

Incorporating social dimensions in Web-store design

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Buyer-seller interactions have significant social dimensions. Shopping on the Internet is mediated by technological interfaces, which are thought of as tools that suppress the social nature of the shopping activity. However, Reeves and Nass argue that technological media, such as computers, are 'fundamentally social and natural'. Thus it is both important and intriguing to understand the social characteristics being projected by the interface or perceived by the Internet shopper. We draw from three domains – theories of social psychology, retail theories and practices, and the concept of computers as social actors – to provide theoretical basis for this thesis. Specifically, we demonstrate our approach by furnishing theoretical arguments for the need to pay attention to the following social dimensions in Web-based stores: politeness, flattery, self-evaluation and other-evaluation, expertise and aesthetics.

Keywords: Internet shopping, Web-store design, media equation, politeness, flattery, self- and other-evaluation, expertise and aesthetics

1. Introduction

"The Net kind of takes away the whole experience – the hunt, the get and the buy", said Eva Kuhn, 13, of New York who browses online but buys in the stores. "Web shopping is just too perfect", she said. "You type in 'gray cords' and there they are. It's not fun. The fun is in the hunt".

<http://www.nytimes.com/library/tech/99/09/biztech/technology/22conn.html>

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Traditional research and evaluations of Web sites have concentrated on the relatively rational (cf [12]) criterion of the usability of the site (e.g., [26]). Similarly, evaluations and guidelines regarding online stores have stressed the issue of information content and its instrumentality to the consumers' cognition and decision processes, as well as classic usability dimensions, such as ease of navigation and interface consistency (e.g., [51,69,70]). In the words of Spool et al. [70] "... no one surfs the online employee policy manual just for kicks" (p. 4). In effect, information technology researchers and practitioners approach Web-site design from the perspective of objective usability criteria.

This utilitarian view leads to a tendency to design with a focus on completing transactions effectively and efficiently. It fails to take into account that an activity like 'shopping is not merely an exercise in acquisition, but a *pleasurable avocation* [our italics]' [30, p. 189]. Fiske, Hodge and Turner [22] say that among other things, 'shopping is ... a way of interacting with others' (p. 96). Thus, the emphasis on the objective usability criteria ignores the social impact of

the Internet. By 'social impact' we mean how human behavior is influenced by the presence, behavior, and products of other human beings or artifacts (in this case, the Internet, Internet users, Web sites, etc.). The Internet, to some extent, fulfills people's social needs for a place in which leisure time can be spent, new merchandise can be sought, mutual interests can be communicated with other users, and so on. At the same time, the Internet may negatively affect certain aspects of social behavior, such as reducing social involvement [45]. Hence, the new social context that the Internet has constructed needs to be seriously considered.

In this article, we argue that the social dimension of Internet use is important when considering the Internet's role as an arena for consumer shopping. The fields of marketing, advertising and consumer behavior have long recognized the importance of fulfilling the consumer's psychological and social needs. The marketing literature commonly assumes that in addition to functional needs, certain types of socio-psychological needs might also be responsible for triggering a buying process [50]. These include, for example, consumers' needs for stimulation, the need for relief from their daily environment, the need for socializing, and the need to observe and learn new trends and fashions. Mehrabian [54] notes that shopping 'should be most reinforcing to those who are confined to boring home and work environments' (p. 293). Fiske et al. [22] point out that 'the conflation of shopping, leisure and entertainment takes shopping out of the realm of domestic chores and attempts to rescue it from the mundane, to relocate in the 'freedom' of leisure and entertainment' (p. 103). When shopping, consumers might also satisfy their need for status and for self-reward. One of the retailer's most important (and yet often delicate) tasks is to stimulate and satisfy these needs. The Internet and the individual Web-stores can both try to address the needs. Just as shopping malls once replaced county fairs and town-squares as community gathering places in which people spent their leisure time, so has the Internet emerged as a substitute for physical shopping centers among some segments of the population. Further, Internet shopping outlets are also becoming entertainment and stimulation centers. But it is still not clear whether specific Web-based stores (WBS) can create and convey a unique image and a sense of trusted establishment worthy of the consumer's time and money, and if so, how.

In this context, we are interested in two main questions regarding the internet store: (a) Can a Web-site project interactive and experience qualities of a store

that parallel those offered by physical stores and actual sales people? (b) What features and design characteristics of Web-site interfaces may project such qualities? The aim of this article is to develop theoretical arguments to support the contention that Web-based stores can and should support positive social experience.

In the next section we describe the approach that sees media as equal partners in social life and present the theoretical framework on which we base our analyses. In Section 3, we present several dimensions of social interaction that pertain to the retail environment and the shopping process, and for which research has demonstrated the viability of our thesis. For these dimensions we then offer suggestions concerning the proper design of the human-computer interaction to enhance the social dimensions of the Web-store. In Section 4, we offer our concluding remarks.

