing attempts, have made donors a little more skeptical about donating online. Thus, providing accurate, relevant, and timely financial information such as recent annual report, audited financial statements, and IRS Form 990 and disclosing clear and rich performance information including mission statements and summaries of funded projects would trigger visitors to form positive attitudes toward charity websites. In addition, detailed donation giving information will help potential donors formulate their decision to donate and aid them in the donating process. Hence, we present the following hypothesis:

H1*: Information content quality positively influences an individual's attitude toward the charity website.*

System quality (SQ) is defined as a website visitor's perception that a website offers what s/he believes as the desired characteristics of a web system (DeLone and McLean 2003). Perception of SQ includes many dimensions such as navigability, response time, visual aesthetics, and security (c.f. Loiacono et al. 2007; Palmer 2002; Wells et al. 2011a, 2001b). Research has found effects of SQ on trust (Bansal et al. 2008), perceived product quality (Wells et al. 2011b), and perceived enjoyment (Parboteeah et al.

2009). Persuasion research has noted that credible (Wu and Shaffer 1987) and attractive (Pallak et al. 1983) communicators are more persuasive than unreliable and unattractive communicators. These human characteristics related to source variables that are traditionally examined as peripheral cues can be applied in the form of website SQ. A website can be more credible when it assures security in processing and verifiability that it is not a spoofed site. In a similar vein, a website can be visually more attractive when it uses aesthetic background or pleasant pictures. In addition, navigation and download delay of a website are critical elements, allowing visitors to acquire information they seek easily and quickly (Fang et al. 2012; Palmer 2002). Therefore, charity website visitors will form positive attitudes toward the website when they perceive the quality of the website system features is high. Given the above reasoning, we propose that

H2*: System quality positively influences an individual's attitude toward the charity website.*

3.3.2. Elaboration States: Personal Involvement with Charity Giving and Helper's High

It would be easy to conceptualize that ICQ is a central cue and SQ is a peripheral cue, because information content is a message variable and system features are analogous to source variables. However, as emphasized earlier, such conceptualizations without factoring in elaboration states, are potentially short-sighted and likely untenable. Regarding elaboration states, ELM researchers have examined involvement as a determinant of recipients' information processing styles, proposing that people with high-

involvement are more dependent on the central route/cue while people with low-involvement rely more on peripheral route/cue (Petty and Wegener 1999).

As noted, the specific motivations of interest to this study are PICG and HH because (1) they are charity-specific constructs that have been examined in various charity and donation research (e.g., Bennett 2003; Bennett 2009; Bennett 2012; Bennett and Gabriel 1999; Bennett and Ali-Choudhury 2009), and (2) they have not been studied as elaborating constructs to determine people's information processing style (i.e., route to persuasion).

Personal involvement with charity giving (PICG) is defined as an individual's perceived relevance of donating money, time, or resources to charity organizations based on inherent needs, values, and interests (Bennett and Gabriel 1999; Bennett 2009). A person can be psychologically involved with a charitable cause (i.e., feel that supporting the cause is highly important, relevant, and necessary, cf. Zaichkowsky 1985), resulting from "personal experience of the issue or through indirect connections with or observations of the cause in question" (Bennett 2012, p. 876). People with high PICG are likely to invoke a relevant schema for evaluating the information in charity websites and exert sufficient attention to evaluating the charity website (cf. Park and Young 1986). That is, they will investigate the charity website to acquire all relevant knowledge and an understanding of the organization behind the charity site (Bennett 2009). In addition, they are highly motivated to engage in thoughtful, effortful scrutiny of available information to make a rational donation decision. In making a donation decision to charity websites, it is important for donors to identify preferred charities, credible charities, and favored ways to donate (Bennett 2003; Brinkerhoff 2001).

The simplest way for donors to find the type of charity to which they want to donate is to read its mission statements. Financial information such as audited financial statement or IRS Form 990 is a common source to identify the charity's norms of accountability. One other key role of charity websites is to provide donors with various ways to donate and assist (making it easy for) them to donate money, time, and resources. An individual with high PICG might scrutinize the charity site's guidance of how to donate to decide on the type of donation to make. In sum, an individual with high PICG is influenced through ICQ.

***H3**: The greater an individual's personal involvement with charity giving, the more information content quality affects attitude toward the charity website.*

People with high PICG want to be assured of the integrity, responsibility, and accountability of the charity organization behind the website (cf. Sargeant 2007). High website system quality does not guarantee any of these aspects of a charity organization. For example, while systems features such as download speed, visual aesthetics or navigability are important for a donor to interact with the site, they hardly assure the charity's accountability of the charity. Nor are the system quality features a precursor for the design of information about the charity's mission and objectives. Providing performance, financial, and donation assistance information is a critical function of charity websites in motivating and enabling people with high PICG to make a donation decision; however, system features do not satisfy these needs. In other words, charity website system quality is less critical since it does not have any important attributes enabling high PICG people in making a donation. Thus, people with high PICG have less

need for and are therefore less likely to inspect SQ in evaluating charity websites. This leads us to posit

H4: *The greater an individual's personal involvement with charity giving, the less system quality affects attitude toward the charity website.*

Helper's high (HH) refers to an individual's perceived pleasure and inherent satisfaction derived from donating money, time, or resources to charity organizations (Bennett and Gabriel 1999; Bennett 2009). HH is analogous to hedonic dispositions and is based on feelings, moods, or emotions (Eagly and Chaiken 1993). Moreover, it emphasizes the hedonic consequences from making a donation. HH can be described as "the surge of self-gratifying positive emotion that certain individuals experience consequent to a charitable act or donation and which leads to enhanced self-esteem" (Bennett 2009, p. 120). In IS research, hedonic motivation has been found to play an important role in influencing technology acceptance and use (Venkatesh et al. 2012). In the eCommerce context, it is suggested that incorporating hedonic elements on websites can increase the pleasure and satisfaction from the visit (Lee et al. 2012). In online donations, emotive images of an issue (e.g., starving children) on charity websites can offer the visitor a means of alleviating feelings of guilt by donating to the sites (Bennett 2009). According to Bennett (2009), making a donation to charity provides donors characterized by greater HH with an improvement in their general mood (e.g., Piron 1991) and sense of satisfaction (e.g., Hausman 2000).

Source factors such as credibility, expertise, likeability, and attractiveness have been examined as peripheral cues. For example, Petty et al. (1983) exposed undergraduate students to a magazine ad under high and low product involvement

conditions and found that argument quality (or product endorser) had a greater influence on persuasion under high (or low) involvement condition. It is important to note that source factors (e.g., source credibility and expertise) are generally characterized as peripheral route variables but also can act through a central route when elaboration (e.g., job relevance and issue involvement) is high as rationalized in Bhattacherjee and Sanford (2006) and Angst and Agarwal (2009). This occurs when source factors are regarded as important in assessment of issues (Harkins and Petty 1987). For instance, beautiful scenery in an advertisement for a vacation location can be a central route when a person is highly involved with travelling (i.e., high elaboration likelihood) and the scenery is processed for its values regarding the travel (Petty and Wegener 1998a). In a similar vein, representational delight (e.g., visually appealing design, pleasant background color) is an important attribute in hedonic websites such as gambling sites (Valacich et al. 2007), suggesting that aesthetic website design could be a central route for gamblers in evaluating the gambling site.

Broadly speaking, hedonic behavior is experiential, recreational, and discretionary (Hartman et al. 2006; Holbrook and Hirschman 1982). In the context of Web use/consumption, hedonic use (e.g., Web surfing and chatting) involves feelings of pleasure, enjoyment, playfulness, arousal, and spontaneity (Hartman et al. 2006). In a similar vein, the hedonic contingency view (Wegener and Petty 1994) suggests that hedonic rewards (i.e., feeling better rather than worse after engaging in an activity) are more contingent on the scrutiny of the hedonic consequences of action in happy than in neutral and sad states. Extending from hedonic Web consumption (Hartman et al. 2006) and the hedonic contingency view (Wegener and Petty 1994), people with greater HH

would likely experience fun, pleasure, and positive mood from quality charity websites. Effective visual design of (eCommerce) websites enhances emotional responses for users (Cyr et al. 2009). Drawing upon visual rhetoric, Cyr et al. (2009) found that human images induce a Web user to perceive the website as more emotionally appealing. A Web user's emotional responses such as arousal and pleasantness are elicited by visual design features of website (Deng and Poole 2010). Moreover, filler interfaces with visual design cues including relevant images and motion images lead to higher focused immersion, temporal dissociation, and heightened enjoyment (Lee et al. 2012). Thus, people with hedonic dispositions are motivated to evaluate aesthetic aspects of charity websites such as images, colors, and background since visual aesthetics increase hedonic donors' mood and feelings.

Although other system features such as navigability, download speed, and security do not directly provide emotional rewards, low quality of such features would induce dissatisfaction of the website. Researchers have pointed out that long waiting times or download delay provoke unpleasantness, dislike, dissatisfaction, and anxiety (Baker and Cameron 1996; Lee et al. 2012; Rose et al. 2005). Thus, people with hedonic disposition, in their evaluation of website features, would likely be turned off in the absence of good quality on these system features. Overall, system features would be very effective in generating positive feelings and emotions, and should have a more important role in evaluating charity websites for people with greater HH. Contrary to PICG, we expect that individuals with greater HH will depend on SQ to a greater extent because SQ is a main source of emotional rewards.

***H5**: The greater an individual's helper's high, the more system quality affects attitude toward the charity website.*

According to the hedonic contingency view, a happy mood leads to greater message scrutiny than a sad mood when an uplifting message is encountered but to less message scrutiny when a depressing message is encountered (Wegener and Petty 1994). Web visitors pursuing hedonic tasks would choose websites that provide pleasurable system environments (Valacich et al. 2007). In the context of charity websites, people with greater HH would not want to read detailed information because it requires cognitive effort and does not give any emotional rewards. Moreover, they would feel that reading much information is boring and unpleasant. People with greater HH might want to avoid activities perceived as likely to be boring (e.g., reading financial information with numbers in tables), but might more willingly engage in hedonic web activities (e.g., seeing children's picture) rather than cognitive web activities (e.g., confirming a charity's trustworthiness). Thus, they are less likely to examine ICQ in detail to evaluate charity websites. Thus, we hypothesize that

***H6**: The greater an individual's helper's high, the less information content quality affects attitude toward the charity website.*

In sum, Hypotheses H1 and H2 illustrate the two alternative influence routes (main effects) in the ELM. Hypotheses H3 through H6 depict the moderating effects of elaboration motivations (PICG and HH) on ELM's two influence routes. For PICG, ICQ is central route (H3) and SQ is peripheral route (H4) while SQ is central route (H5) and ICQ is peripheral route (H6) for HH, representing the multiple roles postulate that a given variable can play multiple roles.

3.3.3. Control Variables

We control for a number of variables that are not of direct interest in the current study but might be related to online donations. Based on prior research, gender (Sargeant 1999), age (Sargeant 1999), value of the Web as an online donation platform (Bennett 2009; Choudhury and Karahanna 2008), past donation behaviors (Bennett 2009), importance of charity's reputation (Meijer 2009), involvement in child relief issues, frequency of visiting charity websites along with attitude toward a trial charity website (more about this later) will be controlled to assess only the true effects of study variables.

3.4. RESEARCH METHOD AND DATA ANALYSIS

Two sets of experiments were administered to test the proposed research model as summarized in Table 3.1. Experiment 1 is a preliminary study intended to conduct manipulation checks and establish initial validation. Experiment 2 focuses on the effect of PICG and HH when manipulating ICQ and SQ as persuasion cues.

3.4.1. Measures

To ensure and enhance construct validity, whenever possible, all measures were adapted from previous studies in which the measurement scales were proven to be valid and reliable. ICQ was conceptualized as a second-order formative construct of three first-order dimensions: quality of performance, financial, and donation assistance information. Each of the three dimensions of ICQ was measured with reflective items using items adapted from existing scales. In addition, overall ICQ was measured with three reflective items. Following Wells et al. (2011b), SQ was conceptualized a second-order formative construct of four first-order constructs: navigability, download delay, and visual aesthetics, and security. Each of the four dimensions of SQ was measured with three reflective indicators. Furthermore, overall SQ was measured with three reflective items. The two elaboration likelihood states, PICG and HH, were adapted from Bennett (2009). Based on Ajzen (1991), attitude toward the charity website was measured with multiple items using semantic differential scales. Willingness to donate to the charity website was conceptualized as a second-order reflective construct of three first-order dimensions: willingness to donate money, time, and resources. All measurement items, scale anchors, and sources are presented in Appendix A3.

Table 3.1. Summary of Experiments

Experiment	Experiment 1	Experiment 2 (N=536)		
Title	Preliminary study	Measurement model	Main effect model	Interaction effect model
Background Theory			• DeLone & McLean IS success model • Website quality	• Elaboration likelihood model of persuasion
Design	2 (ICQ) × 2 (SQ) Lab Experiment			
Demographic	• Male (87: 61%) • Age: 18-24 (93: 65%)	• Male (352: 66%) • Age: 18-24 (503: 94%)		
Focus	• Manipulation check • Instrument validation	• Manipulation check • Instrument validation • Common method bias	• ICQ and SQ as persuasion cues	• Elaborating roles of PICG and HH
Measured Variables	ICQ: PI, FI, DI SQ: NAV, DD, VA, SEC	ICQ: PI, FI, DI; SQ: NAV, DD, VA, SEC PICG, HH, ACW, WDM, WDT, WDR		
Analyses	• Exploratory factor analysis[S] • Manipulation check[S] - ANOVA	• Manipulation check[S] - ANOVA • Confirmatory factor analysis[A] • Common method bias[S] - Harmon's single factor - Marker variable • Validation of ICQ and SQ as second-order constructs • Validation of WD as a second-order reflective construct[A]	• Structural (MIMIC) model[A]	• Structural model[A] (All variables were mean centered for moderation analyses.)
Hypotheses Tested			H1, H2 (all were supported)	H3, H4, H5, H6 (all were supported)

PICG: Personal involvement with charity giving; HH: Helper's high; ICQ: Information content quality; PI: Performance information; FI: Financial information; DI: Donation information; SQ: System quality; NAV: Navigability; DD: Download delay; VA: Visual aesthetics; SEC: Security; ACW: Attitude toward the charity website; WD: Willingness to donate to charity website; WDM: Willingness to donate money; WDT: Willingness to donate time; WDR: Willingness to donate resources
[S]: SPSS 21 was used; [A]: AMOS 21 was used; [P]: SmartPLS 2.0 was used

3.4.2. Website Stimuli (Trial and Finished Sites)

A total of five website stimuli were developed to provide variations in ICQ and SQ as described in Table 3.2. Participants were exposed to a *trial/anchor* site to familiarize themselves with the charity website before being presented with the *experimental/treatment* website. The trial site served as a reference point and learning tool so that measures derived from the experimental/ treatment sites are attributable to the characteristics of the site only. Four experimental/treatment websites were employed, manipulating information content and system features, as illustrated in Table 3.2. It should be noted that IS researchers employing controlled lab experiments have not

traditionally used this *anchoring approach*. Justifications for using the anchoring approach are provided in Appendix A5.

Table 3.2. Website Stimuli Employed

Stimulus	Information Content Quality	System Quality
Trial Site	Medium	Medium
Experimental/Treatment Site A	High	High
Experimental/Treatment Site B	High	Low
Experimental/Treatment Site C	Low	High
Experimental/Treatment Site D	Low	Low

Information content quality was manipulated by varying the amount, extent, and detail associated with the charity's performance information, its financial information, and information about donation options. *System quality* was manipulated by varying the navigability, download delay, visual aesthetics, and security information on the website. These manipulations are described in Table 3.3, and are illustrated in Appendix A4.

After developing measurement instrument and website stimuli, several faculty members and doctoral students pretested and provided their feedback on the validity of content and clarity of the questionnaire and on the appropriateness of website manipulations. Their feedback led to several changes in item phrasing for the final version of the questionnaire and in website stimuli.

Table 3.3. Detailed Website Stimuli

Facet		Low	Medium (Trial Site/Anchor)	High
Information Content Quality	Performance Information	Mission	Mission and vision	Mission, vision, and values
	Financial Information	Annual Report	Annual Report and IRS Form 990	Annual Report, IRS Form 990, and Audited Financial Statement
	Donation Information	Instructions on how to donate money online	Instructions on how to donate money (online and mail) and time (online volunteering)	Detailed instructions on how to donate money (online and mail), time (online and onsite volunteering), and resources
System Quality	Navigability	Sizeable scrolling needed to find links. Inconsistent placement and format	Some scrolling for links. Inconsistent placement with consistent format	No scrolling needed for links. Consistent placement and format
	Download Delay	4 second delay	2.5 second delay	No delay
	Visual Aesthetics	Default fonts, few visuals, bland colors	Moderate fonts, layout, color scheme	Pleasing fonts, professional layout, aesthetic color scheme
	Security	Privacy policy without seals	Privacy policy with two seals	Security and privacy policies with five seals

3.4.3. Experiment 1: The Preliminary Study

The focus of the preliminary study was to (1) conduct manipulation checks, (2) determine the psychometric properties of the instrument for dimensions of ICQ and SQ, and (3) investigate initial construct validity and reliability. This section illustrates the experimental design and data analysis for this preliminary study.

Experiment 1: Sample and Experimental Procedure

The subjects for this experiment were undergraduate and graduate business students at a large public university in the United States. Out of 143 subjects who volunteered to participate 39 percent were female and 65 percent were between 18 and 24 of age. Subjects could earn extra course credit for their participation and an opportunity (ten percent probability) to win a $30 gift card. Subjects were recruited through a letter distributed by the course instructors. This study took place in a controlled laboratory

setting. Students were asked to fill out pre-test survey that measured their background including demographics before they participated in the experiment. Participants were instructed on how to evaluate the trial and finished websites and asked to complete a post-test survey which measured website quality. All data was collected through online surveys implemented in Qualtrics. Subjects were randomly assigned to one of the four finished websites using Qualtrics' random distribution function.

Experiment 1: Data Analysis

Exploratory factor analysis (EFA) was conducted to ensure initial validity (see Table A3 in Appendix A6). We also conducted manipulation checks using ANOVA in SPSS 21.0 for the three ICQ dimensions and the four SQ dimensions; they were found to be significant. The results of EFA indicated that all predefined indicators of each construct loaded appropriately and there was no significant cross loading, demonstrating initial discriminant validity of all nine constructs considered here. The results of the ANOVA test indicated that subjects perceived significant differences in ICQ and SQ manipulations (See Table A4 in Appendix A6).

3.4.4. Experiment 2: The Main Study

The focus of Experiment 2 was to (1) assess the measurement model and (2) test the hypotheses. A 2 (ICQ: high vs. low) × 2 (SQ: high vs. low) controlled experiment was designed to investigate the elaborating role of PICG and HH in attitude formation and online donations. The following section describes the experimental design and data analyses for this study.

Experiment 2: Sample and Experimental Procedure

A separate sample of subjects who had not participated in the preliminary study was recruited for this study. As before, they voluntarily participated in this experiment in exchange for extra course credit and an opportunity to win a $30 gift card. A total of 558 students participated in Experiment 2. Twenty two observations were discarded due to missing data or failure to follow instructions, resulting in 536 usable observations. In terms of demographics, the sample consisted of 352 males (65.7%) and 184 females (34.3%). A very large proportion (93.8%) of the subjects was between 18-24 years old. In terms of prior experience with online charities, a substantive proportion (37.5%) of the subjects had never visited charity website in the past year. However, they were quite active as donors, having made at least one donation in terms of money (73.6%), time (79.5%), and resources (83%).

The procedure of this experiment was the same as that of Experiment 1. The participants were asked to fill out pre-test survey that measured PICG, HH, and various pieces of demographic information before they participated in the experiment. They were instructed on how to assess the trial and final websites. Specifically, they were asked to familiarize themselves with the trial site in terms of information content and system features/functionalities. After they interacted with the trial site, we measured their attitude toward the trial site; they were then assigned to one of four versions of website stimuli and asked to investigate both informational content (performance, financial, and donation information) and system features/functionalities (navigability, download delay, visual aesthetics, and security) in as much detail as possible. After interacting with the finished site, the subjects were asked to complete a post-test survey which measured ICQ,

SQ, ACW, and WD. As with Experiment 1, this experiment also used online survey and random assignment of subjects to the four website treatments using Qualtrics.

Experiment 2: Data Analysis

Descriptive statistics and manipulation check results are presented in Table A5 in Appendix A6. Data analysis, including construct validation and hypothesis testing with structural equation modeling (SEM), was conducted using AMOS 21.0. Following Anderson and Gerbing (1988), we used the two-stage approach: (1) confirmatory factor analysis (CFA) to assess the measurement quality of constructs followed by (2) a structural model to test the hypotheses.

Measurement Model: Using a CFA approach, a 15-factor measurement model was set up to assess the measurement quality of constructs. Although the overall fit indices indicate reasonable fit of the model, we dropped two indicator items because of lower standardized factor loadings (HH2: 0.56 and VOD1: 0.36) than 0.60 (Chin et al. 1997). After conducting a second confirmatory factor analysis, the various overall fit indices of the revised model suggested a good fit of the model to the data; most of the indices were at or better than the recommended thresholds.

The measurement quality of constructs was further examined by assessing several types of psychometric properties, such as convergent and discriminant validities and reliability. C*onvergent validity* ensures that all predefined items of a construct measure a single underlying construct (Nunnally and Bernstein 1994). The minimally recommended value of standardized factor loadings is 0.60 (Chin et al. 1997) or more strictly 0.70 (Hair et al. 2009). The lowest loading between an indicator item and its posited underlying construct factor was 0.69, adequately demonstrating convergent validity. *Reliability*

assesses the degree of internal consistency between multiple measurements of a construct (Hair et al. 2009). These were assessed using internal consistency of each construct with Cronbach's alpha, composite reliability, and average variance extracted (AVE). Composite reliability refers to the degree to which the construct is represented by the indicators (Hair et al. 2009). AVE measures the amount of variance that a construct captures from its indicators relative to the amount due to measurement error (Hair et al. 2009). Literature suggests cut-off values of Cronbach's alpha, composite reliability and AVE to be 0.70, 0.70, and 0.50, respectively (Nunnally and Bernstein 1994). All of these values were very satisfactory in our study. The results demonstrate adequate measurement reliability for all constructs. *Discriminant validity* refers to the extent to which the measures for each construct are distinctively different from each other. It was assessed by comparing the square root of AVE for each construct with the correlations it has with other constructs (Gefen and Straub 2005). As shown in Table 3.4, the square root of the AVE for each construct (see diagonal) was found to be larger than its correlations with other constructs, demonstrating discriminant validity of constructs.

Table 3.4. Results of Confirmatory Factor Analysis: Correlation and Reliability

	# of Items	Mean	Std. Dev.	Cronbach's Alpha	Composite Reliability	AVE	Range of Factor Loadings	Correlation														
								PICG	HH	PI	FI	DI	ICQ	NAV	DD	VA	SEC	SQ	ACW	WD	ATW	VOD
PICG	5	4.44	1.24	.89	.89	.62	.74-.82	***.79***														
HH	4	4.85	1.25	.90	.91	.71	.70-.91	.66	***.84***													
PI	4	5.36	1.38	.94	.94	.80	.87-.92	.04	.05	***.90***												
FI	4	5.41	1.39	.94	.94	.81	.87-.94	.07	.06	.78	***.90***											
DI	4	5.47	1.44	.97	.97	.89	.92-.96	.06	.07	.71	.78	***.94***										
ICQ	3	5.18	1.47	.98	.98	.94	.96-.97	.08	.07	.82	.79	.75	***.97***									
NAV	3	6.04	1.07	.89	.89	.73	.82-.88	.01	.06	.61	.63	.61	.64	***.85***								
DD	3	4.98	1.60	.83	.83	.62	.71-.88	.04	.04	.43	.36	.41	.49	.63	***.79***							
VA	3	4.60	1.72	.97	.97	.91	.95-.96	.14	.09	.51	.46	.45	.61	.53	.53	***.96***						
SEC	2	5.05	1.47	.93	.93	.81	.89-.91	.01	.03	.53	.54	.58	.58	.55	.44	.51	***.90***					
SQ	3	5.20	1.39	.98	.98	.94	.96-.98	.06	.03	.66	.60	.62	.76	.70	.66	.70	.62	***.97***				
ACW	3	5.12	1.52	.96	.96	.90	.93-.96	.16	.08	.73	.68	.68	.83	.62	.57	.68	.61	.82	***.95***			
WD^S	9	3.63	1.55	.92	.93	.81	.88-.93	.36	.30	.47	.45	.42	.53	.35	.31	.44	.40	.49	.59	***.90***		
ATW	3	4.81	1.29	.93	.93	.83	.87-.94	.11	.10	.34	.29	.27	.38	.26	.25	.22	.29	.38	.44	.40	***.91***	
VOD	3	4.98	1.28	.85	.85	.66	.69-.87	.06	.14	-.01	.08	.04	.02	.09	.01	-.10	.03	.01	-.02	.03	.02	***.81***

Bold: Overall measure of second-order construct; ^{S}: Second-order reflective construct; *Square-root of AVE values* represented along the diagonal

ICQ and SQ as Second-Order Formative Constructs: ICQ and SQ were modeled as second-order formative constructs: performance information, financial information, and donation information for ICQ, and navigability, download delay, visual aesthetics, and security for SQ. The three reflective items measuring overall ICQ and SQ enabled us to employ a *multiple indicator multiple causes* (MIMIC) model approach to evaluate the appropriateness of our ICQ and SQ conceptualization (Diamantopoulos and Winklhofer 2001; MacKenzie et al. 2005; Wells et al. 2011b). Similar to Wells et al. (2011b, p. A10), we assessed the validity of ICQ and SQ as second-order formative constructs by (1) evaluating multicollinearity among the seven first-order constructs using SPSS 21.0, (2) examining the goodness of fit indices of the MIMIC model as shown in Figure 3.2 using AMOS 21.0, and (3) conducting a redundancy analysis (see Figure 3.3) using SmartPLS 2.0. We first assessed multicollinearity using the variance inflation factors (VIF) by regressing the means of performance information, financial information, donation information, navigability, download delay, visual aesthetics, and security on attitude toward the charity website. The VIFs ranged from 1.474 to 3.004, well below the 3.33 threshold (Diamantopoulos and Siguaw 2006). Second, the overall fit indices indicated a satisfactory fit of the MIMIC model. Fit indices of the MIMIC model (χ^2 (376) = 958.75) were as follows: Normed-χ^2, χ^2/df = 2.55, NFI = .95, IFI = .97, TLI = .97, CFI = .97, GFI = .89, AGFI = .87, SRMR = .05, RMSEA = .054. Third, a redundancy analysis for ICQ and SQ were conducted separately as shown in Figure 3.3. Finally, formative and reflective ICQ constructs was generated to examine the power of the relationship between formative and reflective ICQ constructs. We measured the formative ICQ construct using the first-order construct as formative indicators by summating the multi-item measures.

The reflective ICQ construct was measured using the three reflective, overall ICQ items. The path weight between two constructs was .849. The same procedure was used for SQ and the result shows the path weight of .812. These path weights suggest that the formative items for ICQ and SQ provide reasonable coverage of ICQ and SQ.

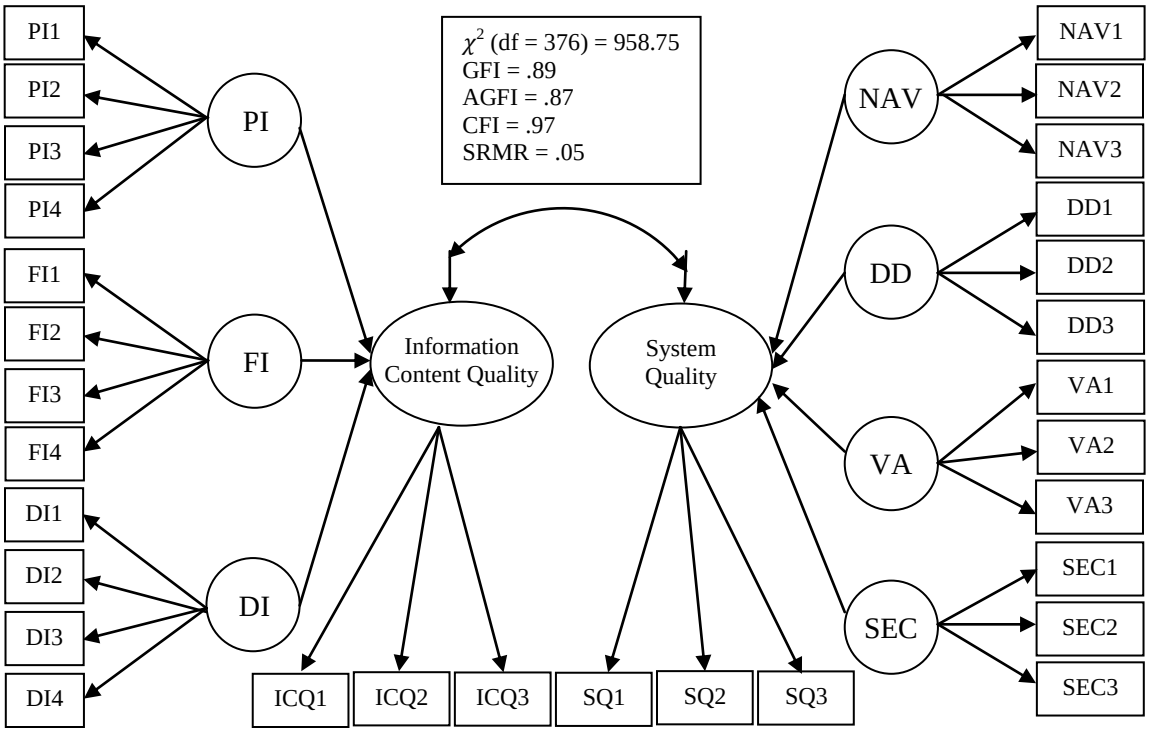
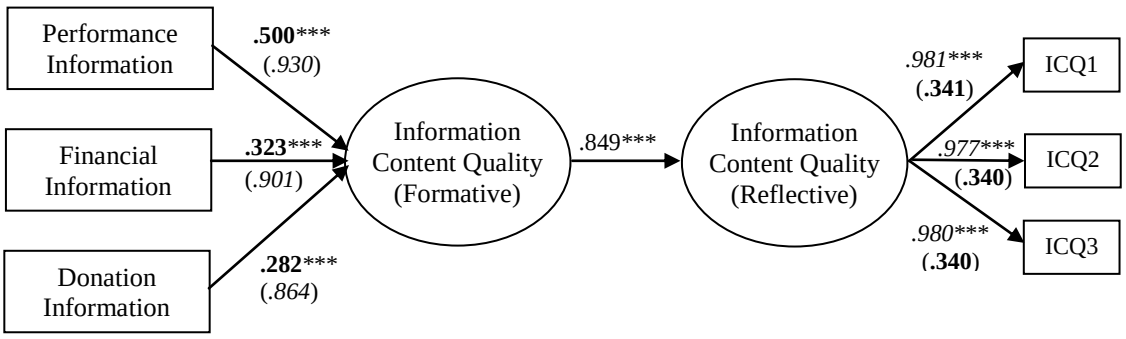
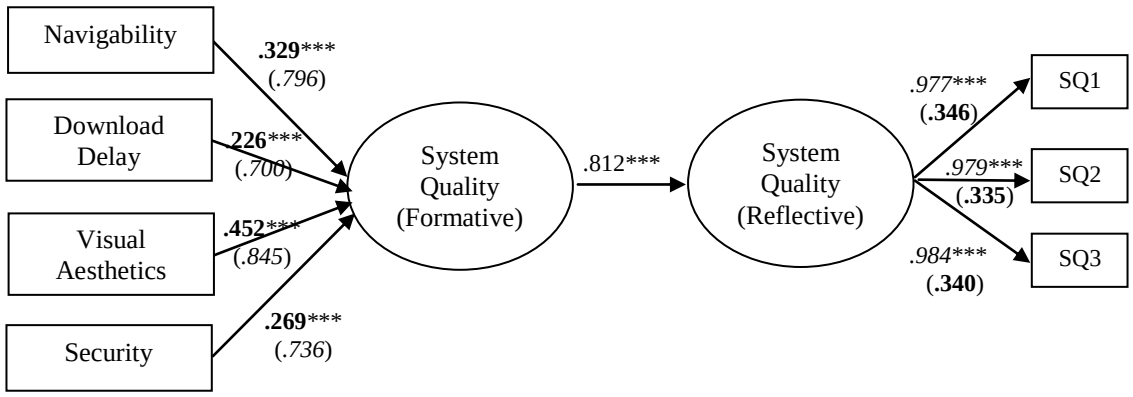


Figure 3.2. MIMIC Model





Italicized values: Factor loading, **Bolded values**: Factor weight

*** p<.001

Figure 3.3. Redundancy Analysis

Second-Order Reflective Model of Willingness to Donate: Following Lu and Ramamurthy's examination for Second-Order Model of IT Capability (2011, p. 941), we conducted comparative analysis of the second-order reflective model of *willingness to donate to charity website*. Particularly, we tested five models: (1) Model 1a: a first-order one-factor model that all 9 measurement items load on, and Model 1b, a constrained first-order three-factor model that sets the correlations between the three factors to one, (2) Model 2, uncorrelated first-order three-factor model that sets the correlations between the three factors to zero, (3) Model 3, a freely correlated first-order three-factor model that allows the correlations between the three factors to be freely estimated, and (4) Model 4, a second-order reflective model. The fit indices of the five models are presented in Table 3.5; these fit diagnostics best support the second-order reflective model. As shown in Figure 3.4, the overall model fit indices and the significant second-order factor loadings support our measurement model specification. In sum, the results provide evidence that

the second-order reflective model of willingness to donate is appropriate to use both conceptually and empirically.