2. Theoretical development

The nature of the shopping process is social, i.e., selling and buying constitute a social interaction (e.g., [68]), in which the seller is trying to influence the buyer. The social perspective of this process includes at least two elements. First, influencing others is an important aspect of all interpersonal (i.e., social) relationships [59]. Second, buying behavior is strongly affected by social influences and needs (such as the need to conform to cultural norms or the need to belong). Thus, the nature and content of the social exchange between the seller and the buyer, as well as other social influences, have much to do with the outcome of the buying process in the traditional shopping context [6].

However, one of major drawbacks of electronic retailing over conventional retailing is that it is inherently less stimulating (having eliminated tactile and olfactory stimulation altogether and reducing the potential range of auditory stimulation). As such, its ability to create a sense of realism, or 'presence' [52] decreases. In addition, its potential to offer the customer social interactions and experiences is limited relative to physical stores. Finally, information cues regarding some of the store's qualities (such as merchandise assortment and variety) are harder to project. Thus, in general, electronic retailing has some intrinsic disadvantages. In this regard, Internet retailers need methods to compensate for these handicaps and to provide consumers equal or greater benefits in comparison to store-based merchants.

Social interaction in conventional retail exchange occurs between humans. Yet, in Internet retailing, it takes place between a human being and a computer. Does this mean that current theories, findings and practices regarding social influences in marketing have limited applicability in the Internet retailing? We contend that the social dimensions that affect ordinary retail exist in the context of Internet shopping as well. Our contention is based on a recent line of research, which suggests that people respond to social cues even when they interact with a computer rather than another person [24,52,55,63]. In their book, 'The Media Equation', Reeves and Nass [63] suggest that individuals' interactions with media (including computers) obey, in principle, the rules of interpersonal interactions. We elaborate on the findings of these researchers to establish a theoretical framework for our thesis.

2.1. *Ascribing human attributes to media*

Social psychologists agree that individual behavior is strongly affected by the environment, especially the social environment that influences thought, feeling, and action. In addition, it is accepted that people do not respond to environments as environments are, but as they interpret environments to be [65]. Undoubtedly, computers in general and the Internet in particular, are becoming integral parts of our environment. This change begs the question: How do people interpret the presence of computers in their environment? Picard [61] asserts that future human-computer interactions should include computers that recognize and express affect, because 'affect is a natural and social part of human communication' (p. 15). Recently, several streams of research have suggested that people already interpret at least some of their computing environment in social terms, despite the fact that such environment lacks many of the things emphasized in traditional social environments. For example, Parks and Floyd [58] maintain that on-line relationships are genuine personal relationships in the eyes of the participants. Lombard and Ditton [52] maintain that media can convey a sense of social environment even if they do not appear particularly realistic. For example, people overlook the artificial nature of the *Tamagotchi* and attempt to interact with it [52]. Similarly, avatars can be used to create a sense of social environment despite looking decidedly artificial.

In the same vein, Reeves and Nass [63] view computers and other media as 'fundamentally social and natural' (p. 5). The Reeves-Nass media equation,

which argues that media equals real life, encompasses two separate thoughts. First, human beings often tend to treat a medium as though they are dealing with another person. Second, they interpret signals and information from a medium as though the signals are being given by a person. An example of the former would be that users tend to be polite to computers. An example of the latter would be that they respond with pleasure when they receive a compliment from a computer [63]. These behaviors are unconscious: 'people automatically assume reality because throughout evolution there was no reason to do otherwise' (p. 253). This is not to say that media *truly* behave socially. Rather, these findings stem from the fact that people *perceive* media as social actors. Lombard and Ditton [52] refer to this phenomenon as 'the illusion of nonmediation'. This perceptual illusion is generated by basic social cues exhibited by the medium, which lead users to treat it as a social entity. Nass and Moon [56] attribute this behavior to 'mindlessness' [48]. In the context of human-computer interaction, mindless behavior occurs because people ignore cues that 'reveal the essential asocial nature of a computer' ([56], p. 83). Nass and Moon suggest that this mindlessness may be triggered by certain characteristics of computers that are closely associated with the human 'prototype', such as words for output, interactivity, and filling of roles traditionally filled by humans. Reeves and Nass [63] base their claims on studies done using diverse media, i.e., pictures, television, computers and so on. They conclude that the media equation is robust regardless of the sophistication level of the communication technology used. Currently, most e-commerce is conducted via technologies similar to those studied by Reeves and Nass, i.e., desktop computers, computer displays and Web-TV. Thus it seems appropriate to extend the media equation concept to the field of electronic retail in general.

Reeves and Nass have provided exhaustive empirical support for their claims. Their strategy was to borrow theories and experiments in human-human interaction and try to perform analogous studies for human-media communication. The results of those studies led them to conclude that humans are built to respond socially when they encounter behaviors that suggest a social presence. If computers interact with humans in a way that resembles human-human interactions (e.g., instructing, taking turns, inquiring), people will tend to treat them accordingly. When media violate social norms, people would not treat them as technologically deficient, but as socially incompetent and even offensive.

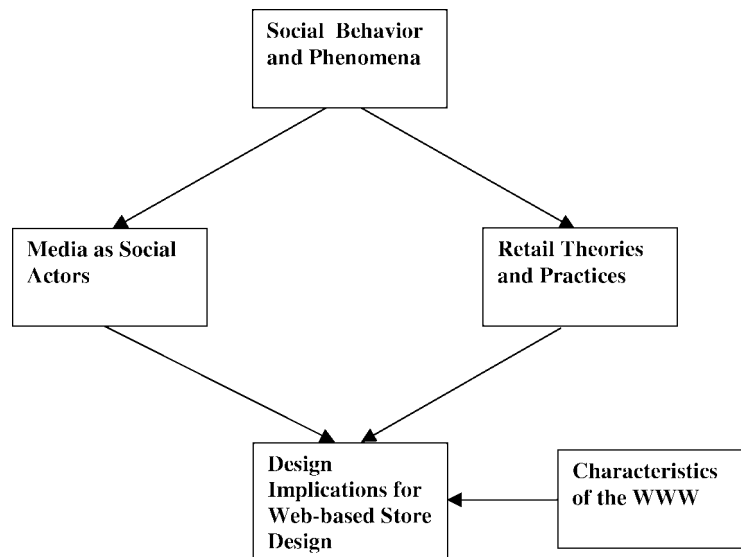


Fig. 1. A research framework for the study of Web-based store design.

Thus the view of computers as social actors provides a basis for arguing that consumers will perceive Web-based stores as possessing social characteristics. A theoretical framework is offered next to provide a basis for analyzing social dimensions of a Web-store.

2.2. The theoretical framework

The theoretical framework is shown in Fig. 1. The framework argues for an integration of research findings in social psychology, retail theories and practices, and the concept of 'computers as social actors'. Social psychologists have long studied person-to-person interactions, and attempts to influence and persuade. Research in these areas has identified many relevant dimensions and constructs, such as politeness and flattery. To a large extent, theories that were developed in the area of social psychology have influenced the work of researchers in the field of marketing and its sub-disciplines (e.g., advertising, retailing and consumer behavior). Subsequently, retail theories and guidelines have been developed based on understanding human behavior in the social context of the retail environment. Those theories, together with the accumulated experience of human behavior in social environments, in general, and in the retail context, in particular, form today's 'retail practice'. In using the term 'retail practice', we refer to practices used by retailers to persuade consumers to buy in their stores. We use those retail practices in conjunction with the concept of 'computers as social actors' [63] to propose that many of the

social dimensions that are relevant to conventional retail can and should be maintained in Internet retailing. Finally, the framework takes into account the distinctive characteristics of the World Wide Web that affect the way in which interpersonal interactions and retail practices can be designed for WBS [67].

The framework reflects our belief that the theories and processes proposed to explain the behavior of consumers in a given social context in general, and in the retail context in particular, do not lose their validity because of the mediating presence of the Web. Rather, in line with the theory of 'computers as social actors', we propose that this medium becomes now another actor in the environment, which consumers perceive and to which they react pretty much like they would to the presence, behavior, and products of other social entities in the retail environment. As such, we suggest that much of the same social conventions that apply to physical shopping environments pertain to Web-based shopping as well.

2.3. Exemplar dimensions

Because of the novelty of the medium and conventional wisdom that sees computers as tools rather than social actors, the social role of computers and their relevance to Web-based retail may not be immediately seen. To demonstrate the relevance of the social role of computers to Web-based retail, we have selected five exemplar dimensions. We show how these dimensions relate to retailing and how the design of Web stores

can accommodate these dimensions. Four of the dimensions discussed here were used in [63] to demonstrate the social role of computers: politeness, flattery, self-evaluation and other-evaluation, and expertise. We also introduce and discuss the dimension of aesthetics. What integrates the dimensions under one umbrella is that each of them is social in nature. In our discussions, the dimensions are termed social, because they originate (or are perceived to originate) from an external source, e.g., a salesperson or a mediating interface, and affect the interaction between the customer and external source. It is possible for such forces to also affect the individual customer's inner feelings and emotions, but this is clearly within in the realm of the social impact on individuals.

We have focused here on those factors for which research findings already exist regarding people's reactions to computers as social actors. We are by no means suggesting that these are the only factors or domains in social interaction that merit attention as relevant to the designing of Web-based retail stores. Clearly, as more work is done in this area, additional factors are likely to emerge as relevant to this line of research.