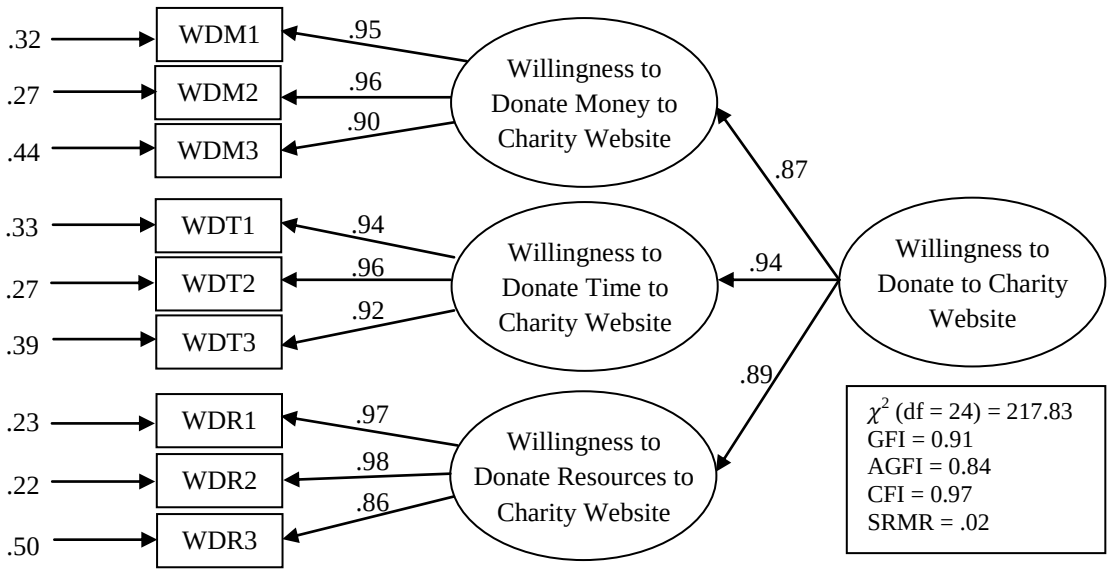


Figure 3.4. Second-Order Reflective Model of Willingness to Donate

Table 3.5. Goodness of Fit Indices for Competing Models of Willingness to Donate

	χ^2 (DF)	χ^2/DF	NFI	IFI	TLI	CFI	GFI	AGFI	SRMR	RMSEA
Model 1a: First-order one factor model	1683.55 (27)	62.35	.75	.75	.67	.76	.57	.30	.066	.339
Model 1b: Constrained first-order three factor model	1683.55 (27)	62.35	.75	.75	.67	.76	.57	.30	.066	.339
Model 2: Uncorrelated first-order three factor model	1366.92 (27)	50.63	.80	.80	.74	.80	.67	.45	.558	.305
Model 3: Freely correlated first-order three factor model	217.83 (24)	9.08	.97	.97	.96	.97	.91	.84	.020	.123
Model 4: Second-order reflective model	217.83 (24)	9.08	.97	.97	.96	.97	.91	.84	.020	.123

Common Method Bias (CMB): The extent of CMB was assessed with two tests. First, Harman's single-factor test was performed by including all items in a principal components factor analysis (Podsakoff et al. 2003). A single factor did not appear from the unrotated solution and the first factor explained 38.8%, suggesting that CMB is not high. Second, we used the marker-variable technique (Lindell and Whitney 2001; Malhotra et al. 2006). Specifically, we added a theoretically unrelated variable, *anticipated regret of lottery*, as a marker variable and tested correlations between the marker variable and study constructs. Under the marker variable technique, correlations between the marker variable and research constructs are assumed to not exist. The results indicated that CMB was not a serious concern because the average correlation coefficient was close to 0 (r = .038, ns). From these diagnostic analyses, it seems reasonable to conclude that CMB is unlikely to be an issue with our data.

Hypothesis Testing: A structural model was set up by specifying the second-order formative construct of ICQ and SQ and second-order reflective construct of WD to examine the significance and strength of each of our hypothesized effects. The main effect model tested hypotheses H1 and H2, while the interaction effect model investigated individuals' information processing stated in H3 through H6. Results of the analysis for each phase, including standardized path coefficients, their t-statistics, significance, and the amount of variance explained (R^2 value) for each dependent variable, are shown in Table 3.6. The main effect model examined the cue effects of ICQ and SQ on attitude toward the charity website, which in turn affects the willingness to donate. As in the estimation of the measurement model, various overall fit indices of the main effect model suggested a good fit of the model. The fit indices were at or better than

the cut-off values. All paths in this model were significant at $p < .001$. Consistent with previous website research in non-charity contexts, ICQ ($\beta = .50$; $p < .001$) and SQ ($\beta = .46$; $p < .001$) had significant effects on attitude toward the charity website, demonstrating support for H1 and H2. In addition, willingness to donate was affected significantly by attitude toward the charity website ($\beta = .54$; $p < .001$). ICQ and SQ jointly explained quite a high amount, 75.2%, of the variance in attitude toward the charity website.

The interaction effect model tested the *elaborating roles* (i.e. moderation) of PICG and HH in evaluating the charity website. The multi-item measures were converted into summated scales. To decrease any possible problems of multicollinearity, we mean centered study variables before forming the multiplicative product term (Cohen et al. 2003). We also mean centered all control variables to ensure easy interpretation of the coefficient. Overall, the fit indices of the interaction effect model indicated a satisfactory fit of the model. Examining individual paths in the interaction effect model, we found a significant positive moderating effect of PICG ($\beta = .09$; $p < .05$) and a significant negative moderating effect of HH ($\beta = -.11$; $p < .01$) on the relationship between ICQ and attitude. We also found a significant negative moderating effect of PICG ($\beta = -.14$; $p < .01$) and a significant positive moderating effect of HH ($\beta = .19$; $p < .001$) on the relationship between SQ and attitude. From the interpretation that a positive (or negative) moderating effect represents central (or peripheral) route to persuasion, the interaction model validates and supports the multiple roles of variables (as embodied in the multiple roles postulate within the ELM). Provided are the results of the two structural models and goodness of fit indices in Table 3.6 and results of hypothesis tests in Table 3.7.

Table 3.6. Results of Structural Models and Goodness of Fit Indices

Independent Variable		Dependent Variable	Main Effect Model			Interaction Effect Model[c]		
			Beta	t-statistics	R^2	Beta	t-statistics	R^2
PI		ICQ	.45***	10.71	.75	.44***	11.62	.84
FI			.27***	5.79		.32***	7.77	
DI			.21***	5.30		.26***	6.67	
NAV		SQ	.31***	7.35	.69	.28***	8.10	.76
DD			.20***	4.90		.20***	5.94	
VA			.30***	8.94		.38***	11.24	
SEC			.21***	6.13		.25***	7.50	
ICQ		ACW	.50***	15.82	.75	.48***	14.64	.80
SQ			.46***	14.55		.48***	13.93	
PICG						.09**	2.81	
HH						.02(ns)	-.69	
ICQ × PICG						.09*	2.06	
SQ × PICG						-.14***	-3.43	
ICQ × HH						-.11**	-2.88	
SQ × HH						.19***	5.03	
Control Variable	*ATW*		.11***	4.37		.10***	4.59	
	Gender		-.01(ns)	-.86		-.04†	-1.80	
	Age		-.01(ns)	-.34		.00(ns)	.02	
	VWO		-.03 (ns)	-1.39		-.04†	-1.93	
	IMP		-.05*	-1.99		-.05*	-2.14	
	INV		.07*	2.59		.05†	1.76	
	FRE		.07**	2.66		.06*	2.17	
	PDB		-.02(ns)	-.73		-.04(ns)	-1.60	
ACW		WD	.54***	13.20	.41	.54***	13.63	.40
Control Variable	*Gender*		.16***	4.30		.17***	4.40	
	Age		-.01(ns)	-.25		-.00(ns)	-.12	
	VWO		.03(ns)	.80		.04(ns)	.95	
	IMP		.05(ns)	1.32		.05(ns)	1.25	
	INV		.15***	3.67		.15***	3.81	
	FRE		.08*	1.97		.08†	1.93	
	PDB		.07†	1.65		.06(ns)	1.45	

Goodness of Fit Indices

.	χ^2 (DF)	χ^2/DF	NFI	IFI	TLI	CFI	GFI	AGFI	SRMR	RMSEA
Good Model Fit Ranges		<3.00	>.90	>.90	>.90	>.90	≈.90	>.80	<.10	<.08
Measurement Model	2589.61 (1431)	1.81	.93	.97	.96	.97	.85	.83	.033	.039
Main Effect Model	2495.30 (1321)	1.89	.93	.96	.96	.96	.85	.83	.095	.041
Interaction Effect Model	659.21 (256)	2.58	.92	.95	.93	.95	.92	.88	.083	.054

*** p<.001; ** p<.01; * p<.05; † p<.10; ns: not significant

[c]: Using a mean centered approach

Table 3.7. Results of Hypothesis Testing

	Hypothesis	Result
H1	Information content quality positively influences an individual's attitude toward the charity website.	Supported
H2	System quality positively influences an individual's attitude toward the charity website.	Supported
H3	The greater an individual's personal involvement with charity giving, the more information content quality affects attitude toward the charity website.	Supported
H4	The greater an individual's personal involvement with charity giving, the less system quality affects attitude toward the charity website.	Supported
H5	The greater an individual's helper's high, the more system quality affects attitude toward the charity website.	Supported
H6	The greater an individual's helper's high, the less information content quality affects attitude toward the charity website.	Supported

Dimensions of ICQ and SQ: As seen from the main effect models in Table 3.6, performance information had the largest effect on overall ICQ, followed by FI and DI. In addition, NAV had a dominant effect on overall SQ, followed by VA, SEC, and DD. Following Wells et al. (2011b), we conducted a complementary analysis to examine the relative effect of the dimensions of ICQ and SQ on attitude by running a structural model with the seven dimensions of ICQ and SQ rather than the higher order constructs as antecedents of attitude. The results (see Table 3.8) show the relative influence of the dimensions on attitude. VA had the strongest influence on attitude, followed by PI, DD, DI, FI, and SEC. However, NAV did not have a significant effect on attitude.

Table 3.8. Effect of Dimensions of ICQ and SQ on Attitude

Rank	Perceived (Self-Reported)	Coefficient	t-statistic
1	Visual Aesthetics	.28***	8.58
2	Performance Information	.24***	5.20
3	Download Delay	.16***	4.06
4	Donation Information	.14**	3.24
5	Financial Information	.12*	2.43
6	Security	.10**	2.81
7	Navigability	-.04(ns)	-.85
Control	*Attitude toward Trial Website*	.16***	6.07

*** p<.001; ** p<.01; * p<.05; ns: not significant

3.5. DISCUSSION AND CONCLUSION

Table 3.9. Limitations and Suggestions for Future Research

Topic	Limitation	Suggestion for Future Research
Sample	We used a controlled experimental design with student subjects, potentially limiting the applicability of the results to other populations.	Additional studies with actual donors in real online donation environment are required.
Type of Charity	We used a single category of charity organization, child relief and development. This may restrict generalizability of the results to other types of charity.	Need to examine other types of charity (e.g. environment protection, animal welfare, health/research, etc).
Information Content Quality	We manipulated performance information, financial information, and donation assistance information primarily in terms of quantity of information.	Investigate information presentation quality in terms of "how information is presented and delivered" beyond or in addition to the mere "quantity of information" to represent ICQ.
Website Quality	We examined ICQ and SQ as persuasion cues. There may be other aspects of website quality that could be considered as cues.	Service quality can be examined in the future to identify its role as a persuasion cue. For service quality, researchers can investigate various dimensions such as customization (e.g., tailoring the content of site) (see Sargeant et al. 2007).
Dimensions of Website Quality	We examined three dimensions of ICQ (performance, financial, and donation) and four dimensions of SQ (navigability, download delay, visual aesthetics, and security).	Other dimensions for ICQ such as charity's historical performance information (e.g., summaries of projects, program impacts) and for SQ (e.g., searchability) could be considered.
Elaboration Construct	We investigated charity-specific motivational constructs.	Examine charity-specific ability constructs and other charity-specific moderators such as prosocial personality (Penner et al. 1995). Also, investigate non-charity specific motivations such as incentivizing.
Attitude Measure	Following traditional ELM literature, we examined subjective measure of attitude toward the charity website.	Other constructs such as trust (Bansal et al. 2008) and attraction (Campbell et al. 2013) can be examined as consequences of website quality. Also, objective measures such as time spent on the website can be used as a proxy of attitude.
Design of Experiment	We manipulated the website stimuli in terms of ICQ and SQ and did not manipulate all the underlying 7 dimensions because it requires 128 website treatments. This experiment design does not allow examining interactions among 7 dimensions.	By reducing the number of dimensions of website quality, future research can test interactions between dimensions, leading to final granularity of analysis and interpretation of effects.

To examine multiple roles of variables, we examined ICQ and SQ as determinants of attitude toward the charity website under elaboration state conditions of PICG and HH, with all hypotheses supported. Especially, two elaboration motivations, PICG and HH,

were investigated to identify how potential donors process the persuasion cues from charity websites. We found that people with high PICG are influenced by information content while people high on HH are influenced by system features when evaluating charity websites. Summaries of the key findings along with the implications for research and practice are provided in the following section. In addition, limitations of this study and future research directions are acknowledged in Table 3.9.

3.5.1. Charity Website as a Channel for Online Donations

Charitable giving occurs in a variety of channels, including corporate giving, telemarketing, public solicitation, online websites, and micro-donations, among others. Different charities can expect varying mix of donations across these channels. Though some overlap is present, different channels typically target different donors. Donor profiles vary considerably, ranging from cash-strapped to wealthy individuals, as well as small to large corporate donors. Donation frequency spans regular donations, ad-hoc donations, and one-time donations made in response to dramatic events. Charity websites are an attractive option for two distinct populations – individual donors who may have an on-going relationship with the charity, and one-time or infrequent donors seeking a convenient option to donate. For the former, legitimacy and effectiveness of donations are more likely to be established through information content quality. For the latter, this is more easily established through system quality. For the charity, an online website offers the advantage of convenience for the donor as well as low operating costs for the charity. This channel will be more effective for charities with skeleton staff that lack a corporate donor base. Charity website quality will certainly be an important aspect for the

donors and effectiveness of this channel as a mechanism for soliciting and collecting donations.

The results of main effect model suggest that charity website quality plays an important role for various types of donation. The overall ICQ was determined by three ICQ dimensions with performance information having the strongest influence on ICQ and the overall SQ was conceptualized by four SQ dimensions with navigability and visual aesthetics having strongest influence on SQ. The relative influence of the seven dimensions on attitude toward the charity website was similar with the exception of navigability having no effect on attitude. To further assess this, we examined the relative effect of four dimensions of SQ on attitude excluding the three dimensions of ICQ and found that all four dimensions were significant. This can be explained by the existing research on website navigability, which emphasizes the supporting role of navigability for information search. The main purpose of website navigation is to help visitors find information efficiently and quickly (Fang et al. 2012; Palmer 2002; McKinney et al. 2002). Therefore, as long as a visitor can find information he or she wants to find, navigation structure would not be a major factor in evaluating charity website. Thus, it appears that ICQ and its dimensions may have had a substitution effect on the navigation structure.

The main effect model exhibited good psychometric properties and explained considerable amounts of variance of all endogenous variables (approximately 75 percent in attitude and 41 percent in willingness to donate). The results strongly confirm that website theories and constructs developed in eCommerce/for-profit websites can be successfully adapted to charity websites and emphasize the mediating role of attitude

toward the charity website in considering various types of online donation (of money, time, and resources) intentions.

3.5.2. Personal Involvement with Charity Giving and Helper's High as Elaboration Motivations

The interaction effect model showed that the central and peripheral routes are possible ways of influencing users to form attitude toward the charity website and engage in making a donation. Based on previous research (e.g., Bansal et al. 2008; Bhattacherjee and Sanford 2006; Sussman and Siegel 2003), this study operationalized the central or peripheral route as using ICQ or SQ, respectively, while elaboration motivation was captured using two charity-specific motivations, PICG and HH. In line with extant findings of persuasion research in other contexts (e.g., Petty et al. 1983; Petty and Wegener 1998a, 1999; Bhattacherjee and Sanford 2006), this study demonstrates that the ELM is successfully applicable to explain the persuasion process in charity websites and donation. In particular, a charity website visitor with high elaboration motivations is more influenced by the central route in that she engages in thoughtful processing of persuasion cues from the site.

This model strongly confirms that elaboration states determine the central or peripheral route to persuasion. Similar to the findings of prior ELM studies (e.g., Bhattacherjee and Sanford 2006; Sussman and Siegel 2003), individuals with high personal involvement are motivated to scrutinize argument quality (i.e., ICQ) and thus these people have less need for and are therefore less likely to consider peripheral cues (i.e., SQ). More importantly, this study emphasizes the hedonic nature of elaboration

motivations. Since system features can give emotive rewards individuals with high hedonic motivation are more likely to process SQ as the central route. This suggests that hedonic motivation plays an important role in determining route to persuasion.

3.5.3. Implications for Research

This research makes several contributions in terms of theory and application of theory in the context of charitable donation in an online context. First, we extend the ELM by incorporating two charity-specific elaboration motivations, personal involvement with charitable giving and helper's high. This is the first study to examine in detail the elaborating roles (i.e., moderators) of these charity-specific motivations on the way persuasion cues (information content and system features) from charity websites are processed in evaluating a charity website and increasing an individual's willingness to donate to the site. As Laurent and Kapferer suggested (1985), knowing the involvement level on one facet (e.g., perceived importance, the classical measure of involvement) is not sufficient. Many IS researchers have dominantly used only personal importance/relevance in examining involvement constructs such as involvement (Sussman and Siegel 2003), product involvement (Son et al. 2006), job relevance (Bhattacherjee and Sanford 2006), and purchase involvement (Pavlou et al. 2007). While PICG is based on perceived importance/relevance, HH captures additional information (affective, emotive, and hedonic). This research contributes to the ELM literature by showing that the hedonic nature of involvement is important in determining the route to persuasion.

Second, this study extends the ELM by empirically testing and validating the multiple roles of variables. Petty and Wegener (1999) pointed out the mistaken belief

attributed to the ELM model that message variables are central while source variables are peripheral. Multiple roles of variables have been supported in prior research on source attractiveness, source credibility, power of sources, two-sided messages, issue-relevant knowledge, mood, and source expertise (see Petty and Wegener 1998a for a review). Although the *multiple roles postulate* has been further emphasized by IS researchers (Angst and Agarwal 2009; Bhattacherjee and Sanford 2006), many ELM-based IS studies have selected central and peripheral route variables without much consideration of elaboration likelihood and theoretical justifications. In that sense, our research highlights the multiple roles postulate in the persuasion process that can shape the formation of individual attitude and eventual donation. Furthermore, our investigation of two-charity specific moderators (i.e., PICG and HH) advances the types of elaboration such as motivation (e.g., need for cognition, personal involvement) in examining multiple roles postulate.

Third, we conceptualized and validated two charity website quality constructs. We examined the quality of charity website using ICQ and SQ. ICQ was conceptualized as a second-order formative construct consisting of performance, financial, and donation information, and SQ was conceptualized as second-order formative construct consisting of navigability, download delay, visual aesthetics, and security. The conceptualization of SQ is based on eCommerce research of Wells et al. (2011b). We show that SQ developed in research dealing with eCommerce context can be successfully applied in the charity website context, suggesting that quality of system features is a fundamental concept that transcends different types of websites. Based on Saxton and Guo (2011), we validated charity-specific information content as well.

Lastly, this research introduced an anchor or reference point before requiring subjects to evaluate the effectiveness of a charity website. Individuals have different perceptions about website characteristics like information content, navigability, speed, and the like. It is reasonable to expect that identical websites will be rated/perceived differently by different individuals. The use of an anchor tends to eliminate some of this, as the rating is now relative to the anchor. On a practical note, one does not expect a charity organization to offer multiple websites for donation. However, it is quite reasonable to assume that real donors will have visited websites of multiple charity organizations and would have established a mental model of what constitutes good quality (on informational content and systems aspects). They can easily judge differences across sites, provided the quality differences are not marginal. The implications of using an anchor in assessing website quality cannot be underscored. Studies (many in the past) have unwittingly used experimental treatments and made inferences from their results that are more likely emerging from incorrect judgments. It is, therefore, essential that extreme care must be taken in (future IS) research to weed out such spurious effects. This is another major contribution of this study.

3.5.4. Implications for Practice

The results from this study have several strategic implications for charity organizations considering or using website as an online donation channel. We recommend charities to (1) invest (wisely) in websites, (2) emphasize on visual aesthetics, (3) focus on overall ICQ, and (4) customize their websites.

First, the findings regarding significant influences of ICQ and SQ on attitude toward the charity website and willingness to donate on the site should encourage charity organizations to spend more effort and resources in maintaining high quality website as potential donors may select charity websites as a major channel for donation and information sources. We specifically recommend charities to hire or outsource development to professional web designers. To reduce operating costs, having volunteers who are experts in web design could be another way to maintain high quality websites. To effectively maintain high quality of information content and system features, we also recommend more collaboration between charity managers who update charity's information and web designers. For example, charity managers can inform recent success stories of projects or newly reported IRS Form 990 to web designers to update the information.

Second, while charity organizations should consider all dimensions of charity website quality, our finding emphasizes visual aesthetics. Our suggestion to focus on visual aesthetics is consistent with findings of prior research which has shown that visually aesthetic or emotive features of an eCommerce website are the most vital element of website quality (Valacich et al. 2007; Wells et al. 2011b). Web designers need to consider various attributes such as font, color, background, and images to improve the aesthetic aspects and, thereby, the appeal of websites. Using more human (e.g., children) images can also enhance the aesthetics (Cyr et al. 2009).

Third, our findings point to the importance of highlighting intrinsic charity website quality aspects (i.e., information content) over extrinsic charity website quality aspects (i.e., system features), which is contrary to what Wells et al (2011b) suggested for

eCommerce websites. Wells et al. pointed out that "given the challenges of presenting complex products and product packages in an online environment, extrinsic website quality attributes may be enhanced more efficiently than intrinsic website quality attributes, such as tailored information and interactivity" (p. 391). The difference in findings may be caused by the research context. While Wells et al. examined eCommerce and perceived product quality via cues from website, we investigated charity website for donation. A major role of charity website is to persuade visitors to donate to the websites. Thus, intrinsic charity website aspects include information content (e.g., charity's mission, financial accountability, guidance to donate) which helps visitors' processing of information, formation of attitude, and donation decision. Accordingly, charity organizations should emphasize providing potential donors with updated, sufficient, useful information on websites over offering high quality, sometimes unnecessary, system features/functionalities.

Finally, we found that individuals with high PICG are motivated to scrutinize information content and individuals relying on HH are more engaged by system features. This calls for a flexible approach to website design. Unlike printed solicitations, a charity website can abstract away some of the complexity and information onto other pages that can be accessed or retrieved as needed. Donors who elect to engage in additional scrutiny of the charity can do so, while others can focus on the donation process directly. Convenience also represents a major factor in the effectiveness of the website. For the one-time donor, a streamlined donation process is necessary. For the sustained donor, storage and tracking of donations could prove invaluable. In an era when organizations are striving to deliver content that is more personalized, a charity could also adopt this

approach and leverage available information about donors. Based on donor's characteristics, charity organizations can provide customized content and donation processes. The effectiveness of this approach will depend on the accuracy of the donor information collected, coupled with the ability to distill that information into cues that are appropriate for the donor.

3.5.5. Future Research Extensions

In addition to future research suggestions indicated in Table 3.9 to address some of the specific limitations of this research, this study opens up several opportunities for further research. One interesting direction for research is to extend this study that focused on charitable donation to exploring eCommerce- (or purchase-) specific constructs as elaboration motivations in examining consumers' buying behavior. Potential constructs could be purchase involvement and hedonic purchase orientation (Laurent and Kapferer 1985). Based on our findings, eCommerce researchers might want to propose and test a model that consumers with high product involvement are influenced by intrinsic cues (e.g., product information content) while consumers with high impulsive buying orientation are influenced by extrinsic cues (e.g., visual appeals) in evaluating eCommerce websites and subsequently engaging in actual commerce. We believe that identifying eCommerce-specific elaboration motivations and applying them to the ELM would nicely complement our current charity website research.

Second, future researchers can examine the moderating role of personal impulsiveness or impulsive donation orientation (e.g., Rook and Fisher 1995) in our research model. Some studies have concluded that impulsive behavior has a hedonistic

aspect and, specifically, that impulsive actions give hedonistic rewards (see Hausman 2000 for review). Thus, alternative hypotheses/ explanations for the more impulsive nature of people with greater HH are possible such as that these impulsive people would like to finish the task fast and thus merely accept SQ as a simple cue. In other words, these people may not elaborate SQ. In addition, because they have already decided to evaluate the website based on the quickly assessed extrinsic cues for SQ, it is possible that hedonic people with impulsive nature may simply accept the quantity of information content (i.e., reflecting a positive moderation) or might not care about/reading the information content (i.e., suggesting no moderation). However, these explanations are not supported from our results that reflected a negative moderation. Unfortunately, we did not specifically examine the impulsive nature of HH. Thus, it would be interesting for future researchers to tease out the impulsiveness of hedonic people and to examine unique role of impulsiveness.

Third, it would be worthwhile for researchers to apply other theories such as visual rhetoric to charity website research. Based on visual rhetoric, Cyr et al. (2009) proposed and found that more *human* images on a website increased a consumer's perceived social presence. Although our study did not articulate or specifically examine within the context of visual rhetoric theory, our website manipulation of visual aesthetics draws on the findings of Cyr et al. (2009). Human images (e.g., child images) were displayed on three information links to depict high visual aesthetics condition while no images were used for the low visual aesthetics condition. As such, future researchers can investigate the applicability of visual rhetoric and other theories in the context of online donations.

3.5.6. Concluding Remarks

The results from this research suggest that charity websites are an important persuasion channel for donations. This study is a first attempt at investigating online donations via charity websites. The ELM was applied to charity website quality to identify potential donors' information processing approaches. We found that information content quality and system quality play both central and peripheral routes to persuasion, depending on an individual's elaboration motivations. The ELM offers a useful theoretical lens to understand how potential donors process information from charity websites with notable consequences for their attitude formation. Valuable practical implications on how charity organizations can better manage their websites to facilitate online donations were proposed. This study serves as a springboard for future investigations and provides practical insights for designing charity websites for online donations.

CHAPTER 4

ESSAY 2: BEAUTIFUL IS GOOD AND GOOD IS REPUTABLE: MULTI-ATTRIBUTE CHARITY WEBSITE EVALUATION AND REPUTATION FORMATION UNDER THE HALO EFFECT

"The work of volunteers impacts on all our lives, even if we are not aware of it"

Anthony Worrall-Thompson

4.1. MOTIVATIONS AND RESEARCH OBJECTIVES

The rapid diffusion of digital commerce technologies has provided remarkable opportunities for innovation in the charity sector. In particular, charity websites have been utilized as a channel for fundraising, recruiting volunteers, and publicizing projects, and reporting financials and performances. Moreover, donors have been increasing their preference to give via charity websites (Dunham+Company 2013). Almost 1.1 million charity organizations exist in the U.S. (Internal Revenue Service 2012), and an increasing number of charity organizations are expected to create and invest in websites. Prior eCommerce research has found that high quality websites lead visitors to engage in purchasing (Wells et al. 2011b). To design more effective websites, some researchers have attempted to identify multiple usability/quality aspects of websites (e.g., Loiacono et al. 2007; Palmer 2002; Venkatesh and Agarwal 2006). For example, Loiacono et al. (2007) proposed WebQual including 12 dimensions including informational fit-to-task, response time, ease of understanding, visual appeal, emotional appeal, consistent image, on-line completeness, and others. Others have examined single or a few attributes that influence human perceptions and behaviors, including visual design (Cyr et al. 2009;

Deng and Poole 2010), waiting time (Lee et al. 2012), navigation (Webster and Ahuja 2006), among others. Some recent research has concluded that aesthetic design is one of the most important attributes in website design (Wells et al., 2011b; Valacich et al. 2007; Van der Heijden 2004). Past research on website design can be broadly summarized as follows: *many attributes of websites are important, and that some attributes are more important than others*. Based on this, this essay begins with two broad questions: How do people evaluate multi-attribute websites? Can people correctly evaluate them?

In relation to the above questions, the halo effect has been used in this study to identify and understand how people make judgments of quality about an object. Of the numerous studies on individuals' rating biases that have been conducted, none has interested researchers as much as the influences of halo (Fisicaro and Vance 1994). Scholars have considered halo errors "pervasive, inevitable, constant, and ubiquitous" (Feeley 2002, p. 578). Halo leads individuals to fail to properly discriminate between conceptually different and potentially independent attributes of objects (e.g., beauty, intelligence, and kindness) (Saal et al. 1980). This phenomenon was initially identified by Wells (1907) as raters assessed the literary merit of 10 authors across 10 independent categories and an overall merit category. Thorndike (1920) later named this rating phenomenon as halo. He found that when supervisors evaluated their subordinates, correlations between attributes were "all higher than reality" (p. 25) and "too high and too even" (p. 27). Since Thorndike's work, halo has enjoyed a rich tradition of empirical research across disciplines.

The halo effect has been employed as a theoretical foundation for rating and decision making in contexts as varied as physical attractiveness (Landy and Sigall 1974),

country image (Erickson et al. 1984), reputation (Dollinger et al. 1997), and aesthetics of website (Hartmann et al. 2008). Past research has examined various types of halos and different casual models which lead to diverse results of ratings. For example, a student could generally like a teacher, and thus this general impression would affect his or her judgments of the teacher on other theoretically unrelated attributes (Feeley 2002). In addition, one salient attribute (e.g., attractiveness) can determine other important attributes (e.g., talent) (Landy and Sigall 1974; Tractinsky et al. 2000) or influence other multi-attribute traits (e.g., socially desirable traits such as occupational status, marital competence, and social and professional happiness) (Dion et al. 1972). Another study found that attractiveness is more influential than intelligence in evaluating human attributes (Meiners and Sheposh 1977), suggesting that there is and can be a dominant attribute in evaluations. Since halo can distort models of evaluative judgments (Holbrook 1983), it is important for researchers to identify different types of halo so that they can adequately conceptualize and model the halo effects. Moreover, there is little theoretical understanding regarding how people evaluate multi-attribute objects and what types of salient halos exist in their evaluation.

Along with physical attractiveness, reputation has been most widely studied in halo effect research (e.g., Brown and Perry 1994; Dollinger et al. 1997). eCommerce research has reported the effect of reputation mainly on trust with an online retailer and purchase intentions (Jarvenpaa et al. 2000; McKnight et al. 2002). However, research into what enables formation of reputation has not received much attention. Bansal et al. (2008) suggested that reputation is "the collective social knowledge about the trustworthiness" of an object (p. 5). The underlying assumption of prior research is that building reputation

requires value adding activities that entail time and effort. Thus, prior researchers have generally examined the consequences of reputation by examining well-known and lesser known merchants (Jarvenpaa et al. 2000). Contrary to traditional beliefs about reputation, this study argues that halo can help identify the mechanism of initial reputation formation of *unfamiliar* or *unknown* humans, organizations, and objects. In other words, the unknown information (i.e., formation of reputation) can be determined by other available quality attributes. While reputation is a highly cherished value, there is little extant research that has examined the initial reputation formation of an unfamiliar object, such as a new, unknown charity website in our study.

Given the above research lacuna, the objectives of this study are to (1) identify if there is evidence of various salient halos while evaluating multi-attributes objects and (2) theorize how these halos influence initial reputation formation. To accomplish these objectives, this study employs charity websites as a multi-attribute donation channel consisting of two dimensions: *information content quality* that consists of three attributes/ sub-dimensions (mission, financial, and donation assistance information) and *system quality* that consists of four attributes/sub-dimensions of system functionalities/features (i.e., navigability, download speed, visual aesthetics, and security). This study also proposes that the initial reputation of a new, unfamiliar object is formed via an overall assessment of information content quality and system quality of the charity websites. An examination of people's judgments on multiple attributes of website quality can contribute to our theoretical understanding of how individuals evaluate the multi-attribute objects and make a decision as well as inform effective charity website design.

The remainder of this essay is organized as follows. In the next section, we provide theoretical foundations from the halo effect and website research. Next, the research model and hypotheses are presented. Then, we describe the research methods used for the study, including experimental procedure, measurement validation, data analyses, and results. Finally, we discuss theoretical and practical implications, limitations, and future research directions.

4.2. THEORETICAL FOUNDATIONS AND RELATED LITERATURE

The halo effect has been studied extensively in disciplines such as social psychology (e.g., Feldman 1986), marketing (e.g., Erickson et al. 1984), education (e.g., Moritsch and Suter 1988), management (e.g., Brown and Perry 1994), and to some extent in information systems (e.g., Tractinsky et al. 2000) for understanding people's evaluations and decision making. We summarize selected prior research on the halo effect in Figure 4.1. In identifying salient halos in the context of websites, this study is based on and extends the works of Wells et al. (2011b) and Xu et al. (2013). In the following section, we first discuss the overall halo research, followed by related website literature.

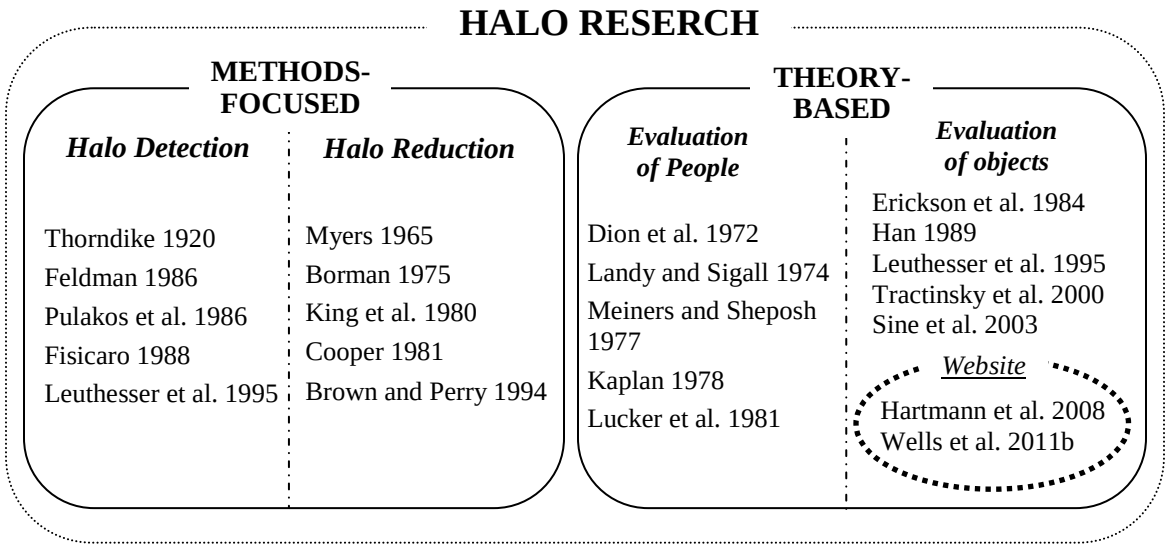


Figure 4.1. Overview of Research on the Halo Effect

4.2.1. The Halo Effect

While the halo effect named by Thorndike (1920) has been most popular term, different labels (e.g., halo error, logical error, halo bias, correlational bias, and illusory

halo) have been used to indicate raters' tendency to overestimate the correlation between traits, dimensions, or behaviors (Feeley 2002). Based on different types and conceptual definitions of halo, Fisicaro and Lance (1990) proposed three causal models of the halo effect. In *general impression model*, halo is defined as "the effect of global evaluation on evaluations of individual attributes of a person" (Nisbett and Wilson 1977, pp. 250). Halo in *salient dimension model* refers to "the tendency for an evaluator to let the assessment of an individual on one trait influences his or her evaluation of that person on other traits (Robbins 1989, p. 444). *Inadequate discrimination model* conceptualizes halo as "a rater's failure to discriminate among conceptually distinct and potentially independent aspects of a ratee's behavior" (Saal et al. 1980, p. 415). The major consequence of the halo effect is higher inter-correlations of dimensional ratings than they actually are; thus, the observed correlations do not represent the true inter-dimensional relations (Feeley 2002; Fisicaro and Lance 1990).