The sections that follow are structured similarly. Each section deals with one of the exemplar social dimensions. In each section we first provide a theoretical basis for the importance and relevance of the exemplar to social interactions in general and in the area of marketing in particular. We then provide evidence that the social meaning of that dimension can be conveyed through media. We then discuss the relevance of this dimension to the context of Internet retailing and the design implications of this relevance for WBS. At the end of each section we present major conclusions and challenges for future research and practice.

3. Politeness

Politeness costs nothing, and gains everything.

Lady Mary Wortley Montagu (1689–1762) *Letters*

3.1. Importance of politeness

Politeness consists of several social skills, some of which are general, and some situation-, or culture-specific [4]. Polite behavior is part of most interaction processes. Impolite behavior may cause an interaction to fail. Green [29] argues that politeness expresses a cooperative spirit and shows respect for others. Further, consistent failure to follow the unwritten rules of

polite behavior may damage a person's entire social life [27]. In the context of retailing, politeness carries comparable weight, both while selling and while providing service. When selling to ultimate consumers, politeness is considered a prerequisite for the successful salesperson (e.g., [31]). Courtesy affects each stage in retail selling, from approaching and greeting the customer, to serving him, handling requests and objections, to post-sale behavior. Impolite behavior in retail stores can take on various forms. For example, exhibited lack of interest in the customer, talking down other brands, arguing with the consumer, embarrassing customers, being too personal, or being downright rude violate social norms and might not be tolerated. Impolite behavior may drive consumers away, or preclude any chance for long-term relationships with the customer. In the context of service centers, Donath [17] notes that 'handling inbound telephone inquiries with politeness and aplomb is a performance baseline. It will not affect revenue unless it is absent' (p. 14).

3.2. Media-mediated politeness

Politeness in human-human interactions can be affected when the interactions are mediated by electronic media. Studies indicate that users of electronic media tend to be less polite in their interactions (e.g., [71]). However, anticipation of politeness from videoconferencing partners has been reported to be even more pronounced than in regular meetings. Bryant [11] suggests that 'if anything, it [videoconferencing] is putting formality back into meetings, the way they are prepared for, how you dress and being polite enough to let someone else have their say'. Thus, computer-mediated interaction may increase the gap between people's expectations from those with whom they communicate on the one hand, and the others' actual behavior on the other hand.

Reeves and Nass [63] found that people interact with computers in a way that is commensurate with basic politeness principles that apply to human-human interaction. One of the most significant findings was that those results were found for relatively 'low-tech' computers, and regardless of whether interactions were text-, or voice-based. In Reeves and Nass's words, 'it doesn't take virtual reality to create the sense that another person is present; people don't need much of a cue to respond socially' (p. 25). In addition, Reeves and Nass suggest that users' polite responses occurred without conscious awareness. Thus, given the more intense nature of real-world Internet shopping (compared

to simulated internet shopping in lab experiments), and the tendency to make Web-based stores' sites livelier and more interactive in general, we expect politeness to be a relevant dimension of WBR-customer interaction. Moreover, given what we already know about the importance of politeness in retailer-customer interaction, it can be reasonably argued that customers would react more favorably to polite Internet stores, rather than to impolite ones. Consequently we propose that *Web-based stores strive to design interfaces that project politeness.*

3.3. Designing-for-politeness of Web-based stores

To design polite interfaces for Web-based stores, we need to define further what 'politeness' means in the Internet shopping context. Reeves and Nass suggest several person-to-person behaviors from which analogies may be drawn. For example, they suggest using Grice's Maxims for polite interaction – quality, quantity, relevance, and clarity – as a basis for designing interfaces. Quality refers to the truthfulness and cooperativeness of responses. Quantity refers to the equitable responses, i.e., not too much, nor too little. Relevance refers to providing information or options that is useful in context. Clarity refers to the understandability of the responses. While these behaviors have utilitarian value, they can also contribute to the perception of politeness. Other dimensions of polite behavior may be greeting the customers as they enter the site and as they exit it. Politeness also includes respecting the customers' right for privacy and security. All of these manifestations of polite behavior are well within the capabilities of today's Web technology. It requires, however, careful design of the process by which the store interacts with its customers.

In general, as electronic media replace or supplement the use of other modes of interaction between customers and merchants, retailers are attending to politeness into such interactions. For instance, e-mail messages are becoming an important mode of exchange between customers and establishments. Using politeness and response speed as measures of responsiveness, a recent article [1] indicates that food establishments' responsiveness to e-mail complaints is better than their responsiveness to regular mail. However, the subtler aspects of politeness need more attention. For instance, Laberis [47] quotes consumers 'And why was I constantly calling the company to check on my orders when it should have been chasing down the information and emailing it to me? I won't shop there

again ...' (p. 35). Thus, we believe that obstacles to polite interfaces stem more from lack of awareness to its importance in computer-mediated transactions than to technological limitations. Consequently, we suggest that *following conventional rules of human-to-human politeness, it is possible to design polite interfaces for Web-based stores.*

The practical consequences of designing-for-politeness are, of course, numerous. Not all of which can be anticipated. As an example, consider the issue of evaluating how the customer perceives the Web-store. Customers are often asked to complete satisfaction surveys by Web stores at the end of a transaction. Such surveys may be self-administered by the store or administered by independent rating agencies, such as Bizrate.com. Surprisingly, politeness may affect the results, depending on who is administering the survey. In face to face interactions, when people ask for another's opinion about themselves, they usually received more positive responses than when an independent third person asks the same question. This tendency, for example, is the source for the well-known problem of acquiescence with survey administrators [46]. Reeves and Nass [63] found the same when the person at one end of the interaction is replaced by a computer. Regardless of whether text or voice technology was used by the computer to ask for the user's opinion (about 'itself'), users' responses were more positive compared to when they were asked by a different computer to rate the target computer. The immediate lesson of this example regarding the design of Web-based stores is that Web stores should not place undue reliance on self-administered customer satisfaction surveys. Due to users' politeness, the responses to such a survey may be biased upwards leading to a false sense of satisfaction among the site's management. Thus, we suggest the following rule of thumb: *Results of self-administered computerized surveys by WBR should be discounted for customers' politeness-induced acquiescence.*

3.4. Research challenges

The more general lesson, as suggested earlier, is that if computers are, indeed, social actors, then much more scrutiny should be placed on the design of the store-customer interaction. Politeness exists at two levels in interpersonal interactions. The more overt aspects of politeness are embedded in norms such as greeting a customer, saying 'please' and 'thank you' and so on. The subtler aspects are embedded in how situations

that may be potentially embarrassing to the customer are handled, e.g., when a customer's credit card is rejected, or having to request information that may be considered personal. Interface designers may be more likely to take into account the more overt aspects of politeness into the interactions. They are less likely, however, to be aware of the subtler aspects. The challenge to the researcher is to identify the subtler aspects of politeness that are a part of the customer-to-Web-store interaction, and to examine their effects on the customer's perceptions of the Web-site.

4. Flattery

*'Tis an old maxim in the schools,
That flattery is the food of fools;
Yet now and then your men of wit
Will condescend to take a bit.'*

Swift, *Cadenus and Vanessa*

4.1. The role of flattery

Flattery is loosely defined as a social behavior that is designed to secure a benefit to the actor (the flatterer) by means of over-generously praising a target person [39]. Whereas the use of the terms 'flattery' or 'ingratiation' evoke negative connotations in everyday usage, it is nonetheless a legitimate and oft-used interpersonal communication tool [39,40]. Empirical data reveals 'a small positive effect for ingratiation on performance evaluations and a significantly stronger positive effect on judgments of interpersonal attraction (i.e., liking)' [28, p. 54]. Sellers are aware of the potential benefits of complimenting customers (e.g., [59,72]) in winning their heart. For example, a salesman's tactic may be to flatter someone for choosing a 'good' (e.g., well-fitting) clothing item. Such flattery might enhance the salesperson's likability and increase the customer's willingness to purchase. Other tactics to ingratiate or flatter are also possible. For example, one tactic is complimenting others on their performance or a desirable quality, e.g., virtues, judgments or choice. Another tactic involves conforming to the target person. This tactic stems from the assumption that, in general, people like others whose values and beliefs appear to be similar to their own. Of course, obvious or offensive flatteries are counter-productive. So, salespeople are encouraged to use sincere and specific 'compliments' [59, p. 296]. In essence, flatterers need to walk the tight rope of trying to influence their target, without

violating the social norms, which prohibit manipulative other-enhancements [39]. Thus, careful timing and choice of words are essential for successful flattery.

Fogg and Nass [25] suggest that flattery works because people desire to think of themselves favorably, and targets tend to believe flatterers, even when they know that the flattery was insincere. Flattery produces a positive affect in the target, and increased feeling of power and importance. Consequently, the dynamics of social interaction, perhaps through reciprocity norms, lead the target to increasingly like the flatterer (except when an ulterior motive is evident) and to judge the performance of the flatterer more favorably (cf [25]).

While the field of flattery has by large been studied in the organizational context, it is reasonable to assume that research findings in this area apply to the fields of marketing and consumer behavior as well. A few studies support this notion. For example, DeBono and Krim [22] found that women were affected by compliments given while they were sampling perfumes. DeBono and Krim divided their sample to low and high self-monitoring women. For the low-monitoring women the compliments (given vs. absent) interacted with the smell of the perfume (pleasant vs. less pleasant). The high self-monitoring group, on the other hand, evaluated the perfume's quality higher when they were given compliments regardless of the actual smell. Similarly, Howard, Gengler and Jain [34,35] report that remembering the target's name is perceived by potential customers as a compliment. The targets, in turn, reciprocated the compliment by being more willing to comply with a purchase request.