As shown in Figure 4.1, our literature review indicates that halo research consists of two main approaches: (1) the methods-focused approach and (2) the theory-based approach. The *methods-focused approach* primarily examines methodological issues of halo. This approach can be divided into halo detection (or measurement) and halo reduction. In the halo detection method, for example, Leuthesser et al. (1995) presented a methodology for measuring brand equity based on halo. On the other hand, research on halo reduction has attempted to find ways to reduce halos. In particular, the review of Cooper (1981) provided nine methods to reduce halo (e.g., increasing rater familiarity, rater training, etc). Brown and Perry (1994) proposed a method for removing financial performance halo in using secondary data.

The *theory-based approach* has focused on theory-based application of halo. While social psychologists generally examined evaluation of human traits (e.g., Dion et al. 1972; Meiners and Sheposh 1977), other researchers applied the halo in non-human contexts such as products (e.g., Erickson et al. 1984), brands (e.g., Leuthesser et al. 1995), stores (e.g., Wu and Petroshius 1987), and organizations (e.g., Sine et al. 2003). In spite of the rich tradition of theoretical applications of halo, only recently have a few researchers examined the role of halo in website design. In the following section, we review investigation of the halo effect in website research and other related studies.

4.2.2. Related Website Research

As mentioned earlier, works of Wells et al. (2011b) and Xu et al. (2013) set the base for our study in developing a theoretical model for this study. Wells et al. (2011b) examined website quality as a signal of perceived product quality. They conceptualized website quality in terms of four attributes – security (SEC), download delay (DD), navigability (NAV), and visual appeal (VA). In Study 1[8], they developed six interface treatments ($A_{\text{all high}}$: all four attributes were of high quality; B_{SEC}, C_{DD}, D_{NAV}, and E_{VA}: one attribute was high while the remaining attributes were of low quality; $F_{\text{All Low}}$: all four attributes were of low quality). Quite unexpectedly and interestingly, the results showed that participants evaluated each of quality attribute in treatment A as being much higher than each of the high quality attribute in treatments B, C, D, and E although the treatments of high quality attributes were same (i.e., security: $6.92_A/5.22_B$, download delay: $7.93_A/6.80_C$, navigability: $8.20_A/7.12_D$, visual appeal: $7.33_A/5.48_E$). *Post-hoc*, Wells et al. attributed this phenomenon to the halo effect. Another interesting result

[8] See Table C2 of Wells et al. (2011b, p. A7)

relates to the role of visual appeal in participants' judgment of navigability. Their result showed that the rating of low quality navigability (7.31_E) with high quality visual appeal (5.48_E) is higher than that of high quality navigability (7.12_D) with low quality visual appeal (3.02_D). This is sort of related to the claim that "what is beautiful is usable" (Tractinsky et al. 2000) and findings in social psychology regarding the role of physical attractiveness on other human traits.

Drawing on Wixom and Todd (2005), Xu et al. (2013) proposed 3Q model by examining the role of information quality (IQ), system quality (SQ), and service quality (SerQ) in website adoption. They theorized that perceived SQ influences perceived IQ and perceived SerQ, and perceived IQ influences perceived SerQ. The results showed significant relationships between SQ and IQ and between IQ and SerQ. Although the theoretical argument for the relationship between SQ and IQ was not based on the halo effect, it is consistent with the arguments of halo based website research. Hartmann et al. (2008) suggested that aesthetic features could overcome poor usability experiences and even positively affect perceived web contents, implying the positive effect of SQ on IQ. What remains unclear, though, is whether the reverse lens is applicable (i.e., the effect of IQ on SQ).

Because the purpose of our study is to identify human judgments of multi-attribute objects and formation of initial reputation, we decided to measure website quality on two dimensions – information content quality[9] (IQ) and system quality (SQ). We based our measure of IQ on three dimensions – mission information, financial information, and donation assistance information. Following Wells et al. (2011b), we

[9] We used information content quality rather than information quality because we conceptualized charity website information quality with information content of mission, financials, and donation assistance. To be consistent with Xu et al. (2013), we use the label IQ for information content quality.

used navigability, download speed, visual aesthetics, and security, as dimensions of SQ. The justifications for selecting two quality dimensions and seven sub-dimensions of IQ and SQ are provided in Table 4.1.

Table 4.1. Justifications for Variable Selection

<table>
<tr><th colspan="2">Website Quality Dimension</th><th>Justification</th></tr>
<tr><td rowspan="2">Dimensions of Website Quality</td><td>Information Content Quality (IQ)</td><td rowspan="2">• After being introduced in DeLone and McLean's IS success model (1992), information quality and system quality have been extensively examined in IS research (e.g., McKinney et al. 2002; Wixom and Todd 2005). However, these two have not been studied as determinants of initial reputation formation in the context of online donations.
• In relation to halo research, IQ and SQ can be treated to be analogous to internal quality (e.g., intelligence, talent) and external quality (e.g., beauty, professional appearance) which have been extensively examined in human evaluation.</td></tr>
<tr><td>System Quality (SQ)</td></tr>
<tr><td rowspan="3">Dimensions of IQ</td><td>Mission Information</td><td>• Nonprofit literature points out that performance information (e.g., mission information, summaries of projects) is an important aspect for nonprofit credibility (Brinkerhoff 2001; Saxton and Guo 2011).
• Since mission information reveals a charity's current mission, goals, and objectives, it is important for potential donors to know charity's mission before making a donation decision.</td></tr>
<tr><td>Financial Information</td><td>• Nonprofit literature suggests that financial information (e.g., IRS Form 990, audited financial statement) is a key attribute for nonprofit credibility (Brinkerhoff 2001; Saxton and Guo 2011).</td></tr>
<tr><td>Donation Assistance Information</td><td>• A key function of charity websites is to help people make donations.
• Donation assistance information can facilitate donations by charity website visitors.</td></tr>
<tr><td rowspan="4">Dimensions of SQ</td><td>Navigability</td><td rowspan="4">• These four were used as dimensions of website quality by Wells et al. (2011b).
• Our study would replicate and extend findings of Wells et al.</td></tr>
<tr><td>Download Speed</td></tr>
<tr><td>Visual Aesthetics</td></tr>
<tr><td>Security</td></tr>
</table>

4.3. RESEARCH MODEL AND HYPOTHESES

Using the halo effect as a theoretical foundation, the research model of this study is presented in Figure 4.2. The primary outcome of interest is perceived reputation of the charity website. Detailed research hypotheses are developed below.

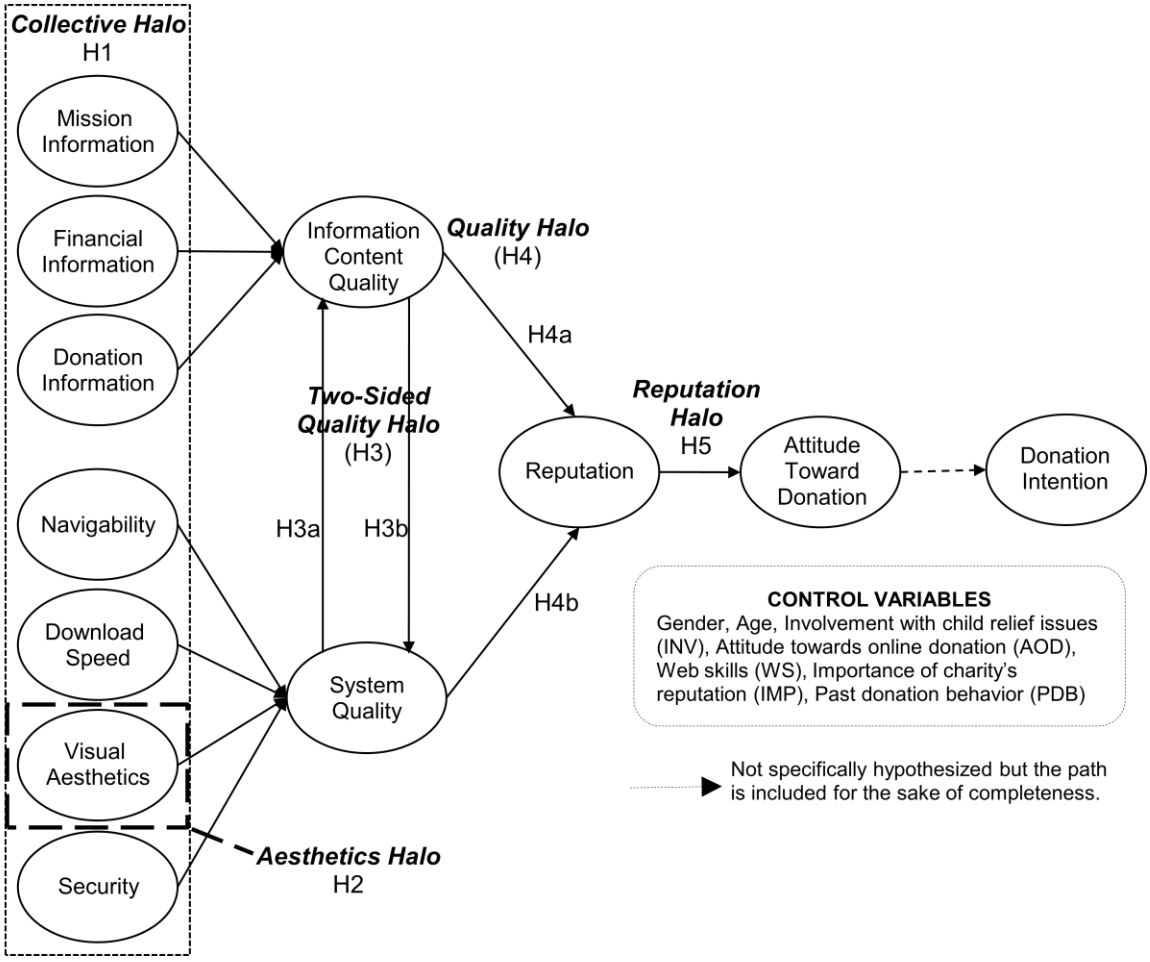


Figure 4.2. Research Model

4.3.1. Collective Halo

As introduced in the previous section, Wells et al. (2011b) made use of four dimensions/attributes (NAV: Navigability, DD: Download Delay, VA: Visual Appeal, and SEC: Security) to represent website quality (WQ) which we treat as system quality

(SQ) in this study. While manipulating the quality of each of these four dimensions/attributes to be high or low (binary) sixteen configurations are possible, Wells et al. used six configurations (i.e. all four high on quality: HHHH; only one high: HLLL, LHLL, LLHL, and LLLH; all four low on quality: LLLL). They found that when the quality of all four dimensions/attributes representing WQ was high, i.e., HHHH configuration, the quality of each of these dimensions/attributes in this configuration was assessed as being higher than the quality of the same/corresponding dimension in the other four configurations with only one high quality of dimension (i.e., HLLL, LHLL, LLHL, or LLLH) even though they were also designed to be at the exact same (high) level of quality as in HHHH configuration. As part of their retrospective analysis, the authors alluded to this observation as perhaps emerging from the halo effect. Our study labels this phenomenon as *collective halo* in a multi-attribute object evaluation setting. In addition, we also conjecture that even when additional quality dimensions/attributes are included (e.g., the three dimensions of IQ in this study, making for a total of seven dimensions/attributes across the two forms of quality—SQ and IQ) the collective halo phenomenon will still hold up. One of the consequences of the collective halo is that it inflates dimensional inter-correlations beyond the true level that may exist, and increase or reduce rating of specific attributes.

The collective halo phenomenon can be adapted and explained from halos which have been used in *salient dimension model* and *inadequate discrimination model* (Fisicaro and Lance 1990), leading to boosting and diminishing effect in particular attributes when judging multi-attribute websites. When there are several attributes, the halo in the *salient dimension model* suggests that an assessment on one salient attribute is

a common cause of judgment on other, non-salient dimensions (Anastasi 1988). Based on the halo in *inadequate discrimination model*, one can conceptualize that individuals are unable to discriminate among conceptually independent attributes (of websites) (Saal et al 1980). In evaluating multiple attributes, the quality of majority of the attributes becomes salient. For example, if all of the (seven) attributes are of high quality, the high quality itself turns out to be salient, boosting the evaluation in a specific attribute. Alternatively, if a majority of the dimensions is of low quality (e.g., LLLLLLH, or LLLLLHH), the low quality itself becomes salient, diminishing in the evaluation of a particular high quality attribute. Thus, people will end up being unable to make correct evaluation of specific attributes.

When the level of quality of all of the (seven) dimensions/attributes is high, they collectively become outstanding. These attributes are readily visible and easy to evaluate as being of high quality. Users are able to easily evaluate these high quality dimensions quickly and with confidence, and these salient collective attributes boost their perception of the quality of each attribute. On the other hand, when a majority of the attributes is of low quality (e.g., a configuration with LLLH of SQ OR HLL of IQ along with LLLH of SQ) these low quality attributes become salient. Thus, they carry over and diminish the evaluation of the particular few high quality attributes (the one H in IQ and one H in SQ). Thus, we present the following hypothesis:

H1*: When the quality of all the (seven) dimensions/attributes is high, each of these attributes will be perceived to be of higher quality than the exact same high quality dimension/attribute in other configurations where the attribute is mixed with a majority of low quality attributes.*

4.3.2. Aesthetics Halo

Extant literature has noted that the attractiveness induced halo effect is a strong and general phenomenon (Eagly et al. 1991). Dion (1981) suggested that the beauty-is-good effect is very strong for measures of social competence. Bassili (1981) concluded that the core of the physical attractiveness halo is an extraversion or a social vitality. Physically attractive individuals are perceived to be enjoying more good things (e.g., happier marriage) and to have more socially desirable traits (e.g., modesty) (Dion et al. 1972). Moreover, attractiveness has more impact than intelligence in evaluating human attributes such as being friendly, likeable, and talented (Meiners and Sheposh 1977). The above-mentioned findings indicate the dominant role of a single attribute such as physical attractiveness (or aesthetic design) in evaluating the various attributes of human beings (or multiple attributes of objects or products).

This dominant role of one salient dimension (i.e., beauty) has been successfully applied to IT artifacts. Tractinsky et al. (2000) claimed "what is beautiful is usable" and found that judgment of interface aesthetics of an IT system correlated higher to judgment of its usability than the objective usability standard. In particular, they found that level of system's aesthetics influenced the post-usage perceptions of both aesthetics and usability, whereas the level of actual usability had no such effect. As such, IS research has found that users make attributions of unrelated factors based on the interface design (Campbell et al. 2013). Visual aesthetics and appearance is often the first website feature to be evaluated by a web visitor, and it can be judged within a very short time, in as few as 50 milliseconds (Lindgaard et al. 2006). In addition, aesthetics (representational delight) has been found to be a dominant element of website quality in experiential contexts (Valacich

et al. 2007; Van der Heijden and Verhagen 2004). Wells et al. (2011b) found that appealing and aesthetic visual design has a dominant effect on website system quality and perceived product quality. Based on attractiveness induced halo and the findings of prior eCommerce research, we expect that when assessing overall system quality of charity websites, visual aesthetics would have a dominant effect over the other system features such as navigability, download speed, and security. Thus, we hypothesize that

H2*: Visual aesthetics has a dominant effect in evaluating system quality.*

4.3.3. Two-Sided Quality Halo

Drawing on DeLone and McLean (2003), this study defines information content quality (IQ) as a charity website visitor's perception that the website discloses useful, timely, reliable and sufficient (mission, financial, and donation assistance) information; and system quality (SQ) as a web visitor's perception that a website provides what she believes to be the desired characteristics of a website system. IQ and SQ can be viewed as intrinsic quality and extrinsic quality (Wells et al. 2011b). According to Richardson et al. (1994), intrinsic quality attributes, which can alter the fundamental nature of the product, are features directly related to the product; extrinsic quality attributes, which do not alter the fundamental nature of the product, are not directly related to the product. Extrinsic quality can be judged without any or much prior knowledge of the product and more easily recognized and processed than intrinsic quality (Richardson et al. 1994). In the context of a charity website, information content such as mission information and financial information would be intrinsic quality because they provide a charity's identity and accountability. On the other hand, system features/functionalities would be extrinsic

quality because they are not directly linked to a charity organization itself and alteration of extrinsic quality does not change nature of the charity. Thus, IQ and SQ can be treated to be analogous to intrinsic/internal quality and extrinsic/external quality[10] that are used when evaluating human beings. While external quality consists of "highly visible, concrete, outward" attributes (e.g., beauty, professional appearance), internal quality is composed of "more elusive, abstract, and internal" attributes (e.g., intelligence, talent) (Meiners and Sheposh 1977, p. 265).

Two-sided quality halo argues that external and internal qualities influence each other. It is related to halo in inadequate discrimination model which was conceptualized as a rater's failure to discriminate among conceptually distinct and independent dimensions (Saal et al. 1980). In particular, the inadequate discrimination model attributes halo error to "cross effects" of ratee behaviors; that is, ratee behavior on one dimension affects the evaluations of ratee behaviors on other dimensions (Fisicaro and Lance 1990). In the same vein, Kelly (1955) argued that individuals who are seen positively on one trait are also seen positively on other traits.

The causal relationship between external quality and internal quality has been examined. Landy and Sigall (1974) found a positive effect of a writer's attractiveness on the evaluation of her work even when the objective quality of her work was relatively poor. In addition, Kaplan (1978) found that male judges evaluated an attractive female author as significantly more talented than an unattractive author. Likewise, IS literature has shown a positive influence of external website quality on internal website quality. As information is stored and delivered by a system, problematic systems can degrade the

[10] Although the terms intrinsic and internal, and extrinsic and external are used interchangeably and can be seen to be analogous, we use 'internal' quality and 'external' quality for the sake of consistency in the remainder of this document.

actual quality of the information content they generate (Xu et al. 2013). Users are expected to know that a good system is essential to attain good information (e.g., in terms of completeness, accuracy, format, currency, etc.), and thus they assess website IQ based on website SQ (Xu et al. 2013). Drawing on the halo effect, Hartmann et al. (2008) concluded that aesthetic website design can positively affect perceptions of website contents. In the context of e-service, Xu et al. (2013) found that perceived SQ positively influences perceived IQ, a result that can also be applicable in the context of charity website.

Furthermore, we also expect that internal quality can affect external quality. Unlike the findings of the effect of external quality on internal quality, the investigation of the reverse relationship has been very limited. External quality attributes are a vessel of internal quality attributes. When a system delivers well structured, reliable, and useful information, the quality of information can carry over to quality of system although the actual quality of the system is not as good as it looks. This argument is somewhat associated with findings of Cenfetelli et al. (2008) and Xu et al. (2013), who theorized the effect of perceived service functionality on perceived service quality and the effect of perceived information quality on perceived service quality, respectively. Cenfetelli et al. posited that the information provided by a website is an important antecedent of service functionality. Extending Cenfetelli et al., Xu et al. found that perceived information quality leads to a positive evaluation of service quality.

Because information content such as mission, financials, and ways to help/assist posted on a website is critical to help donors identify accountability of the charity and facilitate donation decision (Brinkerhoff 2001; Saxton et al. forthcoming), overall

information content can play more important roles than system features. Thus, if a charity website can provide high quality of the essential information content, the information content can cover low quality of peripheral system features/functionalities. Thus, an increase in perceived IQ should lead to a more positive perception/estimation of SQ. Based on the above reasoning we have the two following hypotheses.

H3a*: An individual's perceived system quality positively influences that individual's perceived information content quality.*

H3b*: An individual's perceived information content quality positively influences that individual's perceived system quality.*

4.3.4. Quality Halo and Initial Reputation Formation

We argue that the crucial missing information/link, formation of reputation in this study, can be triggered by available cues (i.e. IQ and SQ). The Merriam-Webster dictionary provides definitions of reputation as "overall quality or character as seen or judged by people in general" and "recognition by other people of some characteristic or ability" (Merriam-Webster 2014). Drawing upon the above, this study defines reputation as the perception of a charity website's honesty with and concern towards its (potential) donors (Metzger 2006). In the real world, people might form reputation of even unknown and unfamiliar people based on their perceptions of these people's intelligence and their professional appearances. In the same vein, reputation of unfamiliar charity websites can be formed based on perceptions of sites' internal and external qualities.

In addition, many incidents of charity scandals have led the public to demand that charities be more responsible for their missions, and become more accountable and

credible in how charitable donations are being utilized (Waters 2007). Disclosure of performance information such as mission, vision, values, goals, outputs, and strategic plans is used to demonstrate responsibility for the charity's performance "in light of agreed-upon performance target" (Brinkerhoff 2001, p. 10). Financial information such as IRS Form 990 and annual report seeks to show "financial accountability," which "concerns tracking and reporting on allocation, disbursement, and utilization of financial resources, using the tools of auditing, budgeting, and accounting" (Brinkerhoff 2001, p. 10). Thus, providing good quality information content would trigger visitors to form a positive reputation of charity websites.

In addition to internal quality, external quality would also help people form reputation. Past research has found that attractive communicators are more persuasive than unattractive communicators (Pallak et al. 1983). When a charity website has good system features/functionalities, visitors can acquire information content they seek quickly and in an easy and pleasant manner (Palmer 2002), leading them to perceive the website to be genuinely concerned about donors. Thus, we have the following hypotheses:

H4a*: Perceived information content quality positively influences perceived reputation of the charity website.*

H4b*: Perceived system quality positively influences perceived reputation of the charity website.*

4.3.5. Reputation Halo

A positive reputation indicates that a person, a product, or an organization is highly esteemed, worthy, valuable, credible, or meritorious (Jarvenpaa et al. 2000; Meijer 2009). Reputation halo has enjoyed a rich body of empirical support. Merton's (1968)

seminal work on the Matthew effect[11] demonstrated that, for the same quality of scientific research, more prestigious scientists receive more citations than less prestigious scientists. Similarly, university prestige increases the technology licensing rate (Sine et al. 2003). According to Dollinger et al. (1997), reputation (of firms) is a predictor of joint venture decisions. eCommerce research has found a positive effect of reputation on trust (Jarvenpaa et al. 2000; Song and Zahedi 2007). Thus, we expect that reputation halo can be successfully applied to the context of online donations via charity website. Therefore, we present the following hypothesis.

H5*: Perceived reputation of the charity website positively influences attitude toward donation to the charity website.*

4.3.6. Control Variables

In order to examine the true effects of research variables, we control for variables such as gender (Sargeant 1999), age (Sargeant 1999), involvement with child relief issues (Bennett et al. 2007), attitude toward online donation (Bennett 2009), web skills (Lee and Chang 2011), importance of charity's reputation (Meijer 2009), and past donation behavior (Bennett 2009). Although these variables are not of direct interest in this study, they might be related to initial reputation formation of the charity website.

[11] Matthew effect was from a verse in the biblical Gospel of Matthew.
For to everyone who has will more be given, and he will have an abundance. But from the one who has not, even what he has will be taken away. (Matthew 25:29)

4.4. RESEARCH METHOD AND DATA ANALYSIS

To test the research model, we created a website (for a fictitious charity organization, which, of course, was not communicated to the study participants) in the domain of child relief and development because child development, hunger, and third world charities (e.g., UNICEF) are most popular among young populations aged between 18 and 24 (Reed 1998). Two experiments were conducted to test the research hypotheses as summarized in Table 4.2. Experiment 1 is a pilot study intended for assessing and establishing manipulation checks. Experiment 2 focuses on examining the various halos in evaluating charity websites, forming initial reputation, and making a donation decision.

Table 4.2. Summary of Experiments

Experiment	Experiment 1 (N=20)	Experiment 2 (N=661)	
Title	Pilot Study	Main Study	
		Measurement Model	Hypothesis Testing
Design	2 Treatments High vs. Low	24 Treatments Partial Factorial Design	
Demographic	• Gender: Male (13) • Average Age: 22.65	• Gender: Male (391: 59.2%), Female (270: 40.8%) • Average Age: 21.59	
Focus	• Manipulation check	• Assignment bias check • Manipulation check • Instrument validation • Common method bias	• H1: Collective halo • H2: Aesthetics halo • H3: Two-sided quality halo • H4: Quality halo • H5: Reputation halo
Measured Variables	MI, FI, DI, NAV, DS, VA, SEC	IQ: MI, FI, DI SQ: NAV, DS, VA, SEC REP, AD, INT	
Control Variables		Gender, Age, Involvement with child relief issues (INV), Attitude toward online donation (AOD), Web skills (WS), Importance of charity's reputation (IMP), Past donation behavior (PDB)	
Analyses	• Manipulation check[S] - Paired t-test - ANOVA	• Assignment bias check[S] • Manipulation check[S] • Exploratory factor analysis[S] • Confirmatory factor analysis[A] • Common method bias[S] - Harmon's single factor - Marker variable[S]	• Independent t-test[S] (H1) • Structural model[A] (H2 – H5) • Bonferroni Analysis[S] (H3) • MANOVA[S] (H3)

IQ: Information Content Quality; MI: Mission information; FI: Financial information; DI: Donation Assistance information; SQ: System quality; NAV: Navigability; DS: Download Speed; VA: Visual aesthetics; SEC: Security; REP: Reputation; AD: Attitude toward donation; INT: Donation intention
[S]: SPSS 21 was used; [A]: AMOS 21 was used

4.4.1. Measures

To increase construct validity, all measures were adapted from previously validated scales whenever possible. Based on nonprofit literature (Saxton and Guo 2011; Sargeant et al. 2007), IQ was conceptualized as a second-order formative construct with three first-order constructs: MI, FI, and DI. Following Wells et al. (2011b), SQ was conceptualized as a second-order formative construct with four first-order constructs: NAV, DS, VA, and SEC. Each of the three IQ dimensions and four SQ dimensions was measured with reflective items adapted from existing scales. In addition, overall IQ and SQ were each measured with three reflective items. Reputation of the charity website was adapted from eCommerce research (Ray et al. 2011). Based on Ajzen (1991), behavioral attitude was measured with multiple items using semantic differential scales. In line with past research on eCommerce (Pavlou and Fygenson 2006) and donation (Armitage and Conner 2001), behavioral intention was measured using items that assess a subject's willingness to donate money, time, or resources to the charity website. All measurement items, scale anchors, and sources are presented in Appendix B1.

4.4.2. Website Stimuli

A total of twenty four website stimuli were developed to provide variations in MI, FI, DI, NAV, DS, VA, and SEC. It is important to note that a partial, factorial design (24 treatments) was employed instead of a full, factorial design (2^7 = 128 treatments) because the goal of this study is to examine halo effects rather than the interaction effects of seven dimensions. However, it may be noted that with this partial design it is not possible to test possible confounding effects of interactions among seven dimensions (see Wells et al.

2011b for more information). Website stimuli employed in this study and justification of these choices are described in Table 4.3.

Table 4.3. Website Stimuli Employed

Stimulus		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IQ	MI	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L	L	L	L	L	L	L
	FI	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L
	DI	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L	L	L	L	L	L	L
SQ	NAV	**H**	**H**	L	L	L	L	**H**	**H**	L	L	L	L	**H**	**H**	L	L	L	L	**H**	**H**	L	L	L	L
	DS	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L
	VA	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	L	L	L
	SEC	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	**H**	**H**	L

Variation	Treatment	Justification
High and/or low IQ and SQ	1, 6, 19, 24	• Variation of IQ and SQ
Manipulating FI	7-18	• Nonprofit literature suggests that FI tends to dominate the performance information (Saxton et al. forthcoming). • FI has much more textual information than MI and DI.
Manipulating one dimension of SQ	2-5, 8-11, 14-17, 20-23	• Based on Study 1 of Wells et al. (2011b)

H: High; L: Low

IQ was manipulated by varying the amount (volume), extent (breadth), and details (depth) associated with the charity's mission information (mission, vision, and values), its financial information (annual report, ISR Form 990, and Audited Financial Statement), and information about donation options (type: money, time and resources; channel: onsite and online). SQ was manipulated by varying the NAV, DS, VA, and SEC on the website. These manipulations are illustrated in Appendix B2.

After developing the measurement instrument and website stimuli, several faculty members and doctoral students pretested and provided their feedback regarding the content validity of measurement scales and the appropriateness of website treatments. Based on their feedback, we made a few changes in item phrasing for the final version of the questionnaire and in the website stimuli.

4.4.3. Experiment 1: The Pilot Study

Recall that the focus of the pilot study was to conduct manipulation checks. For the manipulation checks, this experiment employed used the two extremes – high and low website treatments (1 and 24) – based on two assumptions. When people evaluate multi-attribute objects, (1) they can make distinctions between all high and all low quality of the attributes but that (2) they cannot correctly evaluate and distinguish the actual quality of each attribute if the qualities of attributes vary. For this pilot test, we set up two groups. In Group A (vs. Group B), participants evaluated high (vs. low) quality website first and low (vs. high) quality website later. This setting allows us to identify individuals' cognitive distinction from 'within subject design' and to conduct traditional manipulation check from 'between subject design', and address and account for any ordering effect.

The subjects for this experiment were undergraduate and graduate students at a large public university in the US Midwest. Twenty students participated in this first experiment. They were instructed on how to evaluate the two sequentially presented websites and asked to complete a survey which measured seven dimensions of website quality after they evaluated each website. Ten participants were randomly assigned to each group. We conducted paired sample t-test and ANOVA using SPSS 21.0 for the seven website quality dimensions. They were found to be significantly different, suggesting that our manipulation is successful (See Table 4.4).

Table 4.4. Results of Pilot Test

Within Subject										
	A: High → Low (N=10)					B: Low → High (N=10)				
	I1 (High)	I2 (Low)	I1 – I2	t-value	Sig	J1 (Low)	J2 (High)	J1 – J2	t-value	Sig
MI	5.58	2.80	2.78	4.80	.001	3.23	5.75	-2.53	-6.17	.000
FI	5.80	2.60	3.20	6.14	.000	3.73	5.45	-1.73	-3.00	.015
DI	4.95	2.55	2.40	3.15	.012	3.45	5.80	-2.35	-6.79	.000
NAV	5.87	3.00	2.87	4.46	.002	3.03	5.73	-2.70	-5.37	.000
DS	5.70	2.50	3.20	3.70	.005	3.10	5.13	-2.03	-3.20	.011
VA	4.90	2.10	2.80	3.76	.004	2.10	6.03	-3.93	-8.97	.000
SEC	4.70	2.33	2.37	4.12	.003	2.53	5.40	-2.87	-4.33	.002
Between Subject										
	A and B: Viewed First Site (N=20)					A and B: Viewed Second Site (N=20)				
	I1 (High)	J1 (Low)	I1 – J1	F-value	Sig	I2 (Low)	J2 (High)	I2 – J2	F-value	Sig
MI	5.58	3.23	2.35	24.62	.001	2.80	5.75	-2.95	24.03	.000
FI	5.80	3.73	2.07	15.48	.011	2.60	5.45	-2.85	20.89	.000
DI	4.95	3.45	1.50	7.96	.000	2.55	5.80	-3.25	36.46	.000
NAV	5.87	3.03	2.84	29.12	.001	3.00	5.73	-2.73	14.63	.000
DS	5.70	3.10	2.60	15.78	.000	2.50	5.13	-2.63	10.62	.004
VA	4.90	2.10	2.80	27.83	.002	2.10	6.03	-3.93	22.84	.000
SEC	4.70	2.53	2.17	12.71	.002	2.33	5.40	-3.07	33.97	.000

4.4.4. Experiment 2: The Main Study

The focus of Experiment 2 was to (1) assess the measurement model and (2) test the hypotheses. A controlled lab experiment using the 24 website treatments (Table 4.3) was designed to investigate the effects of various types of halo in charity website evaluation and initial reputation formation. The following section describes the experimental design and data analyses for this study.

Sample and Experimental Procedure: A separate sample of subjects who had not participated in the pilot study was recruited for this study. They voluntarily participated in this experiment in exchange for extra course credit and an opportunity to win a $30 gift card. A total of 669 students participated in Experiment 2. Eight observations were

discarded due to missing data or failure to follow instructions, resulting in 661 usable observations.

It is important to note that researchers have pointed that unfamiliar objects and raters spending insufficient effort are main sources of halo when evaluating ratees across multiple attributes (Feeley 2002). To reduce the possible sources of halo, we included the following procedures to make participants familiar with the attributes of the website (i.e., training) and to spend enough efforts for evaluation (motivation).

All students were granted additional course credit for participating. The participants were asked to fill out pre-test survey that captured various pieces of demographic information before they participated in the experiment. We provided them clear instruction on how to evaluate the website. They were assigned to one of twenty four versions of website stimuli and asked to investigate informational content (mission, financial, and donation assistance information) and system features/functionalities (navigability, download speed, visual aesthetics, and security). To ensure sufficient motivation and interest in the study, we asked all participants to spend enough time and evaluate the website in as much detail as possible. We emphasized that $30 gift cards will be given to students who made an accurate evaluation. After interacting with the website, the participants were asked to complete a post-test survey. The data was collected via an online survey, using Qualtrics, and the study subjects were randomly assigned to the twenty four website treatments. The descriptive statistics across the various treatments is presented in Table 4.5.