4.2. Media-mediated flattery

The idea of technological interfaces flattering a human may seem contrived. However, Reeves and Nass [63] cite research which supports the possibility of flattering via technology. For example, Fogg and Nass [25] found that praise from computers made people feel better about themselves, their performance, the interaction, and the computer with which they interacted. Even more surprising was their finding that flattery had the same effect on users as sincere praise. Moreover, Fogg and Nass also showed that computers that flattered elicited responses in their targets that were similar to responses evoked by human flatterers. They conclude that human-computer interaction can be significantly enriched by adding either sincere praise or flattery.

The notion of flattering computers interlaces with the perception of computers as persuasive technologies [24]. As such, computers can be designed to interactively affect attitudes or behaviors. Persuasive technologies use the same basic strategies that people have ever been using, including flattery, only that they enable the implementation of those strategies in new ways [44]. One such example is the 5-A-Day Adventures CD-ROM, in which software characters praise users for practicing behaviors that lead to good nutrition [23,44].

4.3. Flattery in Web-based stores

Although the persuasive role of commercial Web sites has been acknowledged by researchers (e.g., [67]), flattery as a persuasive technique has received scarce attention. Yet, a closer look at how certain WBS interact with their customers reveals that the Web can be used for flattery in various ways. An example of implementing such a technique may be seen on the Guess Web site (www.guess.com), where consumers can match various clothing items to make outfits. A CNN story on Web-based apparel stores adds that in that store 'you choose a top and the site tells you, 'This will go great with ...' whatever garment is being promoted' (<http://www.cnn.com/STYLE/9910/01/banana.republic/>). This message by the computer is comparable to 'suggestion selling' [31] or 'add-ons' selling [59], in which the salesman tries to solicit additional purchases from the customer. We suggest that, in a similar vein, WBS could compliment customers who are composing their outfits. Alternatively, such cyber-stores can use an expert system that helps people match cloths based on attributes such as living style, physique or colors (e.g., skin, hair, eyes). Throughout the matching process, the computerized system may compliment the customers on appropriate customer attributes, e.g., on their judgment, decisions and so on.

The discussion thus far suggests that *Web-based stores should consider flattering on-line customers as a legitimate and potentially beneficial way of improving the consumers' willingness to buy. Moreover, WBS can design the use of such flattering messages following conventional rules of human-to-human communication.* This is not meant to imply that Web-based stores should at all costs flatter their potential customers. It was stated by early researchers in the field (e.g., [39]) and has been confirmed by a recent meta-analytical study [28] that ingratiation and flattery depend on various contingencies. It is beyond the scope

of the current analysis to list and assess those contingencies, and the reader is referred to the articles by Gordon [28] and Jones [39] for more details. It is our belief that much of this knowledge can be generated by consulting seasoned salespeople who know how to use the right flattery in a given situation. It certainly requires meticulous pre-, and post-testing [67] of the store-customer interaction design to ensure that ingratiation is not overdone.

4.4. Research challenges

This paper is confined to examining whether flattery can contribute to Web-based stores' success, and the extent to which this can be done via technological interfaces. Yet, it is important to recognize that the use of flattery as a persuasive means in Web-sites of Internet-based stores to promote purchases may spawn ethical debates regarding the design and use of persuasive technologies [7,24]. This debate, however, is beyond the scope of this article.

The challenge to the researcher is to operationalize the process of flattery on the Web-site, so that the propositions can be experimentally validated. Reeves and Nass [63] cited research in which flattery was operationalized in the context of users learning how to use computers. Similar methods may be used to study flattery effect on Web-consumers. Clearly, given the intricacy and subtlety of situations in which flattery might work, and given the fact that this area is relatively under-researched in the field of marketing, some great challenges lie ahead for students of Web-based flattery.

5. Self-evaluation and other-evaluation

Let another man praise thee and not thine own mouth.
Old Testament: Proverbs, xxvii 2.

5.1. Effects of self-, and other-evaluation

Research has shown that a person's evaluation of other individuals or organizations is often influenced by how those target entities evaluate themselves (self-evaluation) or are evaluated by third parties (other-evaluation). In general, when an individual hears someone praising another person, he/she reacts by positively evaluating the praised person's performance and the praising person's character. The individual's reaction on hearing a criticism is just the opposite, with the ad-

ditional stipulation that critics are perceived as more intelligent than those who praise [3]. Reactions to hearing people praise or criticize themselves (self-praise or self-criticism respectively) are different, though. Self-praise elicits skepticism in the listener's mind, while self-criticism creates a positive impression of the person in the listener's mind [63].