Table 4.5. Treatment Descriptive Statistics

Interface Treatments (N=661)		1 (N= 28)	2 (N= 27)	3 (N= 28)	4 (N= 28)	5 (N= 27)	6 (N= 27)	7 (N= 28)	8 (N= 27)	9 (N= 27)	10 (N= 28)	11 (N= 28)	12 (N= 29)	13 (N= 28)	14 (N= 27)	15 (N= 27)	16 (N= 27)	17 (N= 27)	18 (N= 27)	19 (N= 29)	20 (N= 27)	21 (N= 28)	22 (N= 27)	23 (N= 27)	24 (N= 28)
IQ	MI	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L	L	L	L	L	L	L
	FI	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L
	DI	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	L	L	L	L	L	L	L	L	L	L	L	L
SQ	NAV	**H**	**H**	L	L	L	L	**H**	**H**	L	L	L	L	**H**	**H**	L	L	L	L	**H**	**H**	L	L	L	L
	DS	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L
	VA	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L	**H**	L	L
	SEC	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L	**H**	L	L	L	**H**	L
MI		**5.49**	**5.55**	**5.96**	**5.42**	**5.35**	**5.54**	**5.36**	**5.05**	**5.50**	**5.34**	**5.32**	**4.94**	5.21	4.90	4.19	4.98	4.29	4.14	4.51	3.71	4.22	4.37	4.31	3.78
		1.06	***1.11***	***.85***	***.84***	***1.24***	***.99***	***1.11***	***1.09***	***.90***	***1.36***	***1.32***	***1.51***	*1.26*	*1.54*	*1.46*	*1.51*	*1.32*	*1.69*	*1.34*	*1.56*	*1.55*	*1.49*	*1.64*	*1.69*
FI		**6.23**	**5.96**	**5.63**	**5.14**	**5.47**	**5.47**	5.09	4.66	5.06	4.92	4.70	4.63	**5.46**	**5.47**	**5.30**	**5.03**	**5.06**	**5.37**	4.73	4.25	4.77	4.17	4.81	4.04
		.90	***.68***	***1.27***	***1.50***	***.98***	***1.17***	*1.29*	*1.50*	*1.17*	*1.62*	*1.78*	*1.70*	***1.40***	***1.45***	***1.16***	***1.32***	***1.60***	***1.18***	*1.43*	*1.90*	*1.31*	*1.73*	*1.26*	*1.74*
DI		**5.94**	**5.41**	**5.39**	**5.22**	**4.90**	**5.18**	**5.48**	**4.86**	**5.35**	**5.38**	**4.79**	**4.92**	5.01	4.59	3.57	4.68	4.17	4.03	4.20	3.33	3.79	3.95	4.36	3.38
		.94	***1.08***	***1.28***	***1.21***	***1.08***	***1.40***	***.89***	***1.44***	***1.09***	***1.49***	***1.55***	***1.71***	*1.20*	*1.61*	*1.59*	*1.32*	*1.52*	*1.53*	*1.29*	*1.57*	*1.52*	*1.37*	*1.22*	*1.60*
IQ		**5.58**	**5.10**	**5.43**	**4.93**	**4.84**	**4.89**	5.08	4.54	5.15	4.88	4.43	4.23	4.92	4.56	3.60	4.54	3.84	3.98	4.24	3.28	3.79	3.74	3.96	2.92
		.77	***1.15***	***1.07***	***1.05***	***1.37***	***1.39***	*1.01*	*1.30*	*1.04*	*1.35*	*1.37*	*1.51*	*1.38*	*1.54*	*1.31*	*1.20*	*1.61*	*1.55*	*1.47*	*1.55*	*1.33*	*1.22*	*1.33*	*1.57*
NAV		**6.52**	**6.00**	5.82	5.24	4.49	5.22	**6.07**	**5.54**	5.12	4.98	4.70	5.01	**6.44**	**5.65**	4.49	4.98	4.96	4.98	**6.38**	**5.00**	4.61	4.93	5.17	4.07
		.53	***1.04***	*1.21*	*1.33*	*1.61*	*1.67*	***1.05***	***1.39***	*1.17*	*1.67*	*1.76*	*1.84*	***.56***	***1.31***	*1.76*	*1.56*	*1.72*	*1.60*	***.62***	***1.55***	*1.57*	*1.74*	*1.55*	*1.44*
DS		**6.18**	4.19	**5.80**	4.55	4.35	4.64	**6.12**	3.58	**5.91**	4.43	4.52	4.60	**6.04**	4.59	**5.83**	4.09	4.14	4.63	**6.37**	3.38	**5.81**	4.43	5.15	4.32
		1.23	*1.64*	***1.26***	*1.32*	*1.64*	*1.73*	***.68***	*1.94*	***1.08***	*1.77*	*1.89*	*2.05*	***1.43***	*1.79*	***1.24***	*1.86*	*1.90*	*1.80*	***.58***	*1.70*	***1.32***	*2.05*	*1.38*	*1.83*
VA		**5.81**	3.83	3.86	**4.83**	3.33	3.60	**5.13**	3.19	3.63	**4.62**	3.80	3.24	**5.02**	3.64	3.11	**4.47**	3.38	3.37	**5.41**	2.85	3.14	**4.96**	3.90	2.18
		.97	*1.66*	*1.70*	***1.68***	*1.58*	*1.98*	***1.43***	*1.68*	*1.47*	***1.54***	*1.67*	*1.66*	***1.51***	*1.66*	*1.61*	***1.54***	*1.89*	*1.75*	***.67***	*1.60*	*1.67*	***1.45***	*1.92*	*1.24*
SEC		**5.60**	4.46	5.00	4.69	**4.58**	4.44	**4.86**	3.84	4.30	4.67	**4.94**	4.16	**5.12**	4.32	3.59	4.42	**4.20**	4.14	**5.03**	3.68	3.95	4.73	**4.56**	3.01
		1.14	*1.48*	*1.40*	*1.50*	***1.33***	*1.65*	***1.20***	*1.56*	*1.37*	*1.91*	***1.87***	*1.78*	***1.54***	*1.70*	*1.64*	*1.75*	***1.69***	*1.80*	***1.47***	*1.69*	*1.85*	*1.66*	***1.28***	*1.87*
SQ		**5.93**	4.65	5.25	4.86	4.33	4.63	**5.71**	3.89	4.83	4.76	4.40	4.36	**5.43**	4.88	4.21	4.62	4.00	3.68	**5.62**	3.59	4.65	4.19	4.67	3.13
		.60	*1.33*	*1.26*	*1.27*	*1.34*	*1.58*	***.70***	*1.57*	*1.26*	*1.59*	*1.39*	*1.55*	***1.07***	*1.27*	*1.60*	*1.35*	*1.56*	*1.73*	***1.26***	*1.50*	*1.43*	*1.60*	*1.29*	*1.47*

H: High Quality; L: Low Quality
Bold: High Quality
Upper Values: Mean; *Lower Italicized Values*: Standard Deviation
Comparison for *Collective Halo* (See Table 4.9 for detailed information.)
Comparison for *Two-Sided Quality Halo* (See Tables 4.10 and 4.11 for detailed information.)

Assignment Bias and Manipulation Checks: Using several demographic and charity-specific variables, we checked for assignment bias. There were no significant differences in gender (Pearson chi-square value = 30.01, p = .149), age (F = .60, p = .931), involvement with child relief issues (F = 1.03, p = .419), importance of charity's reputation (F = .58, p = .943), or past donation behavior (F = .58, p = .942) distribution across the twenty-four treatments, suggesting that there is no assignment bias.

We further conducted manipulation check using ANOVA for each of the seven dimensions of website quality. The results in Table 4.6 show that manipulation checks were significant.

Table 4.6. Manipulation Checks

Perceived	Manipulation High	Manipulation Low	ANOVA	
	Mean (*S.D.*)	Mean (*S.D.*)	F	Sig
MI	5.40 (*1.14*)	4.37 (*1.52*)	97.84	.000
FI	5.47 (*1.27*)	4.65 (*1.56*)	54.01	.000
DI	5.24 (*1.30*)	4.07 (*1.51*)	114.00	.000
NAV	5.96 (*1.16*)	4.92 (*1.61*)	73.11	.000
DS	6.01 (*1.14*)	4.35 (*1.80*)	157.84	.000
VA	5.04 (*1.51*)	3.38 (*1.70*)	150.67	.000
SEC	4.87 (*1.49*)	4.21 (*1.71*)	23.38	.000

Exploratory Factor Analysis: We then conducted exploratory factor analysis (EFA) to ensure initial validity by examining if all predefined indicators of the seven dimensions of website quality loaded appropriately. The results of EFA indicated that there was no cross loading above 0.40, suggesting initial discriminant validity as presented in Table 4.7.

Table 4.7. Exploratory Factor Analysis

	MI	FI	DI	NAV	DS	VA	SEC
MI1	**.807**	.174	.237	.185	.071	.150	.129
MI2	**.694**	.288	.226	.095	.145	.172	.190
MI3	**.825**	.188	.261	.158	.071	.117	.164
MI4	**.824**	.146	.283	.143	.074	.107	.093
FI1	.180	**.804**	.215	.136	.119	.086	.156
FI2	.176	**.816**	.115	.066	.062	.130	.090
FI3	.161	**.835**	.223	.102	.109	.053	.137
FI4	.146	**.840**	.195	.136	.076	.005	.135
DI1	.307	.193	**.790**	.174	.085	.141	.184
DI2	.252	.318	**.726**	.186	.109	.177	.141
DI3	.278	.247	**.768**	.165	.115	.124	.208
DI4	.319	.225	**.788**	.183	.056	.143	.122
NAV1	.187	.158	.236	**.797**	.161	.143	.097
NAV2	.180	.129	.160	**.837**	.155	.237	.138
NAV3	.152	.145	.161	**.829**	.152	.261	.127
DS1	.089	.114	.094	.112	**.914**	.122	.150
DS2	.081	.092	.067	.115	**.922**	.121	.129
DS3	.095	.110	.087	.178	**.905**	.148	.115
VA1	.163	.093	.148	.212	.146	**.888**	.187
VA2	.143	.092	.163	.228	.168	**.872**	.196
VA3	.160	.081	.140	.187	.136	**.894**	.196
SEC1	.159	.163	.186	.118	.170	.187	**.864**
SEC2	.156	.157	.167	.129	.136	.191	**.866**
SEC3	.169	.192	.152	.111	.144	.196	**.871**

Measurement Model: A confirmatory factor analysis (CFA) was performed; a 15-factor measurement model was set up to assess the measurement quality of the constructs. The overall fit indices suggest a good fit of the model to the data because most of the indices were at or better than the recommended cutoff values (see Table 4.8). The means and standard deviations of the constructs are shown in Table 4.8, along with composite reliability (CR), average variance extracted (AVE), range of factor loadings, and correlations between constructs.

The measurement model was further examined by assessing several psychometric properties such as reliability and convergent and discriminant validities. First, scale reliability was assessed using CR and AVE. As shown in Table 4.8, the minimum value

of 0.88 of CR (for WS: web skills) and 0.71 of AVE (for WS and FI: financial information) were greater than the commonly accepted thresholds of .70 of CR and .50 of AVE, respectively (Hair et al. 2009), suggesting satisfactory reliability for constructs. Second, convergent validity was assessed by comparing the standardized factor loadings with the cutoff value of .70 (Hair et al. 2009). The lowest factor loading was .77 for one indicator of MI: mission information (see Table 4.8), adequately demonstrating convergent validity. Lastly, discriminant validity was assessed by comparing the square root of AVE for each construct with the correlations between the construct and the others. The square root of the AVE for each construct was found to be larger than its correlations with the other constructs, demonstrating discriminant validity.

Common Method Bias (CMB): The extent of CMB was assessed with two tests. First, Harman's single-factor test was conducted by including all 50 items in a principal components factor analysis (Podsakoff et al. 2003). A single factor did not emerge from the unrotated solution**,** demonstrating that CMB is not high. Second, we employed the marker-variable technique (Lindell and Whitney 2001; Malhotra et al. 2006). We selected a theoretically unrelated variable of *Risk Perception* as a marker variable and tested correlations between the marker variable and study constructs. The results indicated that CMB was not a serious issue because the three lowest correlation coefficients were .000 (VA), .011 (DS), and .013 (INT) and the average correlation coefficient was close to 0 (r =.043, ns). From these diagnostics, CMB is not likely to be a concern with our data.

Table 4.8. Results of Confirmatory Factor Analysis: Reliability, Correlation, and Goodness of Fit Indices

	# of Items	Mean	SD	CR	AVE	Range of Factor Loadings	Correlations													
							MI	FI	DI	IQ	NAV	DS	VA	SEC	SQ	REP	AD	INT	INV	AOD	WS
MI	4	4.89	1.44	.91	.73	.77-.90	***.85***														
FI	4	5.06	1.48	.91	.71	.77-.88	.53	***.85***													
DI	4	4.67	1.52	.93	.76	.85-.89	.73	.61	***.87***												
IQ	3	4.44	1.47	.96	.88	.94-.94	.80	.62	.82	***.94***											
NAV	3	5.27	1.55	.91	.77	.82-.91	.51	.42	.56	.62	***.88***										
DS	3	4.91	1.78	.95	.87	.93-.94	.30	.31	.32	.36	.42	***.93***									
VA	3	3.94	1.82	.97	.91	.95-.96	.44	.30	.47	.59	.57	.38	***.96***								
SEC	3	4.43	1.67	.95	.86	.91-.94	.47	.45	.52	.58	.43	.39	.50	***.93***							
SQ	3	4.60	1.50	.97	.92	.95-.97	.57	.47	.61	.71	.72	.62	.69	.63	***.96***						
REP	5	4.68	1.37	.95	.79	.80-.92	.64	.53	.64	.70	.53	.36	.52	.64	.63	***.89***					
AD	3	4.33	1.64	.93	.82	.86-.93	.64	.52	.64	.74	.53	.39	.55	.68	.68	.80	***.90***				
INT	3	3.22	1.65	.94	.84	.85-.95	.45	.33	.43	.54	.38	.25	.48	.43	.50	.62	.71	***.92***			
INV	3	4.48	1.47	.96	.89	.91-.97	.14	.13	.12	.14	.12	.00	.16	.12	.12	.18	.20	.29	***.95***		
AOD	3	5.11	1.50	.91	.78	.86-.90	.15	.16	.14	.12	.07	.12	.19	.07	.13	.17	.26	.14	.33	***.88***	
WS	3	5.47	1.14	.88	.71	.79-.90	.00	.06	.01	-.09	.02	-.05	-.07	-.04	-.03	.01	-.03	-.08	.13	.23	***.84***

Goodness of Fit Indices

.	χ^2 (DF)	χ^2/DF	NFI	IFI	TLI	CFI	GFI	AGFI	SRMR	RMSEA
Good Model Fit Ranges		<3.00	>.90	>.90	>.90	>.90	≈.90	>.80	<.10	<.08
Measurement Model	1738.34 (1070)	1.63	.95	.98	.98	.98	.91	.89	.027	.031

Notes:
1. SD: standard deviation, CR: composite reliability, AVE: average variance extracted
2. Diagonal elements display the ***square root of AVE***.

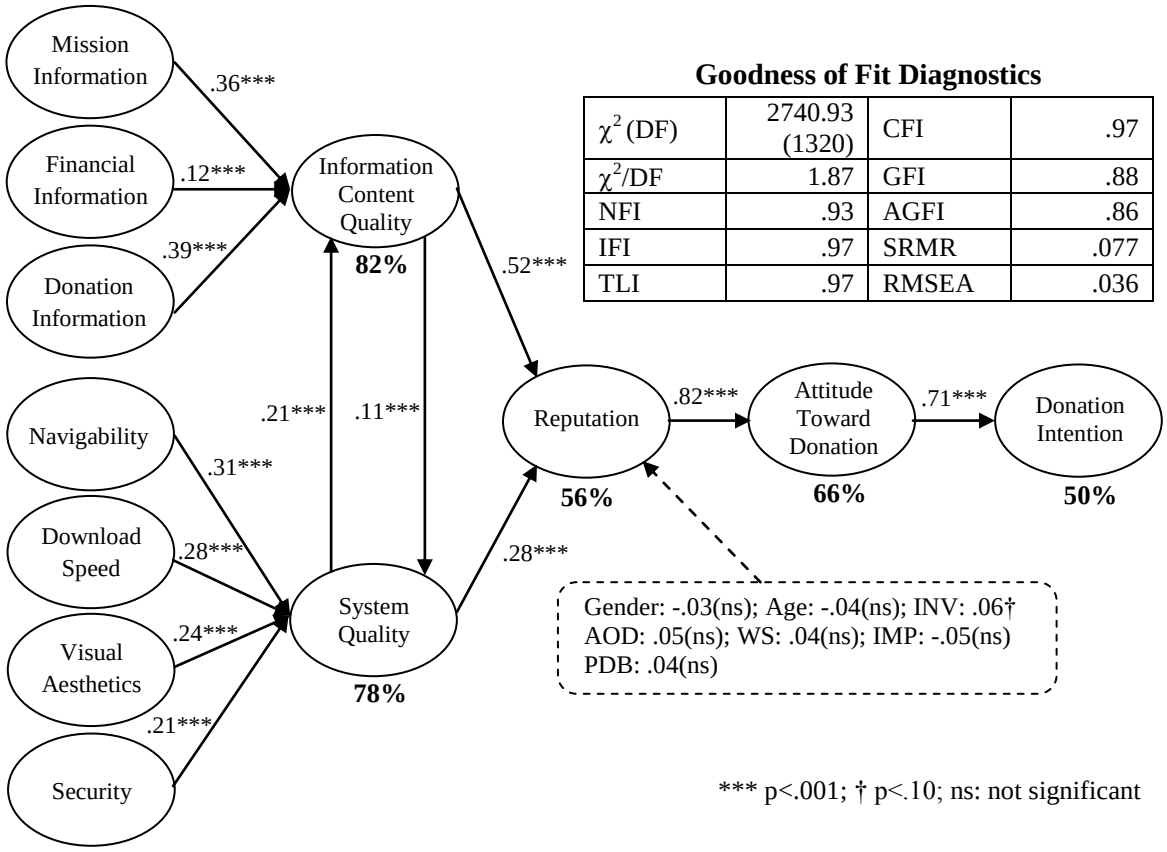
Hypothesis Testing: For hypothesis testing, we used independent sample t-tests for collective halo (H1) and a structural model for aesthetics halo (H2), Two-sided quality halo (H3), quality halo (H4), and reputation halo (H5). To better identify the evidence of Two-sided quality halo, we also conducted Bonferroni analysis.

To test H1, we conducted independent sample t-tests by comparing treatment 1 (all seven dimensions were of high quality) with treatments 12, 14, 15, 16, 17, 18, 20, 21, 22, or 23 (one or two dimensions were of high quality). Similar to the findings of Wells et al. (2011b), when all dimensions were of high quality, participants evaluated each dimension as being higher than the same level of high quality on that dimension but with majority of low quality dimensions of other web stimuli. As presented in Table 4.9, twelve out of fifteen were significantly different, suggesting the evidence of collective halo.

Table 4.9. Results of Testing Collective Halo

Treatments		Dimension	I - J	t-value	Sig
I	J				
1	12	MI	.55	1.59	.117
		DI	1.02	2.76	.001
	14	FI	.76	2.35	.023
		NAV	.87	3.24	.002
	15	FI	.93	3.35	.001
		DS	.35	1.06	.296
	16	FI	1.20	3.96	.000
		VA	1.34	3.87	.000
	17	FI	1.17	3.37	.001
		SEC	.86	3.61	.001
	18	FI	.86	3.05	.004
	20	NAV	1.52	4.91	.000
	21	DS	.37	1.08	.284
	22	VA	.85	2.55	.014
	23	SEC	1.04	3.19	.002
Overall		12/15 are significantly different.			

A structural model was developed to test H2, H3, H4, and H5 by specifying the direct and indirect causal relationships among the constructs and by examining the significance and strength of each of our hypothesized effects. As shown in Figure 4.3, all the values are within an acceptable range for good model fit. Results of the analysis, including standardized path coefficients, significance, and the amount of variance explained (R^2 value) for each dependent variable, are presented in Figure 4.3.



Goodness of Fit Diagnostics

χ^2 (DF)	2740.93 (1320)	CFI	.97
χ^2/DF	1.87	GFI	.88
NFI	.93	AGFI	.86
IFI	.97	SRMR	.077
TLI	.97	RMSEA	.036

Figure 4.3. Results of Structural Model

NAV had the strongest effect on SQ, followed by DS, VA, and SEC, not adequately demonstrating the evidence of aesthetic halo (H2). SQ had a significant effect on IQ ($\beta = .21$; $p < .001$), and IQ had a significant effect on SQ ($\beta = .11$; $p < .001$),

suggesting support for two-sided quality halo (H3). As expected from quality halo (H4), reputation is significantly influenced by IQ ($\beta = .52$; $p < .001$) and SQ ($\beta = .28$; $p < .001$). In addition, reputation positively influenced behavioral attitude ($\beta = .82$; $p < .001$), suggesting support for reputation halo (H5). IQ and SQ jointly explained large amounts of the variances in reputation (57%). Finally, behavioral attitude had a significant influence on behavioral intention ($\beta = .71$; $p < .001$).

To provide additional evidences for two-sided quality halo (H3), we conducted two supplementary analyses: (1) Bonferroni analysis and (2) MANOVA. This study first conducted Bonferroni analysis by comparing among treatments 1, 6, 19, and 24 (see Table 4.10). In the IQ evaluation panel (Result C in the final column), there was no significant difference between high IQ (mean: 4.89) in treatment 6 and low IQ (mean: 4.24) in treatment 19 although they were expected to be different. In addition, the Result D1 (in the final column) shows that there was a significant difference between low IQ (mean: 4.24) in treatment 19 and low IQ (mean: 2.92) in treatment 24. The above-noted result C can be explained that perception of low SQ somewhat reduced the perception of high IQ; and perception of high SQ increased perception of low IQ, leading to non-significant difference. The possible explanation for the result D1 is that perception of high SQ increased perception of low IQ; and perception of low SQ further reduced perception of low IQ.

In the SQ evaluation panel (Result D2), there was a significant difference between low SQ (mean: 4.63) in treatment 6 and low SQ (mean: 3.13) in treatment 24. Similar to the explanation for D1, because perception of high IQ increased perception of low SQ;

and perception of low IQ further reduced the perception of low SQ, low SQ in treatment 6 is perceived to be of higher quality than low SQ in treatment 24.

Table 4.10. Results of Testing Two-Sided Quality Halo

Perceived (self-reported)		**1** (N=28)	**6** (N=27)	**19** (N=29)	**24** (N=28)	Bonferroni Analysis				
		H: MI H: FI H: MI **H:IQ** H: NAV H: DS H: VA H: SEC **H:SQ**	H: MI H: FI H: MI **H:IQ** L: NAV L: DS L: VA L: SEC **L:SQ**	L: MI L: FI L: MI **L:IQ** H: NAV H: DS H: VA H: SEC **H:SQ**	L: MI L: FI L: MI **L:IQ** L: NAV L: DS L: VA L: SEC **L:SQ**	I	J	Mean Difference (I - J)	Sig	Result
IQ	Mean	5.58	4.89	4.24	2.92	1(**H**)	6(**H**)	.70	.340	A
							19(**L**)	1.34	.002	B
							24(**L**)	2.67	.000	B
	SD	.77	1.39	1.47	1.57	6(**H**)	19(**L**)	.65	.442	C
							24(**L**)	1.97	.000	B
						19(**L**)	24(**L**)	1.33	.002	D1
SQ	Mean	5.93	4.63	5.62	3.13	1(**H**)	6(**L**)	1.30	.002	B
							19(**H**)	.31	1.000	A
							24(**L**)	2.80	.000	B
	SD	.60	1.58	1.26	1.47	6(**L**)	19(**H**)	-.99	.028	A
							24(**L**)	1.50	.000	D2
						19(**H**)	24(**L**)	2.49	.000	B

H: High Quality; L: Low Quality

A: Not expected to be different	Expected Results
B: Expected to be different	
C: Expected to be different but found to be statistically not different	Evidence of two-sided quality halo
D: Not expected to be different but found to be statistically different	

Second, this study conducted MANOVA in which the two treatments (IQ and SQ) were included as main effects and the dependent variables were the scales measuring perceptions of IQ and SQ. This approach was used to identify if both treatment effects remained significant in the presence of originally expected effect (i.e., the effect of IQ and SQ on perception of IQ and SQ, respectively). The results in Table 4.11 show that the IQ and SQ treatments had significant effects on the perceptions of both IQ and SQ, suggesting further evidence of two-sided quality halo.

Table 4.11. MANOVA: Effects of IQ and SQ on Perceived IQ and SQ

Independent Variable	Dependent Variable					
	Perceived IQ			Perceived SQ		
	F	Sig	Partial Eta Squared	F	Sig	Partial Eta Squared
IQ (High/Low)	42.91	.000	.284	13.92	.000	.114
SQ (High/Low)	15.96	.000	.129	61.19	.000	.362
IQ × SQ	1.55	.216	.014	6.04	016	.053
R^2			**35.8%**			**43.0%**
Adjusted R^2			**34.1%**			**41.4%**

Post-Hoc Analysis (Dimensions of IQ and SQ): As seen in Figure 4.3, VA did not have a dominant effect on SQ, thereby not supporting the effect of aesthetics halo (H2). Following Wells et al. (2011b), we conducted two separate post-hoc analyses to probe this further and examine the relative effect of the dimensions of IQ and SQ on overall website quality (WS) and reputation by running structural models with all the seven dimensions of IQ and SQ. The results (see Table 4.12) show the relative influence of the seven dimensions on WS and reputation. All seven dimensions had significant influences on WS. Consistent with the findings of Wells et al. (2011a, 2011b) but with an expanded set of dimensions visual aesthetics (VA), in particular, had the largest effect on WS, followed by NAV, DI, MI, SEC, DS, and FI, thereby providing partial support for the aesthetics halo effect (H2). In addition, SEC had the strongest influence on reputation, followed by MI, DI, VA, FI, and NAV. However, DS did not have a significant effect on reputation. A summary of the results is provided in the following section.

Table 4.12. Effects of WQ Dimensions on Website Quality and Reputation

Rank	IV: WQ Dimension	DV: *Website Quality*	IV: WQ Dimension	DV: *Reputation*
1	VA	.375***	SEC	.309***
2	NAV	.203***	MI	.233***
3	DI	.162***	DI	.138**
4	MI	.139***	VA	.111**
5	SEC	.129***	FI	.108**
6	DS	.085**	NAV	.095*
7	FI	.064*	DS	.006(ns)
	R^2	**77.4%**	R^2	**60.2%**

*** p<.001; ** p<.01; * p<.05; ns: not significant

4.5. DISCUSSION AND CONCLUSION

In examining the effects of different types of salient halos in multi-attribute object evaluation, we examined three dimensions of information content quality (ICQ) and four dimensions of system quality (SQ) to identify and establish evidence for collective halo and aesthetic halo. This study also found that internal quality (i.e., IQ) and external quality (SQ) influence each other, suggesting two-sided quality halo. In addition, quality halo shows how people form initial reputation from the available cues. The results of hypothesis testing are summarized in Table 4.13. The implications for research and practice are provided in the following section.

Table 4.13. Summary of Results

Halo Type	Result	Evidence
H1: Collective Halo	Mostly Supported	Table 4.9
H2: Aesthetics Halo	Partly Supported: · Not dominant effect in evaluating system quality. · Dominant effect on overall website quality	Figure 4.3 Table 4.12
H3: Two-sided Quality Halo	Supported	Figure 4.3 Table 4.10 Table 4.11
H4: Quality Halo	Supported	Figure 4.3
H5: Reputation Halo	Supported	Figure 4.3

4.5.1. Implications for Research

We theorized and empirically tested for the effects of several types of salient halos in evaluating multi-attribute websites. Our theoretical model makes two main contributions (collective halo and two-sided quality halo) and two marginal contributions (aesthetic halo and quality halo) to IS research.

First, collective halo has major implications for website design research. Although past research has examined design aspects of websites, only very limited research exists

that has examined multiple aspects (Wells et al. 2011a, 2011b). Our study thus contributes to website design research by showing how website visitors evaluate multiple attributes of websites in the context of a carefully designed charity website. Furthermore, collective halo supports and extends Wells et al (2011b) by adding three dimensions of IQ and examining people's evaluation of multi-attributes from IQ and SQ. While Wells et al. justified this phenomenon post-hoc as a halo effect in the discussion section, this study theorized it based on the halos employed in the salient dimension model and inadequate discriminant model. Drawing on Wells et al. this study showed how multiple attributes are perceived as higher quality, implying positive collective halo. The same theoretical argument can be applied to negative collective halo. In other words, when the quality of all attributes is low, each of these attributes is perceived to be of lower quality than the exact same low quality attribute in other configurations where the attribute is mixed with a majority of high quality attributes. The comparison for low quality of financial information between treatment 24 (Mean = 4.04, SD = 1.74) and treatment 7 (Mean = 5.09, SD = 1.29) shows a significant difference ($t = 2.58$, $p < .05$), suggesting the evidence of negative collective halo.

Second, two-sided quality halo highlights that IQ and SQ influence each other in the context of multi-attribute object evaluation, and extends the findings of both traditional halo research and that of Xu et al. (2013). Traditional halo research found that external quality (e.g., beauty) influences internal quality (e.g., talent, intelligence) (Landy and Sigall 1974). In the context of e-service, Xu et al. (2013) emphasized that website quality dimensions are not independent from one another and found that perceived SQ influences perceived IQ. To the best of our knowledge, however, the effect of IQ on SQ

has neither been completely conceptualized nor empirically tested. We drew upon the halo effect to theorize that perceptions of SQ influence perceptions of IQ, and vice versa. The study of their interdependent relationships in the (charity) website context is important because websites have traditionally been the target of IQ and SQ evaluations (Xu et al. 2013). Overall, our study underlines *interdependent* relationships reflecting the (two-sided) halo effect between internal quality (i.e., IQ) and external quality (i.e., SQ).

Third, the role of explicit attractiveness has been strongly emphasized in physical attractiveness research (Dion et al. 1972) and in eCommerce research invoking visual design (Wells et al. 2011b). We also found that visual feature has a dominant effect in the evaluation of overall website quality. This finding is consistent with website evaluation in impulsive buying (Wells et al. 2011a) and experiential domain (Wells et al. 2011b). However, when evaluating overall system quality and reputation, it was not dominant. In particular, security had a strongest effect in evaluating reputation. This study sheds light on the role of visual design that it may not be so dominant across contexts. This also suggests that important attributes can be appropriately selected and changed depending on the (different) outcome variables of interest and under consideration.

Identifying initial reputation formation represents the last contribution of this study. While trust (McKnight et al. 2002) has been the most popular (intermediary) dependent variable of website quality, recent eCommerce researchers have attempted to advance further by incorporating other variables such as perceived product quality (Wells et al. 2011b) and perceived relationship rewards (Campbell et al. 2013). Although past research has extensively examined the role of reputation in trust and other perceptions (Bansal et al. 2008), initial reputation formation has not been examined as a consequence

of IQ and SQ. Drawing upon the halo effect, this study examined formation of initial reputation (i.e., missing information/link), and found that reputation of even unfamiliar objects can be formed by existing cues (i.e., IQ and SQ).

4.5.2. Implications for Practice

The results from this study have strategic implications for charity managers and website designers. First, a recommendation from the collective halo effect is that charity organizations need to maintain high quality websites. However, because websites includes several different types of important attributes, developing and maintaining all attributes to be of high quality is sometimes unrealistic except for large charity organizations with deep pockets. Thus, we suggest the following: (1) when designing and developing websites, charities can identify key attributes of websites with regard to the type of charity and target donors. (2) They can rank the relative importance of the attributes from the perspectives of target donors. (3) It is better to keep all attributes to be high quality, but we would certainly recommend charities to never have all attributes to be of low quality. (4) Charities need to continue to maintain order and ensure important attributes to be of high quality.

Second, it is certainly in the interest of startup charities to build their reputation as early as possible. This study found the strongest effect of security on initial reputation formation. This study manipulated security using not only privacy policy and security alert but also third party assurance seals (e.g., McAfee, BBB), suggesting that being endorsed by credible third parties can help visitors feel a sense of accountability and reputation on the part of the website (e.g., Aaker et al. 2010; Wells et al. 2011b). Since

there are different types of third party assurance seals, charities can strategically utilize them. Charities without enough credentials can use seals which they can immediately access. For example, security and privacy seals would be good options for those startups. After they build enough credentials in terms of financials and performance, they can use the Charity Navigator seal which attests to capture overall accountability of charities.

Lastly, our findings point to the importance of highlighting information content over system features/functionalities in building reputation. In particular, our results emphasize mission information and donation assistance information over financial information in evaluating overall IQ of the charity website and forming initial reputation. This is contrary to findings of prior nonprofit literature. Saxton et al. (forthcoming) argued that disclosing financial information on the web has a dominant effect over performance information in charitable contribution. Plausible explanations for the greater emphasis on the mission information and donation assistance information in evaluating charity website as observed by us could be that the participants in this study (i.e., college students) are not perhaps as knowledgeable and motivated in evaluating financial information as mature donors. This result would be helpful for charities whose target is young people. Thus, charities which target young population need to provide clear mission information including mission, vision, value, goals, and objectives and donation assistance information (e.g., various donation options) to persuade, particularly, young people who may not be very knowledgeable and motivated in interpreting nuanced financial information.

4.5.3. Limitations and Future Research Directions

Although our study provides important contributions to both research and practice, general interpretations and derived implications should be considered along with several limitations. First, we collected data from student subjects, thereby restricting the external validity (Compeau et al. 2013). Although student subjects likely represent the target population of the phenomenon being examined because young people generally use websites as a donation channel and prefer to donate to child relief and development charities, additional research with actual donors in real online donation environments is suggested to strengthen the generalizability of our findings. Second, using a single category of charity organization, child relief and development, may restrict generalizability of the results to other types of charity. Future research can examine our research model in other types of charity (e.g., services to the homeless, wildlife conservation, etc) or even for-profit websites. Third, using student subjects in the evaluation of child relief and development domain may suffer from *general impression halo*. In other words, because young people generally prefer child relief and development charities, they could have a tendency to evaluate attributes of these charity websites as being higher quality than other types of charity that they do not prefer. Lastly, from among three website quality dimensions (DeLone and McLean 2003; Xu et al. 2013), this study considered only two quality dimensions, IQ and SQ. Although employing two quality dimensions is adequate for an early attempt into the halo effect of charity website design on the initial reputation formation, we recommend that future research examine the role of service quality along with IQ and SQ as well.

This study opens various opportunities for future research. First, as already noted, future research can add service quality to our study's research model. Service quality can be operationalized using accessibility (e.g., making it easy to donate) or communication (e.g., seeking donor feedback or ideas) (Sargeant et al. 2007). This would enable identification of relative importance of the three quality dimensions in initial reputation formation. Theorizing and testing three-sided halo of three quality dimensions would be another contribution.

Second, as was noted in Table 4.5 (descriptive statistics across treatments), participants' evaluation on the 7 dimensions across 24 treatments are not consistent because of halo from different quality combinations of the dimensions. Future research can identify other dimensions of charity website quality (e.g., summaries of projects, design consistency) and examine the best combinations of dimensions in increasing website quality, reputation, trust, and user satisfaction.

Third, while this study examined initial reputation formation as a consequence of quality halo, future research might want to examine role of charity's reputation in charity website evaluation and donor behavior. In particular, researchers can divide the well-formed reputation into two types of charity's reputation: reputation of the founders (e.g., Bill and Melinda Gates Foundation) and reputation of the charity organization itself (e.g., Red Cross). Finding similarity and differences of two types of reputation in online donation behaviors would be interesting.

Fourth, the moderating role of individual difference variables in this model could be another research opportunity. In the context of halo, researchers can, for instance, examine impulsiveness (Rook and Fisher 1995) or need for cognition (Petty and

Cacioppo 1984). For example, researchers can propose a positive moderating effect of impulsiveness between SQ and reputation because impulsive people would like to complete tasks fast and thus simply accept SQ which does not require much effortful thinking.

4.5.4. Concluding Remarks

Treating charity websites as a multi-attribute objects, we employed the halo effect as a theoretical foundation to examine various types of salient halos in evaluating charity websites. This study proposed collective halo, aesthetics halo, two-sided quality halo, quality halo, and reputation halo; and showed evidence of the proposed halos. We also provided interesting practical implications on how charity organizations can effectively manage their websites to increase initial reputation and online donations.

CHAPTER 5

ESSAY 3: THE EFFECTS OF SCHEMA CONGRUITY AND VISUAL CONSISTENCY ON SOCIAL JUDGMENT OF CHARITY WEBSITES

"We cannot do great things on this Earth, only small things with great love."