Surprisingly, very limited attention has been paid in the academic marketing literature to the effects of other-praise or other-criticism on consumer behavior. For example, among the few publications on this topic is a study on the effect of word-of-mouth communications on product evaluation [9]. The study found that word-of-mouth affected consumer judgments in a way that corresponds to the praise versus criticism effects discussed above.

In practice, retailers propagate praise they receive from existing clients or disinterested third parties among potential customers to improve store image. Such propagation is usually accomplished by including key phrases or statements of praise in advertisements or in newsletters. However, the extent to which retailers can disseminate such positive comments is limited by the nature of the channel chosen for dissemination and associated costs. It should also be mentioned that a store could spread comments, positive or negative, about the competition. When they convey negative comments in the traditional environment, they do so subtly and for temporary periods of time. For example, a company may run an advertisement for a period of time implying that the competition, without mentioning names, is slow to respond to customer service. Lastly, a company (often a disinterested third party, e.g., Consumer Reports Online, Bizrate.com) may critique, either positively or negatively, other companies or stores.

5.2. Media-mediated self-, and other-evaluation

It is seemingly absurd to attribute a sense of 'self' to computers, or to suggest that computers can promote their images or to affect how third parties conceive other computers. Yet, a series of studies reported by Reeves and Nass [63] suggest that when praise and criticism are provided by computers, people respond as if they were provided by humans. For example, participants in a study perceived a computer to have done a better tutoring job after it was praised by another computer compared to after it was criticized by the other computer. Similarly, participants disliked a computer more when it criticized another computer than when it

criticized itself. Finally, computers were perceived to be more intelligent when they criticized other computers than when they praised other computers. That is, people's perception of the qualities of the source computer (one providing praise or criticism) and the target computer (one about which praise or criticism is being provided) are similar to their perceptions of human beings performing the same roles. Reeves and Nass suggest that the importance of these findings lie in their extension of the realm of human-media interactions. People perceive media as social actors not only when computers and humans directly interact with each other, but also when people are the observers of interactions between computers.

5.3. Self-, and other-evaluation in Web-based stores

The Internet has expanded the ability to propagate praise and criticism. Information may be made available by the store about itself, by third parties about the store or by the store about the competition. Information by the store about itself is usually presented in advertisements at other sites or in banners at the store's site itself. In either case, the principles of advertising define what is effective in projecting positive images. Generally speaking, we suggest that *in order to garner the positive attitude that praise by others triggers, a Web-based store should strive to refer consumers to information resources that contain positive remarks about the store. Similarly, Web-based stores should consider including criticisms about, and praise of, others in their sites in order to reap the positive attitude that praising others triggers as well as the appreciation evoked by criticizing others.* Clearly, these measures should be applied selectively. For example, blatant self-praise tends to induce skepticism [63]. Thus, *in order to reduce the skepticism that self-praise evokes, Web-based stores should minimize blatant or unsubstantiated boasting.*

Information about the store from third parties, i.e., praise by others, could once be disseminated only by using expensive mass media. Now, Web-based retailers can employ a variety of tactics to disseminate praise by others widely. Web-stores wishing to disseminate positive evaluations about their own store have two options. First, they may create a site or page where the store's customers can post comments about the store. Second, they may link their site to other sites that have made positive comments about the Web-store. Neither option is directly analogous to self-evaluation or other-

evaluation, yet both are similar enough to warrant further inspection.

The option of providing a forum where customers can post comments poses some dangers. While creating a page where customers post comments is not the same as self-praise or self-criticism, we speculate that it could produce similar results. If the comments are all positive, the page is likely to be viewed with skepticism. If the page has strongly negative remarks by an occasional irate customer, other customers may be negatively influenced. A Web-page with balanced views may be the most effective, but this may be difficult to ensure.

The option of creating a page that provides links to other sites, which post positive remarks about the Web-store may be more effective. The Web-store can retain some degree of control on which sites the customer is directed to. Further, we speculate that this will not have results similar to self-praise or self-criticism, and is more likely to be perceived as other-evaluation. Thus, *praise by others can be brought to bear on consumers by a store that uses Web technology to point at various information resources that contain positive remarks about the store.*

The practice of subtly criticizing competitors is prevalent in conventional media, but not the practice of praising competitors. The Internet community is breaking new ground in this respect. An example of a store that praises and/or criticizes its competitors is Isys Information Architects' Inc., a firm that specializes in the design and development of information systems. Isys includes both criticisms and praise sections on designing human-computer interfaces (Interface Hall of Shame and Internet Hall of Fame, respectively)¹ in its Web site. It is very likely that these sections affect users' perceptions of the firm in a way that is commensurate with Reeves and Nass's findings. That is, the firm may be perceived both as 'intelligent' per its criticisms and as generous, per its praise for others in the business. While the long-term benefits of such practices remain to be seen, in the short-run, there is anecdotal evidence of positive response. One of the very first visitors' comments that can be found in the Hall of Shame's feedback section reads (Italics added):

'I just saw the Interface Hall of Shame. It is very thoughtful and smart. Why didn't anyone tell me about it before now!' – Edward Tufte.