Mother Teresa

5.1. MOTIVATIONS AND RESEARCH OBJECTIVES

The pervasiveness of eCommerce is a prominent phenomenon in today's information society. eCommerce technologies have provided charity organizations with a powerful channel that can reach far more potential donors and volunteers than traditional channels (cf. Campbell et al. 2013). Charity websites, in particular, play various roles such as providing background information, publicizing projects, fundraising, recruiting volunteers, reporting performance, and interacting with the general public as well as potential contributors (Waters 2007). As a communication/fundraising channel, charity websites have been of significant interest for charity managers to increase the frequency and level of donations (Bennett 2009; Sargeant et al. 2007). Similar to the findings in eCommerce research (e.g., Wells et al. 2011b), potential donors' positive perceptions of a charity website would facilitate their decision to donate to the charity site. According to Aaker et al. (2010), people use warmth and competence, two primary dimensions that govern social judgments of people and groups, to form perceptions of firms. The current study recognizes the significance of warmth and competence of websites and addresses

how an effectively designed website can enhance donors' perceptions to facilitate donations via websites.

In the context of charity website design, it is important for researchers and practitioners to consider two features: self-benefit and other-benefit charitable appeals (e.g., White and Peloza 2009) and visual webpage design (e.g., Cyr et al. 2009). These two are derived from self-schema congruity theory (Cacioppo et al. 1982) and theory of visual rhetoric (Scott 1994), respectively. It has been suggested that charities generally appeal for donations either egoistically (i.e., by emphasizing the benefits for the donors) or altruistically (i.e., by emphasizing the benefits for others). Investigating the conditions under which self-benefit (vs. other-benefit) appeals are more effective than other-benefit (vs. self-benefit) appeals in influencing donation intention and behaviors has become increasingly important (White and Peloza 2009). Prior research on self-schema has illustrated that matching a message or a product to an individual's personality traits increases favorable perceptions and attitudes (Wheeler et al. 2005). Value-expressive charitable (other-benefit) appeals (e.g., save children's lives) are more persuasive for individuals pursuing altruistic motivations for donations. On the other hand, utilitarian (donor-benefit or self-benefit) appeals (e.g., improve your resume) should be more persuasive for individuals seeking egoistic motivations (Brunel and Nelson 2000).

Researchers have endeavored to identify underlying factors for success in eCommerce. In terms of design, website visual aesthetics (i.e., representational delight) has been found to be a dominant component of website quality (Wells et al. 2011a, 2011b; Valacich et al. 2007). Recent studies have attempted to further advance aesthetic aspects in explaining Web user behaviors. Drawing upon theory of visual rhetoric, for example,

Cyr et al (2009) found that *human images* lead users to perceive the website as more appealing and warmer. In sum, eCommerce research can be further informed by drawing on self-schema congruity and visual rhetoric theories to explore how information and visual design on websites match with web users' personality/motivations in enhancing their positive reactions.

Although self-schema congruity and visual rhetoric can be used to better understand web user behaviors and to advance existing eCommerce theories, a theoretical lacuna still exists in three ways as noted in Figure 5.1. First, while there has been much literature on fit/congruity/match/alignment (e.g., task-technology fit of Goodhue and Thompson 1995) in IS research, self-schema congruity has hardly been applied to the context of eCommerce (online donations in our study). Second, visual rhetoric is used to identify how visual design is related in a specific way to deliver messages (Scott 1994), but visual consistency has not been examined. Lastly, there has been no attempt to theorize schema-visual congruity, an interaction between self-schema congruity and visual consistency.

In trying to address the above gaps, this research has the following objectives. 1. *Schema Congruity* (SC): Based on prior research on self-schema congruity in psychology and consumer research, we apply the theory to online prosocial behaviors. First, this study creates and validates a new scale for the SC construct. We then validate the construct by identifying a match between self-schema (i.e., altruism) and messages (i.e., self- and other-benefit appeals). Finally, we investigate the effect of SC on donor perceptions of charity websites.

2. *Visual Consistency* (VC): Extending the congruity theory and visual rhetoric, we examine VC, which influences user/donor perceptions of charity websites. As with schema congruity, a measure for VC is constructed and validated.

3. *Schema-Visual Congruity*: To examine how consistent visual design can enhance the relationship between SC and user perceptions, we theorize schema-visual congruity as a separate determinant of perceived warmth and competence and empirically test the interaction between SC and VC in influencing user perceptions.

4. *Warmth and Competence*: Social judgment of warmth and competence has been applied to individuals (Judd et al. 2005), groups (Cuddy et al. 2007), and firms (Aaker et al. 2010). This study extends its application to websites. We also test the effects of warmth and competence of charity websites on attitude toward donation, which in turn is expected to influence donation intention.

The remainder of this essay is organized as follows. In the next section, we review relevant literature from self-schema congruity, visual rhetoric, and social judgment of warmth and competence. Next, our research model and hypotheses are presented. Following this, we describe the research methods used for the study, including experimental procedure and measurement validation. Data analysis and results are presented in the subsequent section. Finally, we conclude with a summary of the results, theoretical and practical implications of study, and directions for future research.

5.2. THEORETICAL FOUNDATIONS AND RELATED LITERATURE

As noted in Figure 5.1, our conceptualizations of schema congruity, visual consistency, and schema-visual congruity are based on extant research on self-schema, congruity, and visual rhetoric. We review self-schema congruity, acknowledging the importance of congruity between self-schema and objects/appeals. Additionally, we examine visual rhetoric literature. Finally, we examine literature on social judgment of warmth and competence.

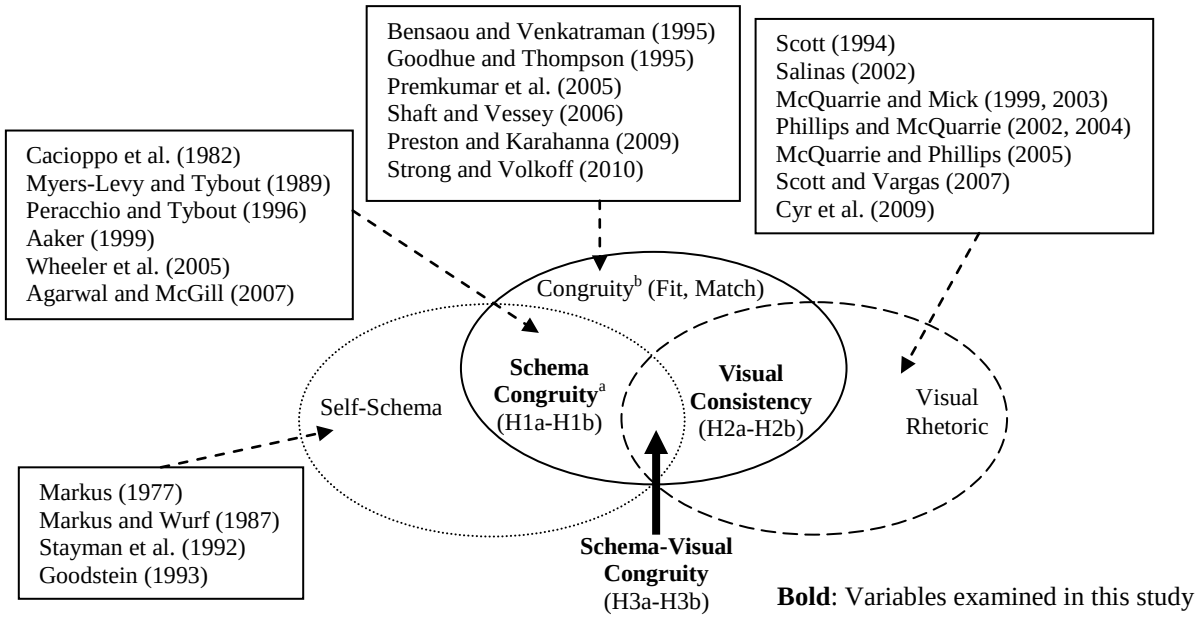


Figure 5.1. Overview of Essay 3[12]

[12] [a] This study examines altruism as self-schema which is a subset of schema. For the sake of simplicity, we use schema congruity to represent self-schema congruity. [b] There has been extensive research on congruity, fit, match, and alignment across disciplines. In this figure, we particularly cite studies published in the IS discipline (e.g., task-technology fit, cognitive fit).

5.2.1. Self-Schema Congruity

Self-schema refers to "cognitive generalization about the self, derived from past experiences, that organize and guide the processing of self-related information contained in the individual's social experiences," and can be viewed as "a reflection of the invariances people have discovered in their own social behavior" (Markus 1977, p. 64). In addition, self-schema contains accumulated knowledge about the self, and it directs attention to information and leads to behavior (Markus and Wurf 1987). Research on congruity (or fit, match) in social psychology and consumer behavior has examined how confirmation or disconfirmation of expectations influences individuals' responses, including information processing and attitude (e.g., Aaker 1999; Cacioppo et al. 1982; DeBono 1987; Shavitt 1990). IS researchers have in general examined the effect of fit on performance (e.g., Goodhue and Thompson 1995; Premkumar et al. 2005; Shaft and Vessey 2006). For example, task-technology fit theory (Goodhue and Thompson, 1995) holds that IT is more likely to have a positive influence on individual performance and be utilized if the capabilities of the IT match the tasks that the user should perform.

Drawing on self-schema and congruity theories, self-schema matching or schema congruity in our study refers to "presenting individuals with a message that appeals or conforms to some aspect of a person's self-conception" (Wheeler et al 2005, p. 787). According to schema congruity, people prefer messages/brands/ products that they associate with a set of personality traits match with their own (Kassarjian 1971; Sirgy 1982). Prior persuasion research on schema congruity has shown that matched messages or products to an individual's personality characteristics are perceived to be more persuasive than the mismatched. For instance, in the arguments relating to abortion and

capital punishment, Cacioppo et al. (1982) found that participants with a legalistic (vs. religious) self-schema perceived the legalistic (vs. religious) arguments to be more persuasive. Specific to the current study, we are interested in altruism as self-schema and self- and other-benefit charitable appeals as target messages.

While several personality traits such as extroversion and need for cognition were used as self-schema in the previous research (e.g., Wheeler et al. 2005), altruism is relevant to the context of online donations. Research has found that prosocial personality characteristics and altruistic motivations can successfully predict several types of donation behaviors (Peddibhotla and Subramani 2007; Penner and Finkelstein 1998). Self-benefit and other-benefit appeals highlight the two ways that charities commonly use for charitable support—positioning charitable giving either egoistically or altruistically (White and Peloza 2009). There has been extensive research on the effectiveness of the types of appeals in examining moderating variables such as gender (Brunel and Nelson 2000), culture (Aaker and Williams 1998; Nelson et al. 2006), and public self-image concerns (White and Peloza 2009). Attitude functional theory defines value-expressive attitudes as attitudes which are formed to aid in the accomplishment of an individual's values, and social-adjustive attitudes as attitudes which are formed from the desire to associate with others (Shavitt 1990). The matching hypothesis of attitude functional theory concludes that messages are more persuasive when contents are congruent with the functional bases of the target attitudes. Therefore, self-benefit appeals are more effective for people with low altruism while other-benefit appeals are more effective for people with high altruism (Brunel and Nelson 2000). In this study, altruism and self- and other-benefit appeals are used to validate the construct of schema congruity.

5.2.2. Visual Rhetoric

"Rhetoric is an interpretive theory that frames a message as an interested party's attempt to influence an audience" (Scott 1994, p. 252). Consumer behavior researchers have attempted to treat visual imagery in advertising beyond a peripheral cue or a simple stimulant for affect, and thus the visual element is currently understood to be "an essential, intricate, meaningful, and culturally embedded characteristic of contemporary marketing communication" (McQuarrie and Mick 1999, p. 51). Under the theory of visual rhetoric, the visual design including viewpoint, focus, graphics, and layout is expected to be associated with the message/information itself in a particular way (Scott 1994). Thus, rhetorical theory suggests that images are communicative artifacts (Scott and Vargas 2007) and visual contents in mass communication comprise a form of writing (Scott 1992, 1993). For example, Pimentel and Heckler (2002) argued that treating logos as non-semantic form is not valid because of the rich, complex layering process emerging from the meaning of logos. For instance, in charity appeals, the images of starving African children even without any textual messages provide tangible clues about the charity and its key purpose–to relieve hunger and help children in developing countries. While rhetorical theory has been extensively utilized in advertising, it is also applicable to consumer websites (Cyr et al. 2009; Salinas 2002).

Both cognitive and affective responses to visual contents have been suggested as part of information processing (Scott 1994). It has been argued that rhetorical figures can invite elaboration because they are based on artful deviation, relative to audience expectations (McQuarrie and Mick 1996). This emphasizes that elaboration is presumed to generate multiple cognitive pathways back to the originating information, which in

turn enhances ad recall (McQuarrie and Mick 2003). Also, elaboration on the meanings set in the visual contents is expected to facilitate a pleasant aesthetic experience, which then increases the positive evaluations (McQuarrie and Mick 2003). Regarding cognitive responses, prior research found that camera angles and cropping influence the level of information processing and evaluation (Myers-Levy and Peracchio 1992; Peracchio and Meyers-Levy 1994).

Visual contents can elicit a wide range of affective responses which often result from cognitive mental processes of inference, comparison, choice, and combination (Scott 1994). Cyr et al. (2009) found human images with facial images on websites to be more effective than human images without facial images or no human images in eliciting social presence. Scott (1994) called for future research that "the sequence of processing as a function of visual layout could be investigated for the impact of the order of the message on consumer response" (p. 269). Deng and Poole (2010) found that a web user's initial emotional responses (i.e., pleasantness and arousal) are evoked by the visual complexity and order design features of a webpage. In sum, visuals are regarded as information and symbols which deliver significant meanings to audience, relating to cognitive and emotive responses. However, what remains to be examined is the effect of consistent visual design on the site visitors' evaluation of websites.

5.2.3. Social Judgments of Warmth and Competence

There has been overwhelming consent in the literature that people use warmth and competence as two primary dimensions which govern social judgment of others (Judd et al. 2005). However, only recently has advanced social cognition research firmly established that "people differentiate each other by liking (warmth, trustworthiness) and

by respecting (competence, efficiency)" (Fiske et al. 2007, pp. 77). Although the definitions vary, the *warmth* dimension generally captures friendliness, helpfulness, generosity, kindness, honesty, sincerity, trustworthiness, and thoughtfulness while the *competence* dimension embodies confidence, effectiveness, intelligence, capability, skillfulness, creativity, and competitiveness (Aaker et al. 2010; Fiske et al. 2007; Grandey et al. 2005; Judd et al. 2005). At a subordinate level associated with prosocial behaviors, demonstrating warmth and competence suggests other-profitable traits (e.g., helpfulness) and self-profitable traits (e.g., efficiency), respectively (Abele and Wojciszke, 2007; Peeters 2002).

Warmth and competence dimensions have consistently appeared in both classic and contemporary research and been applied to evaluations of individuals, groups, and nations. In theoretical perspectives, the three psychological aspects of bias—stereotypes (i.e., cognition), emotional prejudices (i.e., affect), and discrimination (i.e., behavior) have been firmly grounded by warmth and competence (Cuddy et al. 2008). In turn, these dimensions have been employed as varied as in gender stereotype and discrimination (Broverman et al.1972; Glick et al. 2000), liked and disliked groups (Cuddy et al. 2007), and leadership (Tiedens 2001).

Research to date has found three types of relationships between warmth and competence. First, in the orthogonal relationship, people tend to attribute one or the other positive quality to others but not both (Aaker et al. 2010). The rich are perceived as competent but less warm (Fiske et al. 2007). Second, two-sides of casual relationship can be supported via the halo effect that individuals who are regarded positively on one attribute are also regarded positively on other attributes (Kelly 1995). Lastly, Wojciszke

and Klusek (1996) found that integrity (warmth, trustworthiness) and competence emerge in spontaneous impressions of presidential candidates, suggesting high correlation between these two dimensions.

Aaker et al. (2010) applied warmth and competence to firms. They found that nonprofit organizations are perceived to be warmer than for-profit organizations while for-profit organizations are perceived to be more competent than nonprofit organizations. What remains unclear, though, is whether the same lens that colors perceptions of individuals, groups, and firms applies to (charity) websites. In addition, we examine the effects of warmth and competence of charity websites on attitude toward donation to charity websites.

5.3. RESEARCH MODEL AND HYPOTHESES

Based on self-schema congruity and visual rhetoric, the research model of the current study is presented in Figure 5.2. The primary outcome of interest is the social judgment of warmth and competence of the charity website. To be in line with extant eCommerce and donation research, this study also includes attitude toward donation to the charity website (i.e. behavioral attitude) and intention to donate to the charity website (i.e. behavioral intention) as additional dependent variables for the sake of completeness. Research hypotheses are developed next.

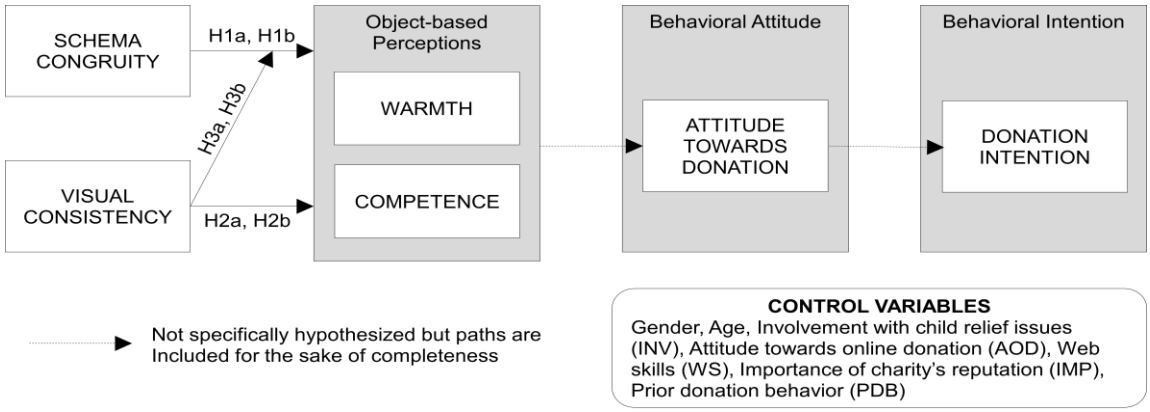


Figure 5.2. Research Model

5.3.1. Schema Congruity

Drawing upon prior research on self-schema congruity (e.g., Cacioppo et al. 1982) and fit theories (e.g., Goodhue and Thompson 1995; Premkumar et al. 2005), this study defines schema congruity (SC) as the extent of match between an individual's self-schema and charitable appeals for making a donation. Research to date has concluded that self-schema matched messages or products are more favorably viewed than mismatched ones. Feedback that is inconsistent with an individual's self-schema is less

likely to be recalled, and more likely to generate negative influence (Eisenstadt and Leippe 1994). Aaker (1999) showed that individuals reveal a preference for brands that match both their own self-schema and the schema appropriate for different situations. In two experiments, Wheeler et al. (2005) found that messages matched to participants' level of self-schema (i.e., extroversion and need for cognition) lead to increased persuasion. According to Aaker (1999), the effects of self-schema congruity are explained by a need for consistency and positivity. First, individuals have a need for consistency that results from an inborn preference for things that are predictable, familiar and stable, and thus reduce uncertainty (Swann 1983). Second, because the personality traits comprising of a person's self-schema are generally positive, the ability to express schematic characteristics often is related to positive affect (e.g., enjoyment), while the inability to express them often is related to negative affect (e.g., dissatisfaction) (Swann et al. 1994). Wheeler et al. (2005) also argued that since information about one's own personality traits is abundant, important, and highly elaborated, messages/appeals to self-schema are effective in influencing attitude.

In the context of donation, Sargeant and Woodliffe (2007) reviewed a rich body of literature and concluded that individuals prefer to make donations to charities that hold symbolic meanings and images congruent with the ways in which they see themselves (e.g., Coliazzi et al. 1984). SC stimulates a person to process information about a certain charity and to enhance psychological involvement with it (Bennett and Ali-Choudhury 2009). The wealthy, for example, tend to avoid poor people's causes such as homelessness and are likely to support the arts, healthcare, and education (Ostrower, 1996). Bennett and Ali-Choudhury (2009) found that after making a first-time donation

to a charity, the fresh donor tends to donate to a different charity that matches better with his or her self-image. Supporting such a charity can maintain and improve a person's self-concepts, as it helps the person demonstrate both inwardly and to the outside world that he or she is linked to certain modes of values, beliefs, attributes or behaviors (Bennett and Ali-Choudhury 2009). Regarding the effectiveness of charitable appeals, value-expressive charitable (help others) appeals are effective for people seeking altruistic reasons, while utilitarian (help self) appeals are effective for people fulfilling egoistic reasons (Brunel and Nelson 2000). In addition, other-benefit appeals are more persuasive than self-benefit appeals in generating positive donation intention among individuals with high public self-consciousness when they are in public (White and Peloza 2009).

Appeals/information/messages on a charity website generally represent the central values and objectives that the charity pursues. For example, appeals such as "develop your knowledge by helping others and improve your resume" suggest that the charity recruits volunteers who may wish to develop their careers by highlighting egoistic and utilitarian motivations. On the other hand, messages such as "save the lives of children in Africa" would evoke moral and altruistic motivations of donors, and thus it will lead people with high morality and altruism to contribute to the charity. This study argues that a charity website which provides matched charitable appeals to an individual's self-concepts would help to generate positive perceptions of charity websites. In particular, matched charitable appeals to a potential donor's beliefs, values, and expectations in making a donation would make the person feel that the charity website is both warm and competent. Thus, we hypothesize that

***H1a**: Schema congruity positively influences perceived warmth of the charity website.*

***H1b**: Schema congruity positively influences perceived competence of the charity website.*

5.3.2. Visual Consistency

We define visual consistency (VC) as the degree of consistency among the visual parts of an entity (i.e., charity websites in our study). While SC suggests match between internal self and an external entity, VC suggests internal consistency of the entity itself. The degree of consistency of an object is associated with the degree of organization of the object, as reflected in the extent of congruity, coherence, unity, and clarity it demonstrates (cf. Nasar 2000). Effects of consistency of an object on the positive perceptions of the object can be informed by preference for consistency (Aaker 1999; Swann 1983) and prior eCommerce research (Deng and Poole 2010; Loiacono et al 2007).

Individuals are predisposed to prefer coherent, expectancy-consistent information (Swann 1983; Swann et al. 1994). The preference for consistency is a type of personality trait that indicates an individuals' susceptibility to consistency effects similar to cognitive balance (Cialdini et al. 1995). In western society, people who are perceived as holding consistent opinions are judged positively (Suh 2002), and individuals are motivated to show stability in their preferences and/or in their expressions of preferences (Tesser 2000). In addition, those who firmly retain their values, and resist external pressures/influences to change are often encouraged (Wells and Iyengar 2005). As the extent of consistency of parts of an object grows, it brings unity, coherence, and clarity to comprehend the object, and thus reduces unnecessary efforts required to understand the object (Nasar 2000). Thus, drawing upon visual rhetoric and people's general preference

for consistency, we argue that consistent visual design can deliver implicit information about an object, leading to positive perceptions of the object. Consistent design of charity websites can help potential donors easily identify and understand the main purpose and the central value of the site. Because consistency reduces uncertainty and demands less effort to understand an object, it leads viewers to feel that charity websites with consistent design are user-friendly, suggesting warmth, kindness, and generosity. Consistency also reduces complexity, ambiguity, and unnecessary information to be processed in understanding the object suggesting that the object is competent, effective, and efficient.

eCommerce research has firmly supported the relationship between website quality/usability and positive perceptions of websites (e.g., McKnight et al. 2002; Wells et al. 2011b; Xu et al. 2013). Prior literature has suggested a number of attributes of website quality such as visual aesthetics, security and privacy, download delay, and information fit to task, among others. In particular, navigation and presentation (Bart et al. 2005) and consistent image (Loiacono et al. 2007) are associated with consistent design of websites. Navigation and presentation refer to "the appearance, layout, and possible sequence of clicks, images, and paths on a Web site (Bart et al. 2005, p. 136). The aspects of navigation and presentation, partly reflected in consistent design, are directly related to the Web site's perceived ease of use including understandability and ease of getting information (Pavlou and Fygenson 2006). Consistent image, one of the dimensions of WebQual, refers to the extent of match between the image of website and the company's image (Loiacono et al. 2007). These website quality factors have been recognized for driving trust and website use intention (Bart et al. 2005). The dimensions of trust

(McKnight et al. 2002) can partly capture social judgment of warmth and competence. By definition, warmth is associated with the integrity and benevolence dimensions while competence is associated with the ability dimension. Based on the above reasoning, VC is expected to positively influence the social judgment of warmth and competence of website. Thus, we have the following hypotheses.

H2a*: Visual consistency positively influences perceived warmth of the charity website.*

H2b*: Visual consistency positively influences perceived competence of the charity website.*

3.3. Schema-Visual Congruity

We further expect that SC and VC will interact in influencing perceived warmth and competence of charity websites. Self-schema plays a role of perceptual filter, determining which information is important to selectively focus and elaborate on and which information is not (Markus 1977). Subject to the extent of the filtering role of self-schema, appeals that fit with an individual's self-schema should be thought about to a greater extent than appeals that misfit with the schema (Wheeler et al. 2005). Because self-schema congruity elaborates cognitive information processing, it is most likely to increase persuasion when appeals are strong and compelling but to reduce persuasion when appeals are weak and specious (Petty and Cacioppo 1986). Wheeler et al. (2005) examined the moderating role of argument quality on the relationship between self-schema congruity and attitude change, and found that matched messages to recipients' self-schema lead to increased or decreased persuasion, depending on the advertisement's argument quality.

Self-verification theory suggests that individuals want self-confirmatory feedbacks from others according to their beliefs and feelings about themselves, or self-concepts (Swann 1983; Swann et al. 1992). Swann (1983) argued that people self-verify "by interacting with the 'right' people in the 'right' situations" (p. 38) because people prefer phenomena that are predictable and consistent with their expectations and self-schema. There have been evidences that people seek interaction with others whose judgments confirm their self-schema (Backman and Secord 1962) and gravitate toward and stay in environments that are compatible with their self-schema (Pervin and Rubin 1967). The right people and right situation are analogous to SC and VC, respectively. The right person could be one who fits with an individual's self-schema, and right situations can be consistent, predictable environment, which are captured in VC.

Extending the findings of Wheeler et al (2005) and self-verification theory (Swann 1983), we argue that the effect of matched appeals is enhanced by the consistent design of websites. Because VC suggests predictable and familiar object and reduces distraction and unpredictability, it may enhance an individual's cognitive elaboration. Furthermore, SC would be elaborated when the context or environment is consistent and predictable. According to Petty et al. (1976), distraction could inhibit the dominant cognitive response to persuasive communication and, therefore, can result in either enhanced or reduced acceptance of persuasive messages. They found that distraction tends to increase persuasion for the counter-arguable messages but decrease persuasion for the messages that elicited primarily favorable thoughts. Thus, it can be hypothesized that individuals reading charitable appeals that matched their self-schema would elaborate more in a consistent and predictable environment (i.e., VC) than individuals

with appeals that mismatched with their self-schema. Accordingly, a low level of VC may limit the positive impact of matching effect of appeals. Conversely, when VC is high, matching effect are likely to be strongly combined through cognitive assimilation and adopted to a larger extent. Thus, VC is expected to strengthen the relationship between SC and perceptions of charity websites. The global pattern would be indicated by an interaction between SC and VC and is stated formally in the following hypotheses.

H3a*: Visual consistency positively moderates the relationship between schema congruity and perceived warmth of the charity website.*

H3b*: Visual consistency positively moderates the relationship between schema congruity and perceived competence of the charity website.*

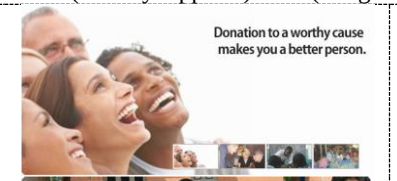
5.3.4. Control Variables

We control for a number of variables such as gender (Sargeant 1999), age (Sargeant 1999), attitude toward online donation (Bennett 2009), past donation behaviors (Bennett 2009), importance of charity's reputation (Meijer 2009), involvement in child relief issues (Bennett et al. 2007), and Web skills (Lee and Chang 2011) that are not of direct interest in the current study but might be associated with online donations to extract the true effects of study variables.

5.4. RESEARCH METHOD AND DATA ANALYSIS

We tested the proposed research model in the context of a child relief charity website that is summarized in Table 5.1. Reed (1998) noted that child development, hunger, and third world charities (e.g., UNICEF, World Vision, Save the Children, and Compassion) are popular among young people (18-24 years old).We created a hypothetical charity organization named *Help Hungry Children* that focused on hunger issues in the context of child development in third world countries. The remainder of this section provides details about research methods, including samples, experimental design and procedures, statistical analyses, and validation methods.

Table 5.1. Summary of Experiments

<table>
<tr><th>Title</th><th>Measurement Model</th><th>Main Effect Model</th><th>Interaction Effect Model</th></tr>
<tr><td>Focus</td><td>• Manipulation check
• Instrument validation
• Common method bias check</td><td>• Schema congruity
• Visual consistency</td><td>• Schema-visual congruity</td></tr>
<tr><td>Experimental Design</td><td colspan="3">2 (Charity Appeals) × 2 (Images on Donation Links) Lab Experiment
Self-Benefit Appeal (A)
 

Other-Benefit Appeal (B)
 

Adults (1) Children (2)
 
</td></tr>
<tr><td>Demographic</td><td colspan="3">• Total number of participants: 212
• Male (117: 55.2%), Female (95: 44.8%)
• Average Age: 22.67
• Distribution to Stimuli: A1 (N=53), A2 (N=53), B1 (N=53), B2 (N=53)</td></tr>
<tr><td>Measured Variables</td><td colspan="3">Schema congruity (SC), Visual consistency (VC), Warmth, Competence, Attitude, Intention</td></tr>
<tr><td>Analyses</td><td>• Exploratory factor analysis[S]
• Manipulation check[S]
• Validation of SC[S]
• Confirmatory factor analysis[A]
• Common method bias[S]</td><td>• Structural model [A]</td><td>• Structural model [A]
(All variables were mean centered for moderation analyses.)</td></tr>
<tr><td>Hypothesis Tested</td><td></td><td>H1a, H1b, H2a, H2b
(All were supported)</td><td>H3a, H3b
(Both were supported)</td></tr>
</table>

[S]: SPSS 21 was used; [A]: AMOS 21 was used

5.4.1. Measures

To ensure and enhance construct validity, whenever possible, all measures were adapted from existing, validated scales. No existing measures for SC or VC were found in the literature. Reflective measures for both of these constructs were developed based on prior research on congruity, match, fit, and alignment (e.g., Sirgy et al. 1997; Preston and Karahanna 2009; Bennett and Ali-Choudhury 2009). SC was measured to assess an individual's degree of congruity between self-schema and charity appeals. VC was measured to assess the extent of visual consistency among parts of the charity website. In particular, this study evaluates matched visual contents between charitable appeals and other components on the homepage. Both SC and VC were measured after exposing the subjects to experimental websites. Measures for social judgment of warmth and competence were adapted from Aaker et al. (2010). Based on Ajzen (1991), attitude toward donation to the charity website was measured with multiple items using semantic differential scales. Consistent with past research in eCommerce and technology adoption, behavioral intention was measured using items that assess a subject's intention to donate money, time, or resources to the charity site. Measures of control variables — web skills, previous donation behaviors, importance of charity's reputation, involvement with child relief issue, attitude toward online donation were also included along with demographic measures for age and gender. These were measured prior to exposure to the experimental website. All measurement items and sources are presented in Appendix C1.

5.4.2. Website Stimuli

A total of four different website treatments were developed to measure and validate SC and VC. The design of website treatments was divided into two parts: (a) charity appeals (two options investigated, characterizing self-benefit vs. other-benefit) and (b) types of images on donation links (two options investigated, depicting adults, vs. children). The detailed interface manipulations and sample screenshots are provided in Appendix C2.

After developing the measurement scales and website treatments, several faculty members and doctoral students (at a major public university in the US Midwest) pretested and provided their feedback on the content validity and clarity of the questionnaire and of the website treatments. After the pretests, we conducted pilot tests on 24 undergraduate students. The results of pre- and pilot-tests suggested that overall survey and website treatments were satisfactory for use in this study.

5.4.3. Sample and Experimental Procedure

The subjects for this study were undergraduate students. They voluntarily participated in this experiment in exchange of extra course credit and an opportunity to win a $30 gift card. A total of 218 students participated in this experiment. Six data points were discarded either due to failure to follow instructions or missing data, resulting in 212 usable observations. The sample comprised 55% males; and the average age was 22.95 years. The participants were asked to fill out pre-test survey that measured altruism and various pieces of demographic information before they participated in the experiment. They were instructed on how to assess the website. In particular, they were asked to

evaluate the two parts of websites: charity appeal and donation link in terms of the types of images. After they were instructed, they were randomly assigned to one of four versions of website stimuli and asked to assess charity appeals and donation links. After interacting with the website, the subjects were asked to complete a post-test survey instrument which measured our main study variables. This experiment used an online survey built in Qualtrics. There were no significant differences in gender (Pearson chi-square value = .21, p = .976), age (F = .47, p = .706), or altruism (F = .84, P = .472) distribution across the four treatment conditions, suggesting that there is no assignment bias.

5.4.4. Manipulation Check and Validation of Schema Congruity

We conducted manipulation checks for (1) charity appeals and (2) types of images on donation links using chi-square tests, and (3) VC using ANOVA. Results of the chi-square test indicate that there are significant differences for charity appeals (Pearson chi-square values = 114.15, p = .000), as well as for types of images (Pearson χ^2 value = 139.80, p = .000). In addition, manipulation checks were conducted using ANOVA for VC [High (or Match): 5.74, Low (or Mismatch): 5.14] and were significant (P = .001).

A univariate ANOVA test on SC was then carried out to validate the measures of SC. Types of appeal has a significant main effect (F = 40.70, p < .001) on SC, but level of altruism has no effect (F = .00, p = .986) on SC. The result also shows that there is an interaction effect (F = 4.92, p < .05) between charity appeals and altruism on SC (see Table 5.2). The results indicate that self-benefit appeals are preferred by people with low altruism while other-benefit appeal is preferred by people with high altruism. This result

is consistent with matching hypothesis of attitude functional theory (Shavitt 1990) and findings of effectiveness of self- and other-benefit appeals (Brunel and Nelson 2000; White and Peloza 2009). It also suggests the validity of using SC as a study construct which influences perceived warmth and competence of charity websites.

Table 5.2. Interaction between Charity Appeal and Altruism on Schema Congruity

DV: Schema Congruity (SC)		F	Sig.
Corrected Model		5.387	.000
Intercept		24.668	.000
Charity Appeal		40.699	.000
Altruism		.000	.986
Charity Appeal × Altruism		4.917	.028
Controls	*Gender*	.001	.975
	Age	.005	.946
	Importance of Reputation	2.028	.156
	Web Skills	.001	.970
	Attitude toward Online Donation	.064	.800
	Past Donation Behavior	1.765	.185
	Involvement with Child Relief Issues	2.259	.134
R^2			.211
Adjusted R^2			.172

5.4.5. Measurement Model

Data analyses, including construct validation and hypothesis testing with structural equation modeling (SEM), were performed using AMOS 21, a covariance-based SEM. Following Anderson and Gerbing (1988), we used the two-step approach: (1) confirmatory factor analysis (CFA) to assess the measurement model and (2) a structural model to test the hypotheses. The various overall fit indices of the measurement model suggested a good fit of the model to the data samples (see Table 4). Most of the indices were at or better than the recommended cut-off values. The measurement model was further examined by assessing several types of psychometric properties such as reliability,

convergent validity, and discriminant validity. The reliability analysis of the scales was assessed using the *composite reliability*–the degree to which the construct is represented by the indicators (Hair et al. 2009). *Convergent validity* was assessed by examining the standardized factor loadings in CFA and the average variance extracted (AVE) of each construct. Literature suggests threshold values of composite reliability, standardized factor loading, and AVE to be .70, .707, and .50, respectively (Hair et al. 2009; Nunnally and Bernstein 1994). *Discriminant validity* was assessed by comparing the square root of AVE of each construct with the correlations it has with other constructs. As shown in Table 5.3, composite reliability, convergent validity, and discriminant validity were satisfactorily demonstrated in the sample set when using generally accepted thresholds for quality research.

Table 5.3. Results of Confirmatory Factor Analysis: Correlation and Reliability

Constructs	Mean	Std. Dev.	CR	AVE	Factor Loading Ranges	Correlations								
						(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) SC	5.22	1.40	.94	.79	.86-.92	**.89**								
(2) VC	5.44	1.32	.91	.71	.72-.89	.36	**.84**							
(3) Warmth	5.65	1.17	.92	.80	.82-.94	.73	.38	**.89**						
(4) Competence	5.44	1.31	.93	.82	.87-.90	.75	.50	.82	**.90**					
(5) Attitude	5.11	1.31	.91	.77	.86-.90	.80	.39	.76	.79	**.88**				
(6) Intention	3.82	1.71	.95	.86	.85-.97	.55	.23	.48	.43	.68	**.93**			
(7) Involvement	4.17	1.41	.95	.87	.87-.98	.15	.00	.07	-.01	.12	.40	**.93**		
(8) AOD	4.53	1.34	.91	.76	.81-.93	.10	.06	.05	.15	.24	.21	.16	**.87**	
(9) Web Skills	5.42	1.14	.88	.71	.79-.94	.06	.20	.02	.06	-.01	-.03	.06	.19	**.84**

Square-root of AVE values represented along the diagonal

5.4.6. Common Method Bias (CMB)

Since all the variables included in the structural model were measured through self-reported survey items, the extent of CMB was assessed with Harman's single-factor

test (Podsakoff et al. 2003) and the marker-variable technique (Lindell and Whitney 2001; Malhotra et al. 2006). Harman's single factor test was conducted by including all variables in an exploratory factor analysis. The first factor explained 34.4%, suggesting that CMB is not high. For the marker-variable technique, we included a theoretically unrelated variable of *anticipated regret of lottery* as a marker-variable and then tested correlations between the marker-variable and the other research constructs. Under the marker-variable technique, correlations between the marker variable and the research constructs are assumed to not exist. The results showed that CMB was not a serious concern because the average correlation coefficient was close to 0 (r = .034, ns). From these diagnostics, it is reasonable to conclude that CMB is unlikely to be an issue with our data in testing our hypotheses.

5.4.7. Hypothesis Testing

A structural model was set up to examine the significance and strength of each of our hypothesized effects. The main effect model tested hypotheses for SC (H1) and VC (H2), while the interaction effect model tested schema-visual congruity (H3). The results of the analysis for each phase, including standardized path coefficients, their significance, and the amount of variance explained for each dependent variable, are shown in Table 4. The main effect model examined the effects of SC and VC on perceived warmth and competence of the charity website. As in the estimation of the measurement models, the various overall fit indices of the main effect model suggested a good fit of the model. All paths in this model were significant at $p < .05$. Consistent with previous self-schema congruity research (e.g. Wheeler et al. 2005), SC had significant effects on both warmth ($\beta = .69$; $p < .001$) and competence ($\beta = .67$; $p < .001$), demonstrating support for H1a

and H1b. VC significantly influenced warmth ($\beta = .13$; $p < .05$) and competence ($\beta = .26$; $p < .001$), indicating support for H2a and H2b. In addition, behavioral attitude was affected significantly by warmth ($\beta = .35$; $p < .001$) and competence ($\beta = .51$; $p < .001$). Finally, behavioral attitude positively influenced behavioral intention ($\beta = .67$; $p < .001$), corroborating extensive research on eCommerce (e.g., Pavlou and Fygenson 2006) and donation (e.g., Armitage and Conner 2001). SC and VC jointly explained large amounts of the variances in warmth (56.2%) and competence (63.8%). In Model B, we also added control variables to examine if the results hold consistent with Model A. As shown in Table 5.4, the results were consistent.

The interaction effect model tested the effect of schema-visual congruity on perceptions of the charity website. The multi-item measures were converted into summated scales. To address any possible problems of multicollinearity, the variables used to create interaction terms were mean-centered before creating the multiplicative interaction terms (Jaccard et al. 1990). Overall, the fit indices of the interaction effect model indicated a satisfactory fit of the model. Examining individual paths in the interaction effect model, we found a significant positive interaction effect between SC and VC on warmth ($\beta = .10$; $p < .05$) and on competence ($\beta = .17$; $p < .001$). The results of the structural models and goodness of fit indices are provided in Table 5.4.

Table 5.4. Results of Structural Models and Goodness of Fit Indices

N=212		**Model A** Main Effect		**Model B** Model A + Controls		**Model C** Interaction Effect[c]	
Independent Variables		DV: **Social Judgment of the Charity Website**					
		Warmth	Competence	Warmth	Competence	Warmth	Competence
R^2		**.57**	**.64**	**.60**	**.68**	**.54**	**.61**
Schema Congruity		.69***	.67***	.70***	.68***	.64***	.62***
Visual Consistency		.13*	.26***	.14*	.25***	.17**	.28***
SC × VC						.10*	.17***
Controls	*Gender*			-.01(ns)	.02(ns)	-.01(ns)	.02(ns)
	Age			-.12*	-.05(ns)	-.13**	-.05(ns)
	INV			-.03(ns)	-.13*	-.03(ns)	-.12*
	AOD			-.01(ns)	.10†	.00(ns)	.09*
	Web Skills			-.05(ns)	-.04(ns)	-.05(ns)	-03(ns)
	PDB			.01(ns)	.04(ns)	-.00(ns)	.02(ns)
	IMP			-.06(ns)	-.06(ns)	-.07(ns)	-.07(ns)
Independent Variables		DV: **Attitude toward Donation to the Charity Website**					
R^2		**.67**		**.72**		**.63**	
Warmth		.35***		.37***		.38***	
Competence		.50***		.49***		.43***	
Controls	*Gender*			.13**		.13**	
	Age			.07(ns)		.08†	
	INV			.09†		.09†	
	AOD			.16**		.14**	
	Web Skills			-.06(ns)		-.05(ns)	
	PDB			-.04(ns)		-.03(ns)	
	IMP			-.02(ns)		-.01(ns)	
Independent Variables		**DV: Intention to Donate to the Charity Website**					
R^2		**.44**		**.56**		**.53**	
Attitude		.67***		.64***		.64***	
Controls	*Gender*			.01(ns)		.00(ns)	
	Age			.09†		.07(ns)	
	INV			.33***		.28***	
	AOD			.04(ns)		.04(ns)	
	Web Skills			-.05(ns)		-.03(ns)	
	PDB			.05†		.07(ns)	
	IMP			-.10†		-.07(ns)	

Goodness of Fit Indices

	χ^2 (DF)	χ^2/DF	NFI	IFI	CFI	GFI	AGFI	SRMR	RMSEA
Good Model Fit Ranges		<3.00	>.90	>.90	>.90	≈.90	>.80	<.10	<.08
Measurement Model	534.87 (341)	1.57	.91	.97	.97	.86	.82	.043	.052
Model A	344.43 (161)	2.14	.92	.96	.96	.86	.82	.061	.075
Model B	719.49 (450)	1.60	.89	.96	.96	.84	.80	.071	.053
Model C	88.24 (38)	2.32	.92	.95	.95	.95	.85	.065	.079

*** p<.001; ** p<.01; * p<.05; † p<.10; ns: not significant

[c]: Using a mean centered approach

5.5. DISCUSSION AND CONCLUSION

5.5.1. Summary of Results

The results of the study confirmed our hypotheses that social judgment of warmth and competence of websites are determined by two types of congruity, match with self-schema and consistency of an object, characterized as schema congruity (SC) and visual consistency (VC), respectively. We also found that the interaction between SC and VC had significant effects. The major findings of this study can be summarized as follows.

First, this study adapted and successfully applied concepts from research on self-schema, congruity, and visual rhetoric to the online charity donation context. In line with the findings of prior research regarding the effects of congruity on perceptions and attitudes, the main effect model indicated that the perceived warmth and competence of the charity website are influenced by SC (H1) and VC (H2). The SC hypotheses suggest that matched charity appeals on the website to self-schema increase both perceived warmth and competence of the charity website simultaneously. While VC also positively influences both dimensions, it has stronger effect on competence than on warmth. The results also indicated that SC has stronger influence than VC in judging charity websites. This relative influence of the two types of congruity suggests that matching appeals to an individual's self-schema is superior to consistency of the object. This can be explained that when people evaluate an object, they first evaluate it based on their self-schema rather than object itself.

Second, H3a and H3b from the interaction effect model showed that there are positive moderating effects of VC on the relationship between SC and positive perceptions of the charity website. In particular, when VC is high, the effect of SC is

stronger in influencing perceived warmth and competence. This study demonstrates that fit with self-schema and consistent visual design are successfully applicable to explain the persuasion process in the context of charity websites and donation. In particular, charity website visitors who view matched appeals on websites with consistent visual design might engage in more thoughtful information processing. In line with the findings from elaboration of self-schema congruity (Wheeler et al. 2005) and effects of distraction (Petty et al. 1976), SC is elaborated in a familiar, predictable, and less distracted environment. As an object-related variable, VC helps people elaborate cognitive processing associated with SC.

Consistent with the theory of reasoned action, advertising research, and eCommerce research, we found that positive perceptions of websites influence attitude toward donation to the charity website, which in turn influences behavioral intention. The relationships among perceptions of objects, behavioral attitudes, and behavioral intention exhibited good psychometric properties and explained considerable amounts of variance of all endogenous variables (approximately 67 percent in behavioral attitude and 44 percent in behavioral intention). The relative influence of warmth and competence of the charity website on the behavioral attitude is in line with the findings of Aaker et al (2010). People prefer to buy a product from for-profit organization's website over nonprofit organization's website. Because of stereotyping effect, people perceive more competence in for-profit website and more warmth in nonprofit website. Consistent with the findings of Aaker et al. (2010), competence has a stronger effect on attitude toward donation to the website than warmth. This can be interpreted and explained that competence could suggest effectiveness of project and fundraising of the charity.

5.5.2. Implications for Research

This research has several theoretical contributions. Drawing upon self-schema, fit theories, and visual rhetoric, we examined the effects of two types of congruity, SC and VC, and then applied them to the context of charity websites and online donations. Another contribution is that this study theorized schema-visual congruity. Finally, the study extends the application of social judgment of warmth and competence to websites. Each of these contributions is elaborated below.

Using self-schema congruity as a basis, the study examined if SC enhances positive perceptions of charity websites. This study is among the first to examine in detail the role of SC in the context of websites. Since prior research has generally operationalized self-schema congruity by examining interaction between self-schema (e.g., extroversion) and manipulated stimuli (e.g., messages) in experimental settings, measurement scales on SC have not been well established. Thus, we developed and validated scales for SC, which can be used in future research. To validate SC, we incorporated altruism as self-schema and self- and other-benefit charitable appeals as messages. Consistent with matching hypothesis, the results of ANOVA showed significant interaction between altruism and charity appeals on SC, suggesting that self-benefit appeals are preferred by low altruistic people and other-benefit appeals are preferred by high altruistic people. We have made an important contribution to the online donations and eCommerce research by theoretically framing SC as a key driver of perceptions of websites.

Second, this study extends the visual rhetoric and congruity theory by empirically testing and validating the effects of VC. Visual rhetoric theory has concluded that visual

contents and design are a source of information beyond peripheral cues. Consistent with the suppositions of visual rhetoric, this study argues that consistent visual design could provide implicit information about the source of the objects, increasing both warmth and competence of the object. In addition, VC makes an implication for eCommerce research. Although past research has examined visual or consistent aspects of website design including navigation and presentation (Bart et al. 2005), consistent image (Loiacono et al. 2007), order and complexity (Deng and Poole 2010), human facial images (Cyr et al. 2009), and visual appeals (Campbell et al. 2013), little research has empirically examined the effect of consistent visual design. Our study thus contributes to the eCommerce literature by adding VC as an important aspect of website design.

Third, as the most important contribution of this study, we theorized schema-visual congruity as an interaction between schema congruity and visual consistency. In particular, this schema-visual congruity extends the Elaboration Likelihood Model (ELM) and self-schema congruity. The ELM suggests that many persuasion variables including self-schema congruity can influence persuasion via multiple processes (Petty and Cacioppo 1986). The primary argument in support of the interaction between SC and VC is that consistent visual design facilitates the elaboration of self-schema congruity. Schema-visual congruity also contributes to congruity theory. In some sense, schema-visual congruity can be viewed as a congruity on the congruity, indicating that self-matching effect is enhanced in a consistent situation or environment. Above all, schema-visual congruity hypotheses explain how congruity on the congruity in website design impacts the user resulting in positive perceptions.

Applying the warmth and competence dimensions to websites represents the last contribution of this study. While trust (McKnight et al. 2002) and TAM constructs (Gefen et al. 2003) have been the most popular (intermediary) dependent variables, recent eCommerce researchers have attempted to advance them by incorporating image appeal and perceived social presence (Cyr et al. 2009), arousal and pleasantness (Deng and Poole 2010), perceived product quality (Wells et al. 2011b), cognitive and affective appraisal (Lee et al. 2012), and perceived relationship rewards (Campbell et al. 2013). Although social psychologists and consumer behavior researchers have widely examined warmth and competence dimensions in the context of humans, groups, and firms, these have not been applied to websites. This study incorporated warmth and competence dimensions, object based perceptions, as consequences of SC and VC, and found that these dimensions are successfully applicable to the context of websites.

5.5.3. Implications for Practice

The results from this study have several practical implications for charity organizations that are considering or currently using website as an online donation channel. A better understanding of the relationship between schema congruity and visual consistency on users' perceptions can help managers create web pages that elicit desired perceptions, attitudes, and behaviors. Our findings generate several recommendations for charity organizations including that they identify their target donor's characteristics, make consistent design of their website a priority, and demonstrate competence when eliciting donations.

First, the findings regarding the strong influence of SC on perceived warmth and competence of websites provide significant implications for website content and personalization, and can help the charities realize the importance of matching these with donors so as to better influence their subsequent donation behaviors. In an era when organizations are attempting to deliver customized contents, a charity could also utilize this approach and leverage available information about donors. Hence, it is important for charities to identify potential donors' characteristics, demographics, preferences, and the like. Based on this information, charity organizations can provide customized messages and websites that will appeal more effectively to the donors. For people who want to develop their career or enhance their self-esteem, charity websites can present appeal messages on how their donations can help donors get jobs or how the donors are well regarded by other people. Likewise, the websites can be customized with human appeal messages for altruistic donors. This matching strategy makes it possible for charities to effectively fundraise in situations where specific donation targets are necessary. For instance, arts, education, and healthcare charities could focus on the rich as their primary contributors (Ostrower 1996).

Second, our findings point to the importance of consistent visual design. Prior research has emphasized visual aspects of website design (Wells et al. 2011b). Moreover, Cyr et al. (2009) found that human facial images can enhance visual appeals. We found a positive effect of VC on perceptions of websites. This emphasizes that charity website designers need to consider consistency of visual design along with or beyond visual aesthetics as a key priority. While more human images on charity websites will increase user perception of visual aesthetics, inconsistently used human images which cannot

reveal the core purpose of the charity might reduce the positive perceptions. In addition, VC suggests that visual website design needs to be less distracting; more harmonized, and provide focused messages so that potential donors can easily understand the charity organization.

Finally, our findings strongly emphasize that higher competence perception increases donation attitude. In the context of product purchase, Aaker et al. (2010) showed that people are more willing to buy a product from a for-profit than a nonprofit because of the stereotyping effects. Previous researchers have concluded that credibility cues (e.g., introduced by *Wall Street Journal*) serve as an effective tool to enhance perceptions of competence (Moscarani 2007). Thus, charity organization might be able to use and post credibility cues such as Charity Navigator seal on their websites.

5.5.4. Limitations and Future Research Directions

Interpretation of the results of this study should be considered along with several limitations. First, the data were collected from a sample of college students, rather than real donors, thereby restricting the generalizability to a population of actual donors (Compeau et al. 2013). However, since college students typically use the web as a donation channel, and child relief and development charities are the most popular for young people (18-24 years old), the use of a student sample should not be a serious threat to the validity of this study. Clearly, additional research with real donors in online donation environments is strongly suggested for future research. Second, in our sample, we used a single category of charity organization, child relief and development. As per Charity Navigator, there are nine categories and thirty four sub-categories of charity

types. While restricting data collection to only single type of charity website category can improve the accuracy of results, using only one charity website category for the research may also limit the generalizability of the results to other charity website categories. Future research needs to test the research model with other types of charities. Third, we used altruism as self-schema to validate SC because altruism is closely associated with donation behaviors (Penner and Finkelstein 1998). Future researchers can examine other self-schema (e.g. need for cognition vs. need for affect). Finally, similar to the experiments conducted by Deng and Poole (2010), we used only the homepage instead of dynamic webpage treatments to reduce any other confounding effects. Having the participants investigate the homepage only and not permitting them to click on any links on the home page may have undesirably influenced the subjects' perceptions.

This study opens a variety of opportunities for future research. As briefly mentioned, one interesting direction for research is to extend this study to focus on other types of self-schema. Prior researchers used a variety of self-schema such as legalistic vs. religious (Cacioppo et al. 1982), sincerity, excitement, competence, sophistication vs. ruggedness (Aaker 1999), extroversion vs. introversion, and high vs. low need for cognition (Wheeler et al. 2005). Based on findings of SC, eCommerce researchers might want to propose and test a model that consumers with high need for cognition prefer textual information which requires cognitive efforts while consumers with high need for affect prefer visual cues in evaluating eCommerce websites and subsequently engaging in actual purchasing behaviors.

Second, future research could test our model by incorporating moderating variables other than VC. For example, distraction (Petty et al. 1976) or waiting time (Lee

et al. 2011) could be a moderating variable which enhances or reduces the elaboration of self-schema congruity or other message variables.

Third, it would be worthwhile for researchers to apply other theories such as the halo effect (Fisicaro and Lance 1991) in examining the effect of self-schema congruity. Future researchers can incorporate information content (e.g., financial and performance information) and examine the effects of self-schema congruity in experiment settings. For example, when a potential donor prefers a certain type of appeals on a homepage based on his/her self-schema, he or she might feel and attribute the information quality of the charity website to be high regardless of its actual quality. This phenomenon can be explained by general impression model of the halo effect (Fisicaro and Lance 1991).

Lastly, extending the research on color harmony (Deng et al. 2010), harmony of human images can be investigated in terms of, for instance, what combination is more effective for persuading people to donate based on individual differences. For example, individuals who prefer consistent objects might think that consistent human images (e.g., using only children images both in the middle and the left panels in this study) are more harmonized because the visual images deliver consistent information which emphasizes a specific message (e.g., help children in developing countries). People who prefer diverse and complex objects might like to choose diverse visual images (e.g., combination of children images in the middle panel and adult images in the left panel) as harmonized visual design. They might think that children and adult images presented together deliver a cue that adults help children. Thus, we encourage future researchers to investigate the moderating role of individual differences between configuration of visual images (i.e., consistent vs. diverse) and perceptions of visual harmony.

5.5.5. Concluding Remarks

Recognizing that charity websites are an important channel for donations, self-schema, congruity, and visual rhetoric theories were applied to the context of charity website to examine the effects of schema congruity (SC) and visual consistency (VC) on site visitors' perceptions of warmth and competence. The results indicate strong support for positive influences of SC and VC on warmth and competence perceptions. We further found the interaction between SC and VC to be an important driver of warmth and competence. As online donations are expected to be increasingly important and pervasive, this research serves as a cornerstone for future investigations.

CHAPTER 6

SUMMARY

"Generosity consists not the sum given, but the manner in which it is bestowed"

"Be the change you want to see in the world"

Mahatma Gandhi

In this closing chapter, we recap and integrate the theoretical underpinnings, the design approaches undertaken, and the results that were observed from each study to at least paint the beginnings of a composite picture of human attitude and behavior in an online charity context when dealing with an unknown charity site.

6.1. Summary of Theoretical Approaches

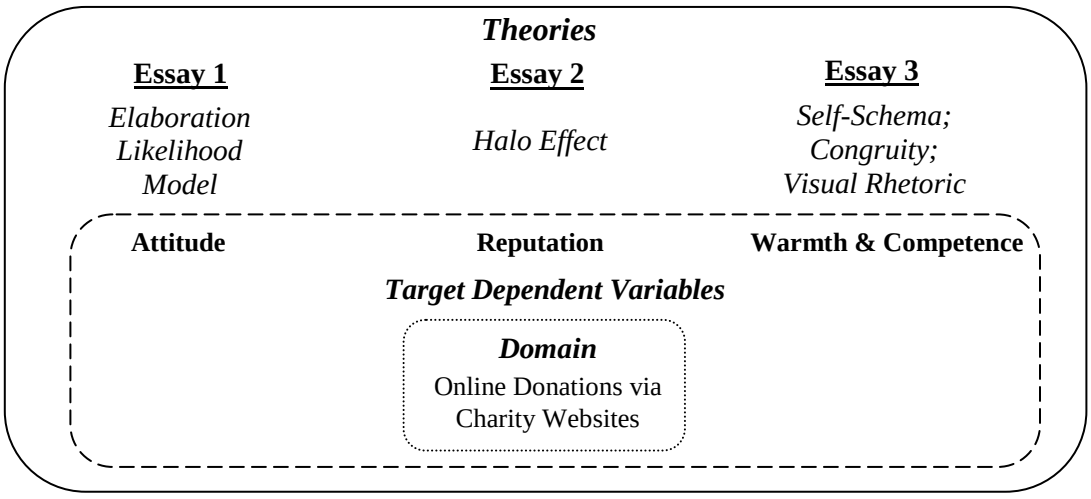


Figure 6.1. Summary of Theoretical Approaches

As summarized in Figure 6.1., the three essays of this dissertation examined the effects of charity website design on people's perceptions, attitudes, and online donation

behaviors based on various theories: the Elaboration Likelihood Model (Essay 1), the halo effect (Essay 2), and self-schema, congruity, and visual rhetoric (Essay 3).

Essay 1 proposed the effects of information content quality (H1) and system quality (H2) on attitude toward the charity website; and elaborating roles of personal involvement with charity giving (H3 and H4) and helper's high (H5 and H6). Essay 2 proposed a number of different types of halos and their roles/influences—collective halo (H1), aesthetic halo (H2), two-sided quality halo (H3), quality halo (H4), and reputation halo (H5). Essay 3 proposed the effects of schema congruity (H1), visual consistency (H2), and schema-visual congruity (H3) on perceived warmth and competence of the charity website.

6.2. Summary of Methods and Analyses

Across the three essays, this dissertation employed controlled lab experiments using websites of an unknown entity–a fictitious child relief and development charity organization, *Help Hungry Children International*. Table 6.1 provides summary of methods and analyses used in this dissertation.

Table 6.1. Summary of methods and Analyses

	Essay 1	Essay 2	Essay 3
# of Participants	536	661	212
Experimental Design	4 treatments 2 (ICQ: high vs. low) × 2 (SQ: high vs. low)	24 Treatments (Partial factorial design)	4 Treatments 2 (Charity appeals: Self-benefit vs. Other benefit) × 2 (Images on Donation Links: Adults vs. Children)
Analysis	• Exploratory factor analysis • Assignment bias and manipulation checks • Confirmatory factor analysis • Common method bias • Structural model		

6.3. Summary of Results

A total of 19 hypotheses was proposed in this dissertation. The results are summarized in Table 6.2.

Table 6.2. Summary of Results

	Hypothesis		Result
Essay 1	H1	Information content quality positively influences an individual's attitude toward the charity website.	Supported
	H2	System quality positively influences an individual's attitude toward the charity website.	Supported
	H3	The greater an individual's personal involvement with charity giving, the more information content quality affects attitude toward the charity website.	Supported
	H4	The greater an individual's personal involvement with charity giving, the less system quality affects attitude toward the charity website.	Supported
	H5	The greater an individual's helper's high, the more system quality affects attitude toward the charity website.	Supported
	H6	The greater an individual's helper's high, the less information content quality affects attitude toward the charity website.	Supported
Essay 2	H1	When the quality of all the (seven) dimensions/attributes is high, each of these attributes will be perceived to be of higher quality than the exact same high quality dimension/attribute in other configurations where the attribute is mixed with a majority of low quality attributes.	Supported
	H2	Visual aesthetics has a dominant effect in evaluating system quality.	Partly Supported
	H3a	An individual's perceived system quality positively influences that individual's perceived information content quality.	Supported
	H3b	An individual's perceived information content quality positively influences that individual's perceived system quality.	Supported
	H4a	Perceived information content quality positively influences perceived reputation of the charity website.	Supported
	H4b	Perceived system quality positively influences perceived reputation of the charity website.	Supported
	H5	Perceived reputation of the charity website positively influences attitude toward donation to the charity website.	Supported
Essay 3	H1a	Schema congruity positively influences perceived warmth of the charity website.	Supported
	H1b	Schema congruity positively influences perceived competence of the charity website.	Supported
	H2a	Visual consistency positively influences perceived warmth of the charity website.	Supported
	H2b	Visual consistency positively influences perceived competence of the charity website.	Supported
	H3a	Visual consistency positively moderates the relationship between schema congruity and perceived warmth of the charity website.	Supported
	H3b	Visual consistency positively moderates the relationship between schema congruity and perceived competence of the charity website.	Supported

6.4. Summary of Implications

The three essays in this dissertation collectively suggested several theoretical and practical implications as summarized in Table 6.3.

Table 6.3. Summary of Theoretical and Practical Implications

Summary of **Theoretical Implications**	
Essay 1	• Extended the ELM by incorporating two charity-specific elaboration motivations: personal involvement with charitable giving and helper's high. • Extended the ELM by empirically testing and validating the multiple roles postulate. • Conceptualized and validated two charity website quality constructs: information content quality and system quality. • Introduced (the need for) and emphasized the importance of an anchor or reference point before requiring subjects to judge the effectiveness of a charity website.
Essay 2	• Supported and extended Wells et al (2011b) by adding three sub-dimensions of information content quality and examining people's evaluation of multi-attributes from information content quality and system quality. • Highlighted that information content quality and system quality influence each other in the context of multi-attribute object evaluation, and extended the findings of both traditional halo research and that of Xu et al. (2013). • Extended the role of explicit attractiveness in the extant physical attractiveness halo research and visual design in eCommerce research to online charity website. • Identified the key influences that lead to the formation of initial reputation.
Essay 3	• Examined and validated the role of schema congruity in the context of websites. • Extended the visual rhetoric and congruity theory by empirically testing and validating the effects of visual consistency. • Theorized schema-visual congruity as an interaction between schema congruity and visual consistency. • Applied the warmth and competence dimensions to websites.
Summary of **Practical Implications**	
Essay 1	• Hire or outsource website development to professional web designers. • Emphasize the visual aesthetics component in design of websites • Focus on overall information content quality • Customize websites.
Essay 2	• Identify key attributes of websites and maintain important attributes to be of high quality. • Emphasize security for fast reputation building. • Highlight information content over system features in initial building reputation.
Essay 3	• Stress importance of consistent visual design of websites. • Emphasize building competence over warmth. • Invest in website content and personalization to match with donors so as to better influence their subsequent donation behaviors.

6.5. Summary of Future Research Directions

This dissertation provided a number of future research directions. The future research directions are summarized in Table 6.4.

Table 6.4. Summary of Future Research Directions

Essay 1	• Explore eCommerce specific constructs (e.g., purchase involvement and hedonic purchase orientation) as elaboration motivations in the context of consumers' purchase behaviors. • Examine the moderating role of personal impulsiveness or impulsive donation orientation. • Investigate charity-specific ability constructs and other charity-specific moderators such as prosocial personality. • Conceptualize information content quality in terms of how the information content is delivered (e.g., granularity manipulated via hyperlinks, audio delivery, etc.) beyond or in addition to quantity of information and investigate their influence.
Essay 2	• Incorporate service quality to the research model. • Identify other dimensions of charity website quality such as summaries of projects. • Examine role of charity's reputation in terms of reputation of the founders and reputation of the charity organization itself. • Investigate moderating role of individual difference variables such as impulsiveness and need for cognition.
Essay 3	• Focus on other types of self-schema such as extroversion and need for cognition. • Test the model by incorporating moderating variables such as distraction. • Apply other theories such as general impression model of the halo effect in examining the effect of self-schema congruity. • Examine visual harmony in terms of consistency and diversity.

6.6. Concluding Remarks

This dissertation had two broad objectives. For a researcher's perspective, this dissertation was intended to contribute to theories for charity website design and online donation behaviors. For a managerial perspective, charity organizations would be able to get benefit in increasing donations. We hope that this dissertation serves as a cornerstone for future online donation research and is a small part of the efforts of many people to make the world a better place.

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ESSAY 1—Appendix A1: Selected Persuasion Studies

Reference	Independent Variable		Dependent Variable	Key Finding	*Journal*
	Elaboration / Moderator	Cue			
Petty, Cacioppo, Goldman (1981)	Personal Relevance	Argument quality, Source expertise	Attitude	- Under high relevance, argument quality has a greater impact on persuasion. - Under low relevance, source expertise has a greater impact on persuasion.	*J. Personality and Soc. Psych.*
Petty, Cacioppo, and Heesacker (1981)	Involvement, Message style	Argument quality	Attitude Cognitive response	- Under low (high) involvement, the use of rhetorical style increases (disrupts) thinking: strong argument is more (less) persuasive, and weak argument is less (more) persuasive. - Found three-way interaction.	*J. Personality and Soc. Psych.*
Cacioppo et al. (1983)	Need for cognition	Argument quality	Message evaluation, Cognitive effort, Recall of message argument	- Under high NC, argument quality had a greater effect on the message evaluations and source impressions. - Subjects with high NC recalled more message argument and reported expending more cognitive effort regardless of argument quality.	*J. Personality and Soc. Psych.*
Heesacker et al. (1983)	Field dependence	Message quality, Source credibility	Attitude, Cognitive response, Argument recall,	- Field-dependent subjects show differential persuasion to strong and weak arguments only as they are presented by a source with high credibility. - For field-independent subjects, the arguments are differentially persuasive for both high and low credible sources. - Increasing source credibility can facilitate message-relevant thought for individuals who typically do not inspect message contents.	*J. Personality*
Petty et al. (1983)	Product involvement	Argument quality, Endorser status	Product attitude, Brand recall and recognition, Purchasing intention	- Argument quality has a greater impact on persuasion under high than low involvement. - Product endorser has a greater impact on persuasion under low than high involvement.	*J. Consumer Res.*
Pallak et al. (1983)	Message tone (rational vs. emotional)	Communicator physical attractiveness, Relevance of communicator expertise	Evaluation of product, Thought, Behavioral intention	- Found an interaction effect between attractiveness and message tone in a way that attitude and behavioral intention are greater as the emotional endorsement is attributed to the attractive than to the unattractive communicator, with no effect for rational endorsement. - The rational message is systematically processed while the emotional message is heuristically.	*Soc. Cognition*
Petty and Cacioppo (1984)	Issue involvement	Argument quality, Argument number	Attitude	- For individuals with low involvement, the number of message arguments serves as a peripheral cue. - For individuals with high involvement, arguments are carefully examined.	*J. Personality and Soc. Psych.*

Reference	Independent Variable		Dependent Variable	Key Finding	*Journal*
	Elaboration / Moderator	Cue			
Cacioppo et al. (1986)	Need for cognition	1: Argument quality 2: Persuasion situation	Attitude, Message evaluation, Cognitive response, Cognitive effort	- Subjects with high NC are more likely to think about issue-relevant information (study 1) and tend to exhibit stronger attitude-behavior correspondence (study 2) in formulating attitudes.	*J. Personality and Soc. Psych.*
Park and Young (1986)	Involvement (low, cognitive, affective)	Music	Attitude, Thought, Behavioral intention	- Provide two types of involvement: cognitive and affective. - Under the low involvement condition, music has a greater impact on brand attitude. - Under the cognitive involvement condition, music has a distracting effect while the effect of the affective involvement condition is not clear.	*J. Marketing Res.*
Harkins and Petty (1987)	Number of sources	Argument quality	Attitude, Thought, Recall	- Multiple sources facilitate information processing. - The persuasiveness of multiple sources presenting strong arguments is removed as the sources are said to have formed a committee instead of being independent.	*J. Personality and Soc. Psych.*
Wu and Shaffer (1987)	Method of attitude formation (direct vs. indirect experience)	Communicator credibility	Agreement, Strength of preferential attitudes, Purchasing intention	- Direct-experience attitudes are more resistant to a counter-attitudinal argument than are indirect-experience attitudes. - The attitudinal responses of direct-experience subjects are formed via their cognitive elaboration of the message arguments, suggesting the central route to persuasion. - The final attitudes of indirect-experience subjects are formed by source characteristics (i.e., peripheral cues).	*J. Personality and Soc. Psych.*
Sanbonmatsu and Kardes (1988)	Arousal	Endorser status, Argument strength	Brand attitude, Purchase intention	- Under high level of physiological arousal, endorser status has a greater impact on persuasion (peripheral route). - Under moderate level of physiological arousal, argument strength has a greater impact on persuasion (central route).	*J. Consumer Res.*
Sorrentino et al. (1988)	Personal relevance, Uncertainty orientation	Argument type	Attitude, Message comprehensibility, Cognitive effort	- Study 1: Under high (low) personal relevance, found are higher (lower) persuasiveness of two-sided communications and lower (higher) persuasiveness of one-sided communications than low (high) personal relevance for uncertainty-oriented individuals. - Study 2: Under high (low) personal relevance, there are higher (lower) persuasive effect of strong arguments and lower (higher) effect for source expertise for uncertainty-oriented individuals.	*J. Personality and Soc. Psych*