Consequently we suggest that *Web-based stores can use Web technology to include criticisms about, and praise of, other parties in their sites, thus harnessing*

the appreciation evoked by criticizing others and the positive attitude evoked by praising others.

There can be many practical ramifications of using various techniques of praising and criticizing others and self. Here we would like to consider one such issue – balancing the effects of positive and negative praises. Third parties maintaining sites fall into one of two categories: interested and disinterested parties. Major internet sites, such as CDNOW and Amazon.com, are examples of interested parties who maintain Web-pages which provide positive or negative remarks about products that they sell. They publish product reviews by their professional staff as well as by customers. Both stores are interested parties in the sense that they are selling the products that are being reviewed. But the inclusion of both positive and negative remarks provides the perception of fairness and evenhandedness. This is important, since research has shown that customers react favorably to various manifestations of fairness by a firm (e.g., [10,62]). In the case of CDNOW and Amazon.com, each store is less concerned about the sale of individual products, and more concerned with total sales. Thus, they can afford to include a wide array of remarks about individual products in an effort to gain consumer confidence and increase total sales. The general form of this guideline would be that *Web-based stores that include both positive and negative product reviews in their Web-site create to a sense of evenhandedness that improves customers' attitude towards the store.*

5.4. Research challenges

Organizations are constantly trying to project a positive image to the buying public. Given the skepticism attached to self-praise, they often use other-opinion to project the positive image. Other-opinions include the opinions of customers and third-parties. The Internet provides the means to direct customers to such other-opinion easily. Previous research has examined the effects of self-evaluation and other-evaluation, but has not examined the effect of an interested party directing customers to other-evaluation. We believe that because of the ease in which retailers can propagate both praise and critique through the Internet, research in this area becomes both urgent and exciting. Major research questions that could be posed in this area are: what is the effect of organizations directing the attention of customers to positive other-opinions? How would customers react to retailers who criticize their competitors? Even more interesting would be the question of how would potential customers react to retailers that praise their competitors?

¹See <http://www.iarchitect.com/index.htm>.

6. Expertise

He is wise who follows the Wise.

Edward Fitzgerald (1809–1883) *Polunius: Liberty*

6.1. The role of expertise in persuasion and advertisement

Advertisers make substantial use of expert endorsers in their attempt to deliver persuasive messages to potential customers [73]. Research in the fields of attitude change and advertising devotes a special place to the persuasive effect of experts' opinions on the target (e.g., [60]). People respect others who are labeled 'experts' more than those who are not, and particularly when the issue at stake relates to the expert's domain of expertise. Although several contingencies have been demonstrated to moderate the role of expertise in persuading the target [32,60], its overall importance is widely acknowledged. In a meta-analysis study of the effects of source characteristics in communication and persuasion research, Wilson and Sherrell [77] found that expertise 'tends to have a stronger effect on persuasion than any other types of source manipulations' (p. 109).

The effectiveness of the label 'expert' is attributed to the difficulties associated with deep thinking and the sustaining of such deep thinking [63]. Reeves and Nass put forth two arguments. First, they argue that "... categorization simplifies interaction. ... The predictability gained by applying a label makes people reluctant to scrutinize the label's accuracy" (p. 144). Second, they suggest that "... people are biased towards acceptance. ... To reject the label of 'expert' means marshaling evidence that the label is wrong. Acceptance, however, takes no work at all" (p. 144).

6.2. Media-mediated expertise

Can we expect electronic media to mirror the effects exhibited by human experts on people? Reeves and Nass [63] suggest that the persuasive effect that is associated with merely being labeled as 'specialist' applies not only to humans but to media as well. It is enough to label a communication medium as a 'specialist' for the medium to be perceived as superior to a 'generalist' medium that provides identical content. For example, people who evaluated the quality of news segments on television sets perceived the segments aired on a 'specialist' (news-only) television set to be of higher quality than the news of a 'generalist' television set. The

ratings of the two televisions were different despite the fact that the news segments were identical. Comparable results were obtained for entertainment shows. Situation comedies were judged to be better entertainment when shown by the specialist set than when they were shown on the generalist news-and-entertainment television set. The results are even more intriguing because all the participants said that "... it made absolutely no difference whether they saw the content on a single generalist TV or on ... specialist TVs' (p. 147).

Similar