Reference	Independent Variable		Dependent Variable	Key Finding	*Journal*
	Elaboration / Moderator	Cue			
Burnkrant and Unnava (1989)	Self-referencing	Argument quality	Attitude toward product, Attitude toward message, Argument recall, Informativeness	- Under the high self-referencing, recall of message content is higher. - Like the effects of involvement, the effects of self-referencing on attitude and cognitive response are found. - Under the high self-referencing, argument quality has a greater impact on persuasion.	*Personality and Soc. Psych. Bull.*
Dröge (1989)	N/A	Ad type (comparative vs. noncomparative)	Attitude toward the ad, Brand cognition, Brand attitude	- Noncomparative ads are processed peripherally whereas comparative ads are processed centrally.	*J. Marketing Res.*
Miniard et al. (1991)	Involvement	1. Claims, Picture (attractive, unattractive) 2. Picture (relevant, irrelevant)	Attitude, Behavioral intention, Cognitive response	- The moderating role of involvement is dependent on whether pictures include product-relevant information. - Identify the role of pictures as either an argument (study 2) or a peripheral cue (study 1).	*J. Consumer Res.*
Haugtvedt and Petty (1992)	Need for cognition	1. Newly formed attitude (Immediate, delayed) 2: Type of message (Initial message, counter-message)	Attitude, Thoughts, Argument recall	- Study 1 (persistent): The newly formed attitudes of individuals with high NC are more persistent those of individuals with low NC over a 2-day period. - Study 2 (resistance): Both high-NC and low-NC individuals are influenced by an initial message argument. However, the initially created attitudes of individuals with high NC are more resistant to the counter-argument.	*J. Personality and Soc. Psych.*
Meyers-Levy and Peracchio (1992)	Motivation to process, Need for cognition	Camera angle (high, eye-level, low)	Product evaluation	- Under low processing motivation, evaluations are most favorable when a subject looks up at the product, least favorable when she looks down at the product, and moderate when the product is at eye level. - Under moderate processing motivation, eye-level shots evoke most positive evaluations.	*J. Marketing Res.*
Baker and Petty (1994)	Setting (balanced, imbalanced)	Argument quality, Source (majority, minority)	Attitude, Thoughts, Argument recall	- Study 1: Argument quality has a greater impact on persuasion with majority than with minority endorsement. - Study 2: Under imbalanced (balanced) setting, argument quality (source) has a greater impact. - Either majority or minority endorsement can increase argument scrutiny if the source-position pairing (setting) is surprising.	*J. Personality and Soc. Psych.*

Reference	Independent Variable		Dependent Variable	Key Finding	*Journal*
	Elaboration / Moderator	Cue			
Shavitt et al. (1994)	Involvement	Primed attribute (sensory, image, control), Endorsers	Thought favorability, attitudes, behavioral intention	- When sensory attributes are salient, the persuasive impact of source attractiveness occurred via a more peripheral route. - When image attributes are salient, the impact of source attractiveness occurred through a relatively central route.	*J. Consumer Psych.*
Burnkrant and Unnava (1995)	Self-referencing	1. Picture relevance 2. Grammatical form (questions, statements)	Attitude toward the product, Attitude toward the ad, Cognitive response	- Increasing self-referencing evokes message elaboration and can enhance persuasion in strong arguments. - When self-referencing is increased in the existence of other variables which increase elaboration, the positive effect of self-referencing on persuasion is moderated or reversed.	*J. Consumer Res.*
Meyers-Levy and Peracchio (1995)	Resource demand, Processing motivation	1: Color (color, B&W) 2: Type of ad claim, Color (4 types)	Thoughts, Product attitude, Buying intention	- Study 1: Under high motivation subjects, the effects of full-color vs. B&W ads are moderated by the cognitive demands of the ad. - Study 2: Color in ads can increase or undermine people's attitudes depends on resource consuming, processing motivation, and resource availability for processing.	*J. Consumer Res.*
Priester and Petty (1995)	Need for cognition	Argument quality, Source honesty	Attitude, Cognitive response	- Post-message attitudes of subjects with low NC rely less on message scrutiny as the source is presumed to be relatively honest.	*Personality and Soc. Psych. Bull.*
Meyers-Levy and Peracchio (1996)	Self-reference	Outcome favorableness (positive, negative), Decision making style (rational, intuitive)	Product evaluation, Thoughts, Recall	- An initial (moderate) increase in self-referencing has a greater impact on persuasion, whereas a further (extreme) increase in self-referencing has a less effect on persuasion; and these effects occurred only under high motivation individuals. - Under low motivation, no effect of self-referencing is found.	*J. Consumer Res.*
Sengupta et al. (1997)	Message involvement	Argument strength, Cue relatedness	Initial attitude, Delayed attitude	- Under low involvement conditions, when both related and unrelated peripheral cues evoke similar initial attitudes, only when the cue is related to the product category do attitudes persist over time.	*J. Consumer Res.*
Petty and Wegener (1998b)	Need for cognition	Argument strength, Type of argument	Attitude	- For individuals with low NC, argument strength has a greater impact on attitude when the message arguments matched rather than mismatched the functional basis of the attitude.	*Personality and Soc. Psych. Bull*
Cho (1999)	Involvement	Information request, Size of banner, Dynamic information	Attitude toward the vehicle, Attitude toward web advertising, Clicking banner	- Under high involvement, information request has a greater impact on attitudes and clicking of banner. - Under low involvement, size of banner and dynamic information have greater impacts on attitudes and clicking of banner.	*Current Issues and Res. in Advertising*

Reference	Independent Variable		Dependent Variable	Key Finding	*Journal*
	Elaboration / Moderator	Cue			
Chebat et al. (2001)	Involvement, Prior knowledge	Deep information processing	Attitude toward ad, Attitude toward brand, Behavioral intention	- Under low involvement, paradoxically, individuals can reach deeper information processing if they have knowledge about the product and perceive low risk in it.	*J. Business Res.*
Eastin (2001)	Knowledge of content	Source type	Perceived message credibility	- Main effects of knowledge and source are found. - No significant interaction effect between source and knowledge.	*J. Computer-Mediated Comm.*
Priester and Petty (2003)	Endorser trustworthiness	Argument quality	Attitude, Cognitive response, Attitude accessibility	- Found is an interaction between argument quality and endorser trustworthiness. - Endorsers with low trustworthiness evoke greater elaboration. - Endorsers with high trustworthiness produce a comparatively nonthoughtful acceptance even when those endorsers are familiar.	*J. Consumer Psych.*
Oh and Jasper (2006)	Involvement, Product type	Message argument, Background picture	Elaboration (thoughts), Attitude toward product	- Under high involvement, the message argument influences an individual's attitude toward the utilitarian product, while a background picture affects attitude toward the expressive product.	*Clothing and Textile Res. J.*
Briñol, Petty, and Barden (2007)	Need for cognition, Emotion (happy, sad)	Argument quality, Message focus	Thoughts, Attitudes, Emotion	- Emotion may affect evaluative judgments by influencing the confidence people have in their thoughts to a persuasive message.	*J. Personality and Soc. Psych.*

* Cue types are not identified in this table (see Angst and Agarwal (2009) for more information).

Appendix A2: Selection of Three Dimensions of ICQ and Four Dimensions of SQ

Because of the potentially complex processing involved with charity websites, and the rich literature in website quality, we elected to measure website quality on two separate dimensions – information content quality and system quality. We based our measure of *information content quality* on established constructs of financial (Saxton and Guo 2011), performance (Saxton and Guo 2011), and donation (Sargeant et al. 2007). Following Wells et al. 2011b, we used navigability, download delay, visual aesthetics, and security, as components of *system quality*.

Nonprofit literature has suggested that disclosures of financial and performance information are critical aspects of nonprofit credibility (Brinkerhoff 2001; Melendez 2001; Saxton and Guo 2011). Using the *financial information* such as annual report, audited financial statements, and IRS Form 990, potential donors can evaluate a charity's financial accountability (Brinkerhoff 2001). The Pension Protection Act of 2006 requires 501(c) organizations to file Form 990 to keep the tax-exempt status (Internal Review Service 2011). Thus, disclosing Form 990 implies a charity's compliance with current laws and regulations (Saxton and Guo 2011). *Performance information*, such as the mission statement and summaries of funded projects, reveals the charity's current objectives, and how it actually accomplishes those objectives. Since individuals have different preferences for specific charities (Bennett 2003), charity organizations need to provide clear and understandable statements detailing their vision, values, and organizational impact for potential donors and volunteers. *Donation assistance information* also represents critical information for charity websites (cf. Sargeant et al. 2007). The main purpose of the charity website is to assist people in donating money,

resources, or time. Without appropriate information about how to donate, donors would have difficulty finding appropriate donation methods. Providing clear and detailed donation assistance information (e.g., how and where to donate) is necessary to facilitate donation by website visitors.

Although many dimensions of SQ have been suggested (e.g., Loiacono et al. 2007), we are specifically interested in four aspects of SQ (navigability, download delay, visual aesthetics, and security) for four reasons. First of all, Wells et al. (2011b) proposed website quality as a potential signal of product quality. They conceptualized website quality as a second-order formative construct consisting of the four dimensions of navigability, download delay, security, and visual appeal. More importantly, they found that the four dimensions explained 80% of their website quality construct. Second, replicating Wells et al.'s website quality in a different context (i.e., charity websites) may support the generalizability of their conceptualization. Third, Wells et al.'s website quality is equivalent to system quality of this study but does not include ICQ. Adding ICQ into Wells et al.'s conceptualization of website quality enables us to apply websites into dual-process theory of persuasion. Finally, a comprehensive review of eCommerce/website literature (as presented in Table A1) suggests the importance and popularity of the four aspects of SQ.

Table A1. Summary of Selected Website Research

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						<u>Intermediary Dependent Variable</u> Dependent Variable
Gehrke and Turban (1999)	√ Business content		√ Navigation efficiency	√ Page loading		√ Security	Marketing/customer focus
	- By counting the number of citations in the literature, this study suggested the relative importance of category of successful website design: business contents (31%), marketing/consumer focus (26%), page loading (19%), navigation efficiency (17%), and security (6%).						N/A
Liu and Arnett (2000)	√ Information quality (relevance, accurate, timely, flexible, etc)		√ System Quality (security, rapid accessing, ease of use, etc)				Service quality, Learning capability, Playfulness, System use
	- Four factors are important to website success: (1) information and service quality, (2) system use, (3) playfulness, and (4) system design quality						Design quality of websites (attractiveness, dependability, reliability, trustworthy, meeting demand, pleasing customers)
Tractinsky et al. (2000)	√ Amount of information		√ Usability (Ease of use)		√ Aesthetics		
	- Strong correlation between perceived aesthetics and perceived usability (ease of use) is found.						N/A
Barnes and Vidgen (2001)	√ Reliability (Reliable information) √ Communication (Correct information)		√ Navigation		√ Aesthetics	√ Credibility √ Security	Competence, Responsiveness, Access, Understanding the individual
	- Provide five categories and ten subcategories of WebQual 2.0.						N/A
Coyle and Thorson (2001)					√ Vividness		Interactivity
	- Vividness and interactivity are positively associated with perceived telepresence and attitude toward websites.						Perceived telepresence, Attitude toward websites
Nielsen (2000)	√ Content		√ Navigation	√ Response time		√ Credibility	Interactivity
	- Provide dimensions of website usability						N/A
Becker and Mottay (2001)	√ Information content		√ Navigation √ Design consistency	√ Performance (system response time) √ Reliability (consistent response time)	√ Page layout (visual presentation)	√ Security	Customer service
	- Provide strategic usability factors						N/A

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						<u>Intermediary Dependent Variable</u> Dependent Variable
Rose and Straub (2001)				√ Download time			
	- Contrary to the expectation of the negative relationship between download time and attitude toward e-retailer, results from a lab experiment do not support the hypothesis.						Attitude toward e-retailer
Salisbury et al. (2001)			√ Easy of navigation			√ Web security	Usefulness
	- Developing a scale to measure perceived web security. - Web security has a greater impact on purchasing intention than ease and utility of product purchasing.						Purchase intent
Zhang and von Dran (2001-2002)	√ Information content		√ Navigation	√ Technical support	√ Visual appearance	√ Privacy	Cognitive outcomes, Enjoyment, User empowerment, Credibility
	- Although rankings of key quality factors are different from one Web domain to another, some factors (e.g., navigation, information content) are highly important across all six Web domains (education, government, medicine, entertainment, eCommerce, and finance).						N/A
Agarwal and Venkatesh (2002)	√ Content		√ Ease of use				Promotion, Made for the medium, Emotion
	- Development measurement of website usability based on Microsoft Usability Guideline (MUG).						N/A
McKinney et al (2002)	√ Information quality (relevance, timeliness, reliability, scope, perceived usefulness)		√ System quality (access, usability, navigation, interactivity)				
	- Divide website quality into information quality and system quality and propose nine key constructs.						Web customer satisfaction
McKnight et al. (2002)	√ Perceived site quality						Perceived vender reputation
	- Website quality and reputation are strong drivers to build consumer trust.						<u>Trusting belief, Trusting intention</u> Intention to follow vendor advice, to share personal information with web vender, and to purchase from site
Palmer (2002)	√ Information content		√ Navigation	√ Download delay			Interactivity, Responsiveness
	- Development of website usability metric - Website success is significantly related to website download delay, information content, navigation, interactivity, and responsiveness.						Website success (frequency of use, user satisfaction, intent to return)
Ranganathan and Ganapathy (2002)	√ Information content		√ Design (easy to navigate, response time, visual aids)			√ Security √ Privacy	
	- All examined dimensions have impacts on online purchasing intention. - Security and privacy have greater influences on online purchasing intention.						Online purchase intent

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						<u>Intermediary Dependent Variable</u> Dependent Variable
DeLone and McLean (2003)	√ Information quality (completeness, ease of understanding, relevance, personalization, security)		√ System quality (adaptability, availability, reliability, response time, usability)				Service quality (assurance, empathy, responsiveness)
	- Based on updated D&M model, eCommerce success metrics are suggested.						<u>Use, User satisfaction</u> Net benefits
Montoya-Weiss et al. (2003)	√ Information content		√ Navigation structure		√ Graphic style		General Internet expertise Service quality perceptions Security risk perceptions
	- User perceptions of navigation structure, information content, and graphic style are strongly associated with online channel service quality perceptions.						Overall satisfaction Online channel use
Rose et al. (2003)				√ Actual delay √ Perceived delay			Cultural chronism (mono and polychronism)
	- Respondents from polychronic cultures (Egypt, Peru) are less concerned with web delays than respondents from monochronic cultures (the U.S., Finland).						Attitude toward delay
Galletta et al. (2004)				√ Website delays			*Website familiarity*
	- Found significant impacts of website delays. - Website familiarity moderates the relationships between website delays and outcome variables.						<u>Satisfaction with the site</u> Intentions to return, Number of task completed
Kim et al. (2004)	√ Information quality		√ System quality			√ Structural assurance	Service level, Refutation, Empathy
	- For potential customers, information quality positively influences trust, while system quality does not. - For repeat customers, information quality is related to trust and system quality is associated with customer. satisfaction, while there are no significant relationships between information quality and customer satisfaction and between system quality and trust.						Trust, Consumer satisfaction
Koufaris and Hampton-Sosa (2004)						√ Perceived security control	Perceived willingness to customize, reputation, size, usefulness, and ease of use, Trust propensity
	- Perceived security control is positively associated with initial trust						Initial trust in company
Lavie and Tractinsky (2004)			√ Usability (ease to navigate)		√ Classic and expressive aesthetics		Pleasurable interaction, Service quality
	- Two dimensions of aesthetics (classic and expressive) are derived.						N/A

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						Intermediary Dependent Variable Dependent Variable
Lee and Kozar (2004)	√ Content Relevance		√ Navigability			√ Credibility	Consistency, Interactivity, Supportability, Simplicity, Readability, Learnability, Telepresence
	- Provide nomological network between website usability constructs and users' perceptions.						Purchase intention Purchase
Rosen and Purinton (2004)	√ Web content (text)				√ Web content (picture, graphic)		
	- Development of the Website Preference Scale (WSPS) - WSPS increases web users' likelihood of revisit.						Overall impression, Likelihood of revisit
Webb and Webb (2004)	√ Information quality (intrinsic, contextual, representation, accessibility)						Service quality (reliability, responsiveness, assurance, empathy, tangibility)
	- Development of an instrument to measure website quality.						
Bart et al. (2005)			√ Navigation		√ Graphical Presentation	√ Privacy √ Security	Brand strength, Advice, Order fulfillment, Community features, Absence of errors
	- Navigation is more important for information-intensive site. - Privacy is more significant for sites in which involvement and information risks are high.						Online trust
Green (2005)	√ Content		√ Navigability	√ Download delay		√ Design credibility	Interactivity, Responsiveness
	- Significant relationships between website usability features and web users' perceptions are found.						Trust, Perceived usefulness, Perceived ease of use, Perceived risk, Satisfaction with design Intention to transaction
Song and Zahedi (2005)	√ Purchase facilitation (detailed product description)		√ Ease of use and navigation		√ Purchase facilitation (picture)	√ Service (security, privacy)	Promotion, External interpersonal
	- Perceived existence of web design elements has significant effect on beliefs. - Found positive impacts of perceived price and service on attitude, a significant relationship between external normative and external subjective norm, and the effects of perceived self-efficacy and resource facilitation on perceived behavioral control.						Attitude, External subjective norm, Perceived behavioral control Online purchasing intention
Galletta et al. (2006)				√ Delay			Content familiarity, Site breadth
	- Direct influence of three factors on user attitude and performance. - Mediating role of attitude between three factors and behavioral intention. - Significant three way interaction between all three factors						Attitude Performance, Behavioral intention

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						<u>Intermediary Dependent Variable</u> Dependent Variable
Kang and Kim (2006)	√ Quantity of content √ Informativeness		√ Navigation Difficulty				Entertainment *Level of interest*
	- Perceived amount of website content has a positive impact under low-interest web users but not high interest users.						Attitude toward website
Lee and Kozar (2006)	√ Information quality (relevance, currency, understandability)		√ System quality (navigability, response time, security)				Service quality Vendor-specific quality
	- High quality website increases website selection and the most preferred website produce highest business performance.						Website preference, Business performance (ROA, ROE, PM)
Mithas et al. (2006-2007)	√ Website content		√ Website structure				Website functionality *Government vs. commercial domain,* *Physical goods vs. service domain,* *Information richness domain,* *Transaction richness domain*
	- Relative importance of different website features (e.g., structure, content) in influencing customer loyalty to a website varies, relying on the website's domain.						Consumer loyalty
Pavlou and Fygenson (2006)			√ Website navigability	√ Download delay			Trust, Perceived usefulness and ease of use of getting information, Time resources, Getting information skills
	(Getting information behavior) - Download delay is significantly related to attitude and controllability. - Website navigability is significantly associated with self-efficacy. - Website navigability positively influences controllability at 0.10 level.						<u>Attitude, Subjective norm, Controllability, Self-efficacy</u> Intention to get information, Getting information behavior
	√ Product diagnosticity					√ Information protection	Trust, Perceived usefulness and ease of use of purchasing, Product value, Monetary resources, Purchasing skills
	(Purchasing behavior) - Product diagnosticity is significantly associated with attitude, controllability, and self-efficacy. - Information protection positively influences controllability.						<u>Attitude, Subjective norm, Controllability, Self-efficacy</u> Intention to purchase, Purchasing behavior
Venkatesh and Ramesh (2006)	√ Content		√ Ease of Use				Promotion, Made for the Medium, Emotion
	- Generalizability of metric and instrument based on MUG in the U.S. and Finland. - Found differences in usability factors which are important in determining web versus wireless site use.						Web and wireless site use

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						<u>Intermediary Dependent Variable</u> Dependent Variable
Fang and Holsapple (2007)			√ Navigation structure				Task complexity
	- A usage-oriented hierarchy navigation is associated with higher usability than subject-oriented hierarchy navigation.						Website usability
Loiacono et al. (2007)	√ Information fit-to-task √ Tailored information		√ Intuitive operation	√ Response time	√ Visual appeal		Online completeness, Relative advantage, Ease of understanding, Innovativeness, Emotional appeal, Consistent image, Trust
	- Identifying four categories (ease of use, usefulness in gathering information, usefulness in carrying out transactions, and entertainment value) and developing 12 dimensions of website quality. - Significant impacts of response time, trust, usefulness, ease of use, and entertainment on reuse intention.						Reuse intention
Pavlou et al. (2007)	√ Product diagnosticity √ Website informativeness						Trust, Social presence Information privacy and security concerns
	- Product diagnosticity and website informativeness are important uncertainty mitigators.						<u>Perceived uncertainty,</u> Purchase intention, Actual purchase
Sargeant et al. (2007)	√ Case for support √ Education		√ Easy to Navigate			√ Accountability	Accessibility, Respect, Interaction, Customization, Empowerment
	- The number of potential donors is correlated with accessibility, accountability, education, interaction, and empowerment. - The total amount of online donations offered is correlated with accessibility, accountability, and education.						Online donation in past year, Donations via mail, Average donations, Number of new donors
Song and Zahedi (2007)	√ Information quality (understandability, relevance, usefulness, reliability, adequacy)		System quality (ease of use)			√ Structural assurance	Trust signs, Web user's propensity to trust, reputation, Positive experience
	- Dimensions of information quality and system quality are strong predictors of each trust beliefs. - Ability, benevolence, and integrity increase intention to use health infomediaries in health decisions.						<u>Perceived risk, Trust beliefs - ability, benevolence, integrity</u> Intention to use health infomediaries
Valacich et al. (2007)	√ Functional convenience (e.g., product/service information)		√ Functional convenience (e.g., ease of navigation)	√ Structural firmness (response time)	√ Representational delight (e.g., a visually appealing design)	√ Structural firmness (e.g., privacy/security policies, security seals)	
	- Examining online consumer's hierarchy of needs. - Design elements of websites have their relative value.						N/A

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						<u>Intermediary Dependent Variable</u> Dependent Variable
Waters (2007)	√ Communication (annual report, 990 form, mission statement)						Fundraising (printable receipt, shopping cart)
	- Top nonprofits' websites include annual reports, organizational goals, and mission statements. - Second-tier nonprofits tend to employ a sales approach by using eCommerce technology and terminology for online donations.						N/A
Zhou et al. (2007)			√ Navigability				
	- Development a Markov model based navigability measure.						N/A
Bansal et al. (2008)	√ Overall website information quality		√ Overall website design quality			√ Privacy policy √ Third party assurance	Reputation, Availability of company information, Experience with the website *Privacy concerns*
	- In the context of privacy, information quality and design quality are peripheral cues. - Low privacy concerns moderate the influence of information quality on trust in the finance and health websites. - Low privacy concerns moderate the relationship between website design quality and trust in all contexts (finance, health, and eCommerce). - Found a positive relationship between trust and intention to provide private information.						<u>Trust in the website</u> Private information disclosure
Chen and Lee (2008)			√ Central route website content (ease of looking for information, attractiveness, download time, privacy)				Peripheral route website content (reputation, positive mood), Utilitarian value, Hedonic value *Personality*
	- Under higher levels of agreeableness and conscientiousness, central route website content is more favorable for evoking utilitarian shopping value. - Under higher levels of emotional stability, openness, and extraversion, peripheral route website content is more important in eliciting experiential and hedonic shopping value. - Utilitarian value and hedonic value increase attitude toward the website, which in turn positively influence trust of online shopping, ultimately approach behavior. - Central route website content is positively associated with attitude toward the website while peripheral route is not.						<u>Attitude toward the website</u> <u>Trust of on line shopping</u> Approach behavior

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						Intermediary Dependent Variable Dependent Variable
Cyr (2008)	√ Information design		√ Navigation design		√ Visual design		
	- In overall model for all examined countries (Canada, Germany, and China), information design, navigation design, and visual design positively influence trust and satisfaction. - There are significant effects of trust and satisfaction on e-loyalty. - Found are no significant relationships between visual design and trust in Canada and Germany, between navigation design and trust in Germany, and between information design and trust in Germany and China.						Trust, Satisfaction E-loyalty
Lowry et al. (2008)			√ Website quality (navigability, aesthetics, and functionality)				Brand image, Brand awareness
	- Website quality and branding are strongly associated with initial trust. - Initial trusting beliefs increase initial trusting intentions.						Initial trusting beliefs Initial trusting intentions
Vance et al. (2008)			√ Navigational structure		√ Visual appeal		Institution-based trust *Culture (Uncertainty Avoidance)*
	- Navigational structure and visual appeal are significantly associated with perceived ease of use and trust. - Ease of use and institution-based trust increase trusting beliefs, which in turn positively influence intention to use mobile commerce technologies.						Perceived ease of use, Trust Intention to use mobile commerce technologies
Cyr et al. (2009)					√ Human image		*National Culture*
	- Human images with facial features are positively related to image appeal and perceived social presence, which in turn influence website trust.						Image appeal, Perceived social presence Website trust
Kim and Niehm (2009)	√ Perceived information quality		√ Ease of use			√ Trust (Keeping personal information safe)	Interactivity, Online completeness, Entertainment
	- Interactivity, online completeness, ease of use, and entertainment are positively associated with perceived information quality, while trust is not. - Perceived information quality significantly influences perceived value and loyalty intention.						Perceived value Loyalty intention of apparel retail websites
Tang (2009)	√ Information quality (sufficient, relevant, timely, useful)		√ Website design characteristics (load, responsiveness, organization, layout, ease to use, navigate)				Website cognition, Designation cognition
	- Website design characteristics are significantly associated with users' website cognition in both high and low psychologically involved people. - Information quality is significantly associated with users' website cognition in only high psychologically involved people. - Website cognition influences attitude toward website while there is no significant relationship between destination cognition and attitude toward destination.						Attitude toward website, Attitude toward destination Further information search, Travel intention

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						Intermediary Dependent Variable Dependent Variable
Parboteeah et al. (2009)	√ Information fit-to-task		√ Ease of navigation	√ Download delay	√ Visual appeal	√ Security	
	- Task relevant cues (e.g., information fit-to-task) and mood relevant cues (e.g., visual appeal) are directly associated with perceived usefulness and perceived enjoyment. - Found significant effects of perceived usefulness and perceived enjoyment on urge to buy impulsively.						Perceived usefulness, Perceived enjoyment Urge to buy impulsively
Zo and Ramamurthy (2009)	√ Information content quality		√ Functional quality (navigability)	√ Functional quality (download delay)	√ Information presentation quality	√ Service quality (security)	Indirect and direct awareness, Price sensitivity
	- There are differential influences of price sensitivity and dimensions of website quality on consumers' website choice.						Consumer website choice behavior
Deng and Poole (2010)					√ Visual complexity and order		*Metamotivational state*
	- The visual complexity and order design features are significantly associated with people's emotional responses.						Arousal, Pleasantness Approach-avoidance behavior toward website
Kim and Tadisina (2010)					√ Appearance/ attractiveness of website quality		Company profile, Third-party support, Propensity to trust
	- Website quality, company profile, third-party support, and propensity to trust positively influence initial trust.						Competence trust, Goodwill trust
Wells et al. (2011a)			√ Navigability		√ Visual appeal	√ Security	*Impulsiveness*
	- Website quality is an environmental cue that affects the likelihood that a consumer experiences an urge to buy impulsively. - There is a moderating effect of consumer's impulsiveness.						Urge to buy impulsively
Wells et al. (2011b)			√ Navigability	√ Download delay	√ Visual appeal	√ Security	*Product asymmetries of information, Signal credibility*
	- Website quality is a potential signal of perceived product quality. - There are moderating effects of product asymmetries of information and signal credibility between website quality and perceived product quality. - Perceived product quality is positively associated with online purchasing intention.						Perceived product quality Intention to purchase from website

Reference	Information Content Quality		System Quality				Other Key Variable *Moderator*
	Financial	Performance	Navigability	Download Delay	Visual Aesthetics	Security	
	Key Finding						Intermediary Dependent Variable Dependent Variable
Lee et al. (2012)				√ Perceived waiting time	√ Filler interfaces with visual elements (text, image)		Focused immersion (FI), Temporal dissociation (TD), Heightened enjoyment (HE)
	- Websites with filler interfaces generate more FI and TD than websites without filler interfaces. - Filler interfaces with visual elements create higher FI and TD than no-filler interface. - Filler interfaces with relevant design characteristics produce higher FI, TD, and HE than filler interfaces with generic design characteristics. - Three dimensions of cognitive absorption (FI, TD, and HE) significantly reduce PWT. - PWT negatively influences cognitive appraisals and affective appraisals of websites, which in turn increase website usage intention. - Affective appraisals significantly increase cognitive appraisals.						Perceived waiting time (PWT) Affective appraisals, Cognitive Appraisals Use intention
Campbell et al. (2013)					√ Visual appeal		Competent behavior, Relationship compatibility, Relationship receptiveness
	- Found significant effects of visual appeal, competent behavior, relationship compatibility, relationship receptiveness on perceived relationship rewards. - Perceived relationship rewards positively influence attraction toward a website, which in turn affect intention to use a website.						Perceived relationship rewards, attraction toward a website Intention to use a website
Xu et al. (2013)	√ Information quality (IQ) (Completeness, Accuracy, Format, Currency)		√ System quality (SQ) (Reliability, Flexibility Accessibility Timeliness)				Service quality (SerQ) (Tangibles, Responsiveness, Empathy, Service Reliability, Assurance)
	- Found that SQ is positively influences IQ, which in turn affects SerQ. - Not found a significant relationship between SQ and SerQ.						Information satisfaction, System satisfaction, Service satisfaction Usefulness, Ease of use, Enjoyment Attitude Intention
Saxton et al. (Forthcoming)	√ Financial index	√ Perform-ance index					Price, Fundraising, Age
	- Nonprofit website disclosure of financial information (annual report, audited financial statement, IRS Form 990, etc) and performance information (mission statement, community impact) positively influence the amount of charitable contribution. - Financial information is dominant over performance information.						Charitable contributions a nonprofit organization receives

Because we did not find research examining *donation assistance information*, this table does not include donation assistance information.

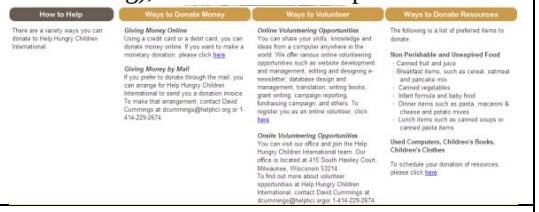
Appendix A3: Measurement Items

Performance Information (Source: McKinney et al. 2002; Zo and Ramamurthy 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		Factor Loading
PI1	This charity's mission statement is useful to understand its mission, vision, and values.	.91
PI2	This charity's mission statement seems to be timely and current.	.88
PI3	This charity website provides reliable mission statement in terms of its mission, vision, and values.	.92
PI4	This website's mission statement information seems sufficient.	.87
Financial Information (Source: McKinney et al. 2002; Zo and Ramamurthy 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
FI1	This charity website provides useful financial information.	.90
FI2	This charity website provides timely/up-to-date financial information.	.87
FI3	This charity website provides reliable financial information.	.94
FI4	This charity website provides sufficient amount of financial information.	.90
Donation Information (Source: McKinney et al. 2002; Zo and Ramamurthy 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
DI1	This charity website provides useful information to assist me in making money, time and resource donation.	.92
DI2	This charity website provides timely and current information to assist me in making money, time and resource donation.	.95
DI3	This charity website provides reliable information to assist me in making money, time and resource donation.	.96
DI4	This charity website provides sufficient information to assist me in making money, time and resource donation.	.95
Information Content Quality (Source: Wells et al. 2011b) Seven-point scales anchored with "very low quality" and "very high quality"		
ICQ1	In sum, how would you rate the information content quality of the charity website you just now interacted with?	.97
ICQ2	All in all, I would rate the information content quality of the charity website that I just now interacted with as being	.96
ICQ3	How would you rate the overall information content quality of the charity website that you just now interacted with?	.97
Navigability (Source: Salisbury et al. 2001; Wells et al. 2011b) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
NAV1	Navigating on this charity website is easy for me.	.83
NAV2	I find that my interaction with this charity website is clear and understandable.	.88
NAV3	It is easy for me to become skillful at navigating the pages of this charity website.	.85
Download Delay (Source: Loiacono et al. 2007; Wells et al. 2011b) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
DD1	When I use this charity website, there is very little time between my actions and the website's responses.	.89
DD2	The charity website loads slowly.(R)	.76
DD3	This charity website takes very little time to load.	.71
Visual Aesthetics (Source: Loiacono et al. 2007; Wells et al. 2011b) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
VA1	This charity website is visually pleasing.	.96
VA2	This charity website displays visually aesthetic/pleasing design.	.95
VA3	This charity website is visually appealing.	.95

Security (Source: Pavlou 2001; Wells et al. 2011b) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
SEC1	I am confident that the information I provide during my online interaction will not reach inappropriate parties during storage in this charity's databases.	.89
SEC2	I believe inappropriate parties cannot deliberately observe the information I provide during my online interaction at this charity.	.90
SEC3	In my opinion, inappropriate parties will not collect and store the information I provide during my interaction with this charity website.	.91
System Quality (Source: Everard and Galletta 2005; Wells et al. 2011b) Seven-point scales anchored with "very low quality" and "very high quality"		
SQ1	In sum, how would you rate the system quality of the charity website that you just now interacted with?	.96
SQ2	All in all, I would rate the system quality of the charity website that I just now interacted with as being	.97
SQ3	How would you rate the overall system quality of the charity website that you just now interacted with?	.98
Personal Involvement with Charity Giving (Source: Bennett 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
PICG1	Giving to charity means a great deal to me.	.81
PICG2	Giving to charity is a vitally important part of my life.	.82
PICG3	I am deeply interested in the work of the charities I support even if I am not able to make a donation (of money, time, or resources).	.77
PICG4	I feel heavily involved with the good causes to which I donate.	.74
PICG5	I am fascinated by the work of the charities I support.	.81
Helper's Giving (Source: Bennett 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
HH1	Donating to charity gives me a lot of pleasure.	.70
HH2	I would feel guilty if I did not give money or volunteer to charity.†	[.56]
HH3	I feel uplifted after making a donation to charity.	.86
HH4	I obtain deep inherent satisfaction from giving to charity.	.91
HH5	Giving to charity makes my own life (feel) better.	.88
Attitude toward the Charity Website (Source: Ajzen 1991) Seven-point semantic scales		
ACW1	This charity website is (bad/good).	.93
ACW2	My feeling toward this charity website is (negative/positive).	.96
ACW3	My attitude toward this charity website is (unfavorable/favorable).	.96
Willingness to Donate Money (Source: Kim and Son 2009; Van Slyke et al. 2006) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
WDM1	I intend to donate money to this charity website.	.95
WDM2	I predict that I will donate money to this charity website.	.96
WDM3	I am willing to donate money to this charity website.	.90
Willingness to Donate Time (Source: Kim and Son 2009; Van Slyke et al. 2006) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
WDT1	I intend to donate (or volunteer) my time on this charity website.	.94
WDT2	I predict that I will donate (or volunteer) my time on this charity website.	.96
WDT3	I am willing to donate (or volunteer) my time on this charity website.	.92

Willingness to Donate Resources (Source: Kim and Son 2009; Van Slyke et al. 2006) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
WDR1	I intend to donate my resources (e.g., used books, clothes, phone, food, footwear, electronics…) from this charity website.	.97
WDR2	I predict that I will donate my resources (e.g., used books, clothes, phone, food, footwear, electronics…) from this charity website.	.97
WDR3	I am willing to donate my resources (e.g., used books, clothes, phone, food, footwear, electronics…) from this charity website.	.86
Control Variables		
Attitude toward <u>Trial Website</u> (Source: Ajzen 1991) *Seven-point semantic scales		
ATW1	This charity website is (bad/good).	.89
ATW2	My feeling toward this charity website is (negative/positive).	.92
ATW3	My attitude toward this charity website is (unfavorable/favorable).	.94
Value of the Web as an Online Donation Platform (Source: Bennett 2009; Choudhury and Karahanna 2008) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
VW1	One of the advantages of donating on the web is the absence of appeal pressure.†	[.36]
VW2	Donating on the web saves time.	.87
VW3	Donating on the web saves extra costs.	.69
VW4	Donating on the web is very convenient.	.87
Past Donation Behaviors Have you engaged in charitable giving to any charity organization(s) this past year?		
Frequency of Visiting of Charity Websites Have you visited website of any charity organizations this past year?		
Involvement with Child Relief and Development Issues How important to you is the issue of child relief and development (e.g., help children in developing countries)		
Importance of Charity's Reputation How important to you is the reputation of charity organizations?		
Anticipated Regret of Playing Lottery (<u>Marker Variable</u>) (Source: Sheeran and Orbell 1999)		
AR1	If I missed playing the national lottery for one week, I would regret it.	
AR2	Not playing the national lottery for one week would upset me.	
(R) Reverse coded; † Removed after initial CFA		

Appendix A4: Website Manipulations and Screenshots

		Low [Finished Site]	Medium [Trial Site]	High [Finished Site]
Information Content Quality	Performance Information	• Organization's mission is presented. 	• Organization's mission and vision are presented. 	• Organization's mission, vision, and values are presented. 
	Financial Information	• A PDF file is presented via the Annual Report 2011 link. 	• Two PDF files are presented via the Annual Report 2011 and IRS Form 990 2010 links. 	• Three PDF files are presented via the Annual Report 2011, IRS Form 990 2010, and Audited Financial Statement 2011 links. 
	Donation Information	• Instructions on how to donate money online are presented. 	• Instructions on how to donate money (online and mail) and time (online volunteering) are presented. 	• Detailed instructions on how to donate money (online and mail), time (online and onsite volunteering), and resources are presented. 
System Quality	Download Delay	• A 4-second waiting page is presented to access any page on the website. 	• A 2.5-second waiting page is presented to access any page on the website. 	• No download delay is coded. N/A

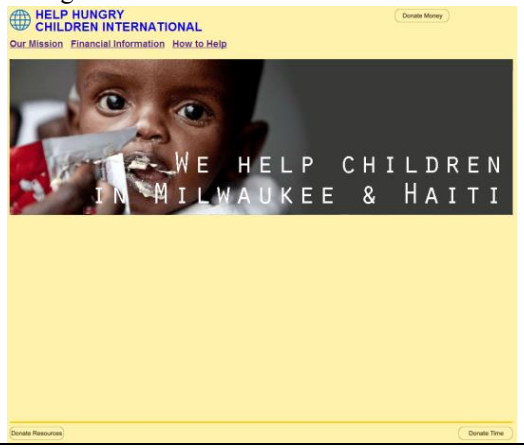
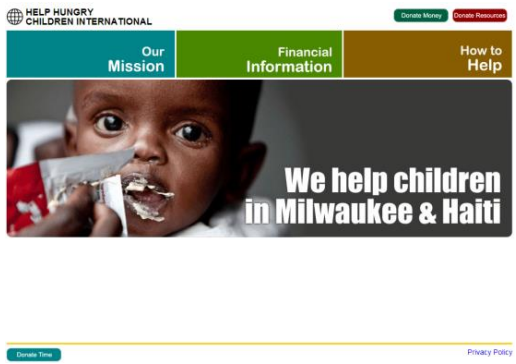
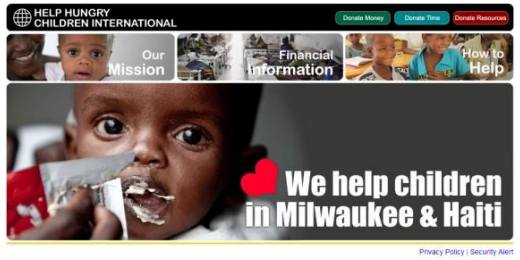
		Low [Finished Site]	Medium [Trial Site]	High [Finished Site]
System Quality	Navigability	• Three donation links are separately placed. • Long scroll is needed to find information. 	• One donation link is separated. • Short scroll is needed to find information. 	• Three donation links are clustered together. • No scroll is need. 
	Visual Aesthetics	• Unattractive aesthetics in the design of the website. Only text lines are used. 	• Moderately attractive website. Only block buttons are used. 	• Attractive aesthetic design in terms of fonts, colors, and pictures. 
	Security	• Privacy policy is presented through the Privacy Policy link. • NO seals are present on the website. Privacy Policy	• Privacy policy is presented through the Privacy Policy link. • TWO security and privacy seals are present on the website. Privacy Policy online privacy alliance TRUSTe	• Security and privacy policies are presented through the Security Alert and Privacy Policy links. • FIVE security and privacy seals are present on the website. Privacy Policy | Security Alert online privacy alliance TRUSTe McAfee SECURE ACCREDITED BUSINESS

Image Source: SOS Children's Villages UK (www.soschildrensvillages.org.uk); UNICEF UK (www.unicef.org.uk)

Appendix A5: Anchoring Approach

As mentioned earlier in the study, the trial site served as a reference/anchoring point, and IS researchers employing controlled lab experiments have not traditionally used this *anchoring approach*. The assumption of manipulation check without an anchoring stimulus is that respondents can cognitively make a distinction between high quality and low quality with respect to information content and system features.

We conducted an experiment without an anchoring site. The results of one-way ANOVA are provided in Table A2. The results indicate that respondents have serious difficulties in discriminating donation information and navigability across four treatments. Perdue and Summers (1985) pointed out that "when multiple factors are involved, directional t-tests and/or one-way ANOVA followed by multiple contrasts may not be sufficient for adequately analyzing the manipulation and confounding checks" (p. 322). Thus, manipulation checks regarding high and low quality were performed by first running an ANOVA for ICQ (performance information, financial information, and donation information) and SQ (navigability, download delay, visual aesthetics, and security) where the treatment was the independent variable (IV) and the dependent variable (DV) was the scale measuring perceptions of that treatment. In addition, a more rigorous form of manipulation check was also performed as recommended by Perdue and Summers (1986) and recently used by Wells et al. (2011b) by running ANOVAs in which both treatments (ICQ and SQ) were included as main effects and the DV was the scale measuring perceptions of each treatment. This approach was used to insure that each treatment effect remained significant in the presence of the other treatments. As shown in

Table A2, the results suggest problems in identifying donation information and relatively weak discriminating capability.

Table A2. Treatment Descriptive Statistics and Manipulation Checks

Descriptive Statistics	Experiment without an Anchoring Site (N=120)				ANOVA	
	A: IHSH (N=30)	**B**: IHSL (N=30)	**C**: ILSH (N=30)	**D**: ILSL (N=30)		
Perceived (self-reported)	H:PI H:NAV H:FI H:DD H:DI H:VA **H:ICQ** H:SEC **H:SQ**	H:PI L:NAV H:FI L:DD H:DI L:VA **H:ICQ** L:SEC **L:SQ**	L:PI H:NAV L:FI H:DD L:DI H:VA **L:ICQ** H:SEC **H:SQ**	L:PI L:NAV L:FI L:DD L:DI L:VA **L:ICQ** L:SEC **L:SQ**	F	Sig
PI	5.67	5.96	5.79	4.84	6.09	.001
FI	5.69	5.94	5.36	4.95	2.89	.039
DI	5.54	5.82	5.85	5.36	1.07	.360
ICQ	5.38	5.32	5.14	4.61	2.29	.083
Weighed ICQ[a]	4.10	4.30	4.12	3.70	3.06	.031
NAV	6.49	6.09	6.40	5.96	1.83	.145
DD	6.03	5.32	6.02	5.02	3.74	.013
VA	5.53	3.99	5.48	3.70	15.58	.000
SEC	5.14	4.28	5.14	4.57	2.73	.047
SQ	5.59	4.84	5.62	4.69	4.06	.009
Weighted SQ[a]	3.73	3.19	3.71	3.10	9.25	.000

Manipulation Checks			Perceived (self-reported)								
			PI	FI	DI	**ICQ**	NAV	DD	VA	SEC	**SQ**
A	ICQ (high/low)	F	**5.59**	**6.88**	**.109**	**4.14**					
		Sig	**.020**	**.010**	**.742**	**.044**					
	SQ (high/low)	F					**5.21**	**10.70**	**46.52**	**7.66**	**12.14**
		Sig					**.024**	**.001**	**.000**	**.007**	**.001**
B	ICQ (high/low)	F	**5.66**	**6.82**	**.11**	**4.17**	.36	.35	.50	.31	.06
		Sig	**.019**	**.010**	**.743**	**.044**	.550	.554	.482	.582	.801
	SQ (high/low)	F	2.49	.10	.226	1.62	**5.18**	**10.64**	**46.32**	**7.62**	**21.11**
		Sig	.117	.756	.636	.206	**.025**	**.001**	**.000**	**.007**	**.007**

[a] Weighted ICQ and Weighted SQ were calculated using factor weights for additional information.
A: ANOVAs with one treatment and one DV
B: More rigorous ANOVAs with both treatments and one DV

Difficulties of identifying multi-attribute website quality could be triggered by the halo effect. Based on the halo effect in individual perception, De Angeli et al. (2006) found that user perception of information quality is influenced by the aesthetic quality of the website interface. Similar phenomenon to the finding of De Angeli et al. was found in our experiment without the anchoring site. A comparison of treatments B and C provided non-significant difference (5.32_B versus 5.14_C) in terms of perceived ICQ while it offered significant difference (4.84_B versus 5.78_C) in terms of perceived SQ, suggesting that

respondents' perception of ICQ is affected by their perception of SQ. Also, the results suggested overall SQ is mainly judged by visual aesthetics. This demonstrates the importance of employing the anchoring approach, which we did for subsequent runs.

Appendix A6: Descriptive Statistics and Validation

Table A3. Exploratory Factor Analysis and Reliability

Items	ICQ Dimensions (1st order constructs)			ICQ	SQ Dimensions (1st order constructs)				SQ
	MI	FI	DI		NAV	DD	VA	SEC	
PI1	**.837**	.290	.175	.174	.179	-.038	.163	.133	.087
PI2	**.785**	.279	.212	.102	.217	.004	.130	.239	.176
PI3	**.777**	.286	.243	.338	.129	-.026	.143	.099	.055
PI4	**.786**	.231	.273	.264	.124	.054	.126	.188	.027
FI1	.270	**.790**	.195	.315	.057	.095	.132	.088	.057
FI2	.260	**.786**	.207	.166	.178	.090	.121	.101	.241
FI3	.238	**.793**	.302	.088	.162	.096	.117	.166	.079
FI4	.327	**.718**	.288	.269	.132	.046	.114	.074	.077
DI1	.265	.314	**.763**	.171	.179	.061	.116	.201	.158
DI2	.218	.235	**.782**	.166	.244	.089	.163	.250	.196
DI3	.265	.299	**.760**	.121	.195	.040	.158	.292	.151
DI4	.243	.261	**.802**	.180	.211	.054	.136	.180	.157
ICQ1	.254	.300	.192	**.785**	.112	.107	.136	.162	.259
ICQ2	.325	.269	.189	**.786**	.145	.089	.154	.144	.252
ICQ3	.342	.281	.195	**.765**	.145	.109	.195	.118	.252
NAV1	.145	.131	.143	.109	**.861**	.190	.167	.116	.182
NAV2	.195	.146	.228	.185	**.814**	.144	.187	.149	.199
NAV3	.196	.158	.246	.039	**.829**	.157	.135	.175	.128
DD1	.055	.058	.116	.102	.421	**.734**	.108	.129	.118
DD2	-.005	-.044	-.026	.079	.082	**.853**	.126	.044	.276
DD3	-.047	.207	.075	.032	.069	**.847**	.180	.122	.044
VA1	.168	.150	.146	.122	.177	.267	**.806**	.229	.193
VA2	.185	.155	.199	.169	.191	.187	**.808**	.202	.238
VA3	.215	.175	.154	.185	.249	.166	**.702**	.332	.261
SEC1	.180	.092	.195	.091	.117	.085	.214	**.858**	.165
SEC2	.140	.085	.212	.119	.131	.121	.160	**.901**	.115
SEC3	.156	.147	.195	.104	.155	.104	.154	**.876**	.084
SQ1	.113	.159	.240	.298	.260	.219	.269	.173	**.747**
SQ2	.104	.169	.220	.252	.241	.274	.255	.189	**.765**
SQ3	.134	.162	.220	.287	.232	.257	.272	.190	**.758**
Cronbach's Alpha	.96	.94	.97	.98	.95	.84	.95	.97	.99

The results of EFA indicated that all predefined indicators of each construct loaded appropriately, demonstrating initial discriminant validity of all nine constructs considered here.

As we did with the experiment without the anchoring site, manipulation checks were performed by first running an ANOVA for ICQ and SQ where the treatment was the IV and the DV was the scale measuring perceptions of that treatment for Experiments 1

and 2. As before, the more rigorous form of manipulation check was also performed as recommended by Perdue and Summers (1986) and recently used by Wells et al. (2011b) by running ANOVAs in which two treatments (ICQ and SQ) were included as main effects and the DV was the scale measuring perceptions of each treatment to insure that each treatment effect remained significant in the presence of the other treatments. As shown in Tables A3 and A4, the manipulations were significant with a p-value ≤ .001, and the results indicate that showing anchoring site is a reliable method to help participants differentiate attributes of website quality.

Table A3. Treatment Descriptive Statistics and Manipulation Checks for Experiment 1

Descriptive Statistics	Experiment 1 (N=143)				ANOVA	
	A: IHSH (N=33)	**B**: IHSL (N=37)	**C**: ILSH (N=37)	**D**: ILSL (N=36)		
Perceived (self-reported)	H:PI H:NAV H:FI H:DD H:DI H:VA **H:ICQ** H:SEC **H:SQ**	H:PI L:NAV H:FI L:DD H:DI L:VA **H:ICQ** L:SEC **L:SQ**	L:PI H:NAV L:FI H:DD L:DI H:VA **L:ICQ** H:SEC **H:SQ**	L:PI L:NAV L:FI L:DD L:DI L:VA **L:ICQ** L:SEC **L:SQ**	F	Sig
PI	6.07	5.24	4.72	4.35	9.65	.000
FI	6.14	5.28	4.36	4.07	18.48	.000
DI	6.26	5.18	5.14	4.42	10.49	.000
ICQ	6.05	5.01	4.73	3.65	20.86	.000
Weighed ICQ[a]	4.86	4.13	3.73	3.38	16.37	.000
NAV	6.51	5.77	6.36	5.35	7.12	.000
DD	5.76	4.63	5.54	4.31	7.40	.000
VA	5.68	3.49	4.82	3.07	23.70	.000
SEC	5.11	4.31	5.15	4.06	3.72	.013
SQ	5.87	4.84	5.67	3.63	22.28	.000
Weighted SQ[a]	3.81	2.99	3.61	2.76	17.10	.000

Manipulation Checks			Perceived (self-reported)								
			PI	FI	DI	**ICQ**	NAV	DD	VA	SEC	**SQ**
A	ICQ (high/low)	F	**20.82**	**44.64**	**14.17**	**32.63**					
		Sig	**.000**	**.000**	**.000**	**.000**					
	SQ (high/low)	F					**18.83**	**21.20**	**61.20**	**10.92**	**45.55**
		Sig					**.000**	**.000**	**.000**	**.001**	**.000**
B	ICQ (high/low)	F	**22.42**	**47.72**	**16.70**	**36.70**	2.01	1.112	6.69	.13	3.14
		Sig	**.000**	**.000**	**.000**	**.000**	.159	.294	.011	.721	.079
	SQ (high/low)	F	6.35	6.90	15.28	12.34	**19.38**	**21.53**	**65.06**	**10.92**	**47.04**
		Sig	.013	.010	.000	.001	**.000**	**.000**	**.000**	**.001**	**.000**

[a] Weighted ICQ and Weighted SQ were calculated using factor weights for additional information.
A: ANOVAs with one treatment and one DV
B: More rigorous ANOVAs with both treatments and one DV

Table A4. Treatment Descriptive Statistics and Manipulation Checks for Experiment 2

Descriptive Statistics	Experiment 2 (N=536)				ANOVA	
	A: IHSH (N=136)	**B**: IHSL (N=136)	**C**: ILSH (N=136)	**D**: ILSL (N=136)		
Perceived (self-reported)	H:PI H:NAV H:FI H:DD H:DI H:VA **H:ICQ** H:SEC **H:SQ**	H:PI L:NAV H:FI L:DD H:DI L:VA **H:ICQ** L:SEC **L:SQ**	L:PI H:NAV L:FI H:DD L:DI H:VA **L:ICQ** H:SEC **H:SQ**	L:PI L:NAV L:FI L:DD L:DI L:VA **L:ICQ** L:SEC **L:SQ**	F	Sig
PI	6.01	5.93	4.94	4.54	47.25	.000
FI	6.07	6.04	5.01	4.51	54.00	.000
DI	6.10	5.85	5.33	4.59	33.67	.000
ICQ	5.98	5.62	4.97	4.18	49.22	.000
Weighed ICQ[a]	4.86	4.76	4.09	3.65	56.30	.000
NAV	6.39	6.16	6.20	5.42	23.52	.000
DD	5.55	4.76	5.36	4.24	20.57	.000
VA	5.58	4.29	5.29	3.22	72.48	.000
SEC	5.38	5.13	5.28	4.40	13.14	.000
SQ	5.86	5.27	5.47	4.20	42.93	.000
Weighted SQ[a]	3.62	3.17	3.50	2.68	56.10	.000
ACW	5.90	5.42	5.10	4.05	44.04	.000
WDM[b]	3.76	3.63	3.30	3.01	6.17	.000
WDT[b]	3.76	3.76	3.37	3.04	6.14	.000
WDR[b]	4.45	4.19	3.90	3.37	9.53	.000
ATW[c]	4.75	4.90	4.79	4.80	.30	.826
PICG[c]	4.40	4.63	4.45	4.30	1.67	.172
HH[c]	4.73	4.94	4.86	4.89	.70	.554

Manipulation Checks			Perceived (self-reported)								
			PI	FI	DI	**ICQ**	NAV	DD	VA	SEC	**SQ**
A	ICQ (high/low)	F	**133.14**	**147.85**	**75.74**	**112.33**					
		Sig	**.000**	**.000**	**.000**	**.000**					
	SQ (high/low)	F					**30.28**	**52.20**	**167.61**	**20.78**	**67.05**
		Sig					**.000**	**.000**	**.000**	**.000**	**.000**
B	ICQ (high/low)	F	**134.16**	**149.39**	**78.22**	**117.55**	27.8	7.25	28.47	11.24	44.8
		Sig	**.000**	**.000**	**.000**	**.000**	.000	.007	.000	.001	.000
	SQ (high/low)	F	5.11	6.56	18.49	25.81	**31.8**	**52.82**	**176.23**	**21.18**	**72.55**
		Sig	.024	.011	.000	.000	**.000**	**.000**	**.000**	**.000**	**.000**

[a] Weighted ICQ and Weighted SQ were calculated using factor weights for additional information.
[b] Dimensions of Willingness to Donate to the Charity Website
[c] Expected the means of these variables to not be significantly different across the four website treatments confirming absence of any *assignment bias* across the four different conditions of experimental stimuli.
A: ANOVAs with one treatment and one DV
B: More rigorous ANOVAs with both treatments and one DV

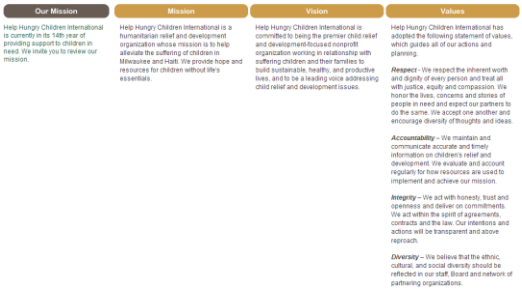
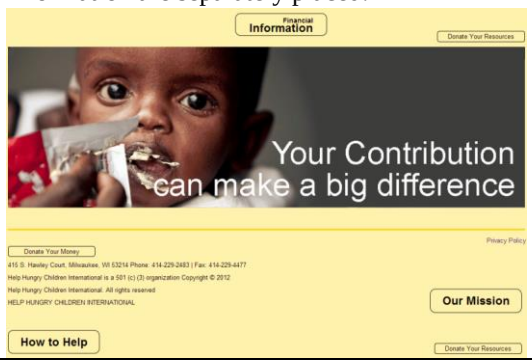
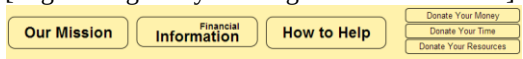
ESSAY 2—APPENDIX B1: Measurement Items

Mission Information (Source: McKinney et al. 2002; Zo and Ramamurthy 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		Factor Loading
MI1	This charity's mission statement is useful to understand its mission, vision, and values.	.87
MI2	This charity's mission statement seems to be timely and current.	.77
MI3	This charity website provides reliable mission statement in terms of its mission, vision, and values.	.90
MI4	This website's mission statement information seems sufficient.	.87
Financial Information (Source: McKinney et al. 2002; Zo and Ramamurthy 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
FI1	This charity website provides useful financial information.	.86
FI2	This charity website provides timely/up-to-date financial information.	.77
FI3	This charity website provides reliable financial information.	.88
FI4	This charity website provides sufficient amount of financial information.	.87
Donation Assistance Information (Source: McKinney et al. 2002; Zo and Ramamurthy 2009) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
DI1	This charity website provides useful information to assist me in making money, time and resource donation.	.89
DI2	This charity website provides timely and current information to assist me in making money, time and resource donation.	.85
DI3	This charity website provides reliable information to assist me in making money, time and resource donation.	.87
DI4	This charity website provides sufficient information to assist me in making money, time and resource donation.	.89
Information Content Quality (Source: Wells et al. 2011b) Seven-point scales anchored with "very low quality" and "very high quality"		
IQ1	In sum, how would you rate the information content quality of the charity website you just now interacted with?	.94
IQ2	All in all, I would rate the information content quality of the charity website that I just now interacted with as being	.94
IQ3	How would you rate the overall information content quality of the charity website that you just now interacted with?	.94
Navigability (Source: McKnight et al. 2002) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
NAV1	It is easy to find the information I wanted.	.82
NAV2	The structure and contents of this charity website are easy to understand.	.91
NAV3	The organization of the contents of this charity website makes it easy for me to know where I am when navigating it.	.90
Download Speed (Source: Loiacono et al. 2007; Wells et al. 2011b) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
DS1	When I use this charity website, there is very little time between my actions and the website's responses.	.93
DS2	The charity website loads fast.	.93
DS3	This charity website takes very little time to load.	.94

Visual Aesthetics (Source: Loiacono et al. 2007; Wells et al. 2011) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
VA1	This charity website is visually pleasing.	.96
VA2	This charity website displays visually aesthetic/pleasing design.	.95
VA3	This charity website is visually appealing.	.96
Security (Source: Pavlou 2001; Wells et al. 2011b) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
SEC1	I am confident that the information I provide during my online interaction will not reach inappropriate parties during storage in this charity's databases.	.94
SEC2	I believe inappropriate parties cannot deliberately observe the information I provide during my online interaction at this charity.	.91
SEC3	In my opinion, inappropriate parties will not collect and store the information I provide during my interaction with this charity website.	.94
System Quality (Source: Everard and Galletta 2005; Wells et al. 2011b) Seven-point scales anchored with "very low quality" and "very high quality"		
SQ1	In sum, how would you rate the system quality of the charity website that you just now interacted with?	.97
SQ2	All in all, I would rate the system quality of the charity website that I just now interacted with as being	.95
SQ3	How would you rate the overall system quality of the charity website that you just now interacted with?	.96
Reputation (Source: Ray et al. 2011) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
REP1	This charity website has a reputation for being honest.	.92
REP2	This charity website has a reputation being fair.	.92
REP3	This charity website is known to be dependable.	.90
REP4	This charity website has a reputation for being donor-oriented.	.80
REP5	This charity website has a good reputation.	.90
Attitude toward Donation to the Charity Website (Source: Ajzen 1991) Seven-point semantic scales		
For me, donating (money, time, resources) to this charity website is:		
AD1	(bad - good)	.92
AD2	(foolish - wise)	.93
AD3	(undesirable - good)	.86
Intention to Donate to the Charity Website (Source: Kim and Son 2009; Van Slyke et al. 2006) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
INT1	I intend to donate (money, time, resources) to this charity website.	.95
INT2	I predict that I will donate to this charity website.	.95
INT3	I am willing to donate to this charity website.	.85
Attitude toward Online Donation (Source: Ajzen 1991) Seven-point semantic scales		
For me, donating online to charities is:		
AOD1	(bad - good)	.88
AOD2	(foolish - wise)	.90
AOD3	(undesirable - good)	.86

Web Skills (Source: Lee and Chang 2011) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
WS1	I am very skilled at using the web.	.90
WS2	I know how to find what I want on the web.	.84
WS3	I know more about using the web than most people I know.	.79
Involvement with Child Relief and Development Issues Seven-point scales anchored with "strongly disagree" and "strongly agree"		
INV1	In general, I have strong interest in the issue of child relief and development (e.g., helping children in developing countries)	.91
INV2	The issue of child relief and development is very important to me.	.97
INV3	The issue of child relief and development matters a lot to me.	.96
Past Donation Behaviors Have you engaged in charitable giving to any charity organization(s) this past year? (Money, Time, Resources)		
Importance of Charity's Reputation How important to you is the reputation of charity organizations?		
Risk Perception (Marker Variable) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
RP1	Compared to other individuals that I know, I am usually more willing to take on risky situations.	
RP2	Compared to other individuals that I know, I am usually more willing to take on uncertain environments.	

Appendix B2: Website Manipulations and Sample Screenshots

		Low	High
Information Content Quality	Mission Information	• Organization's mission is presented. (59 words) 	• Organization's mission, vision, and values are presented. (257words) 
	Financial Information	• A non-updated PDF file is presented via the Audited Financial Statement 2011 link. [Content in Audited Financial Statement 2011 is same as that in 2013] 	• Three updated PDF files are presented via the Annual Report 2013, IRS Form 990 2012, and Audited Financial Statement 2013 links. 
	Donation Information	• Instructions on how to donate money online are presented. (45 words) 	• Detailed instructions on how to donate money (online and mail), time (online and onsite volunteering), and resources are presented. (270 words) 
System Quality	Navigability	• Three donation links are separately placed. • Mission, financial, and donation assistant information are separately placed. 	• Three donation links are clustered together. • Mission, financial, and donation assistant information are clustered together.  [High Navigability and High Visual Aesthetics]  [High Navigability and Low Visual Aesthetics]
	Download Speed	• A 4-second waiting page is presented to access any page on the website. **Now Loading**	• No download delay is coded. N/A

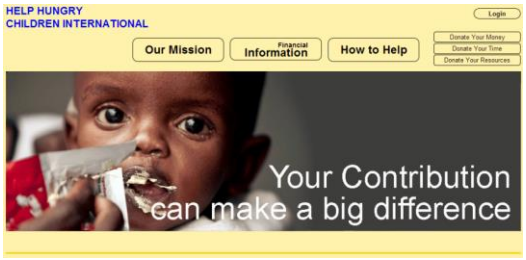
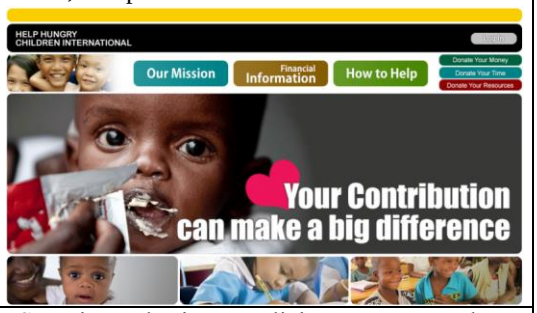
		Low	High
System Quality	Visual Aesthetics	• Unattractive aesthetics in the design of the website. 	• Attractive aesthetic design in terms of fonts, colors, and pictures. 
	Security	• Privacy policy is presented through the Privacy Policy link. • Very short privacy policy is presented (33 words) • NO seal is present on the website.  Privacy policy 	• Security and privacy policies are presented through the Security Alert and Privacy Policy links. • Detailed privacy policy is presented (510 words). • FIVE security and privacy seals are present on the website.  Privacy Policy  Security Alert 

Image Source: SOS Children's Villages UK (www.soschildrensvillages.org.uk); UNICEF UK (www.unicef.org.uk)

ESSAY 3—Appendix C1: Measurement Items

		Factor Loading
Manipulation Check: Charity Appeals I believe that the appeals made on the ***main part*** of this charity website indicate benefit being realized for		
CA1	persons **making** donation or **providing** help (i.e., donors)**.**	
CA2	persons **receiving** donation or help (i.e. donees).	
Manipulation Check: Images on Donation Link The human images displayed on the ***links*** of this charity website indicates		
IMG1	persons **making** donation or **providing** help (i.e., donors)**.**	
IMG2	persons **receiving** donation or help (i.e. donees).	
Altruism (Source: Peddibhotla and Subramani 2007; Penner et al. 1995) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
ALT1	I empathize with people who are looking for help.	
ALT2	I am genuinely concerned about people who may need my help.	
ALT3	I feel it is important to help others.	
ALT4	I generally feel pity and empathy for people who suffer.	
ALT5	I willingly help others who face problems.	
Schema Congruity Seven-point scales anchored with "strongly disagree" and "strongly agree" The appeals made on the ***main part*** of this charity website		
SC1	reflect what I believe is important in making a donation.	.87
SC2	are consistent with the values I have in making a donation.	.92
SC3	fit with what I expect in making a donation.	.86
SC4	match with the reason I have in donating to charity.	.89
Visual Consistency Seven-point scales anchored with "strongly disagree" and "strongly agree" The appeals made on the ***main part*** and images displayed on the ***links*** of this charity website		
VC1	match each other	.86
VC2	have fit with each other	.89
VC3	are consistent	.89
VC4	are congruent	.72
Warmth (Source: Aaker et al. 2010) Seven-point scales anchored with "strongly disagree" and "strongly agree" In general, I believe that *Help Hungry Children International*'s website is		
W1	warm	.91
W2	kind	.94
W3	generous	.82
Competence (Source: Aaker et al. 2010) Seven-point scales anchored with "strongly disagree" and "strongly agree" In general, I believe that *Help Hungry Children International*'s website is		
C1	competent	.87
C2	effective	.92
C3	efficient	.92
Attitude toward Donation to the Charity Website (Source: Ajzen 1991) Seven-point semantic scales For me, donating (money, time, resources) to this charity website is:		
ATT1	(bad – good)	.90
ATT2	(foolish – wise)	.86
ATT3	(undesirable – desirable)	.88

Intention to Donate to the Charity Website (Source: Ajzen 1991) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
INT1	I intend to donate (money, time, resources) to this charity website.	.95
INT2	I predict that I will donate to this charity website.	.97
INT3	I am willing to donate to this charity website.	.85
Involvement with Child Relief and Development Issues Seven-point scales anchored with "strongly disagree" and "strongly agree"		
INV1	In general, I have strong interest in the issue of child relief and development (e.g., helping children in developing countries).	.87
INV2	The issue of child relief and development is very important to me.	.98
INV3	The issue of child relief and development matters a lot to me.	.95
Attitude toward Online Donation (Source: Ajzen 1991) Seven-point semantic scales For me, donating online is:		
AOD1	(bad – good)	.87
AOD2	(foolish – wise)	.93
AOD3	(undesirable – desirable)	.81
Web Skills (Source: Lee and Chang 2011) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
WS1	I am very skilled at using the web.	.94
WS2	I know how to find what I want on the web.	.80
WS3	I know more about using the web than most people I know.	.89
Importance of charity's reputation How important to you is the reputation of charity organizations? (*Not important at all-Extremely Important)*		
Past Donation Behavior Have you engaged in charitable giving (i.e., donate) to any charity organization(s) this past year? (Money, Time, Resources)		
Anticipated Regret of Playing Lottery (Marker Variable) (Source: Sheeran and Orbell 1999) Seven-point scales anchored with "strongly disagree" and "strongly agree"		
AR1	If I missed playing the national lottery for one week, I would regret it.	
AR2	Not playing the national lottery for one week would upset me.	

Appendix C2. Detailed Website Stimuli and Sample Screenshots

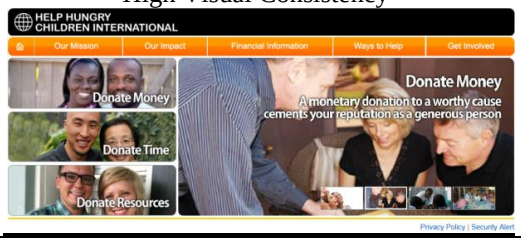
Charity Appeals	**A**: Self-Benefit Appeals Images of adults and following textual messages were used to show how donations are beneficial to donors. *Donation to a worthy cause makes you a better person.* ***Donate Money**: A monetary donation to a worthy cause cements your reputation as a generous person.* ***Donate Your Time**: You can enhance your resume and develop your skills by helping others.* ***Donate Resources**: Your contributions in kind make you a valued benefactor.*	**B**: Other-Benefit Appeals Images of children and the following textual messages were used to show how donations are beneficial to children. *Donation enriches the lives of children by alleviating poverty and eliminating hunger.* ***Donate Money**: Your contribution can make a big difference in the quality of children's lives.* ***Donate Your Time**: Use your skills and knowledge to enhance the lives of less fortunate children.* ***Donate Resources**: Your contributions may seem small to you, but they can make enormous differences in the lives of children.*
Donation Link	**1**. Adult images were provided on the donation links.	**2**. Children images were provided on the donation links.
Sample Screen Shots	**A1**: Self-Benefit Appeal and Adult Images High Visual Consistency 	**B2**: Other-Benefit Appeal and Child Images High Visual Consistency 

Image Source: Children's Relief International (www.childrensrelief.org); Good 360 (www.good360.org); SOS Children's Villages UK (www.soschildrenvillages.org.uk); UNICEF UK (www.unicef.org.uk); Volunteers of America (www.voa.org); World Vision (www.worldvision.org)

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	Kwak, D.-H., Deng, S., Neely, D., and Zhao, H. 2012. "What Should be Considered to Attract Charity Website Visitors?" *Proceedings of the 11th Workshop on e-Business*, Orlando, (Dec, 15).
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	Kwak, D.-H., Kizzier, D., and Jung, E. 2011. "Spyware Knowledge in Anti-Spyware Program Adoption: Effects on Risk, Trust, and Intention to Use," *Proceedings of the 44th Hawaii International Conferences on System Sciences* (HICSS), Kauai, (Jan 4-7).

Invited Talks	Kwak, D.-H. "The Elaborating Role of Personal Involvement with Charity Giving and Helper's High on the Effects of Website Quality in Online Donation: Multiple Roles of Variables," *The Big Ten IS Symposium*, University of Minnesota, MN, May 11, 2013.
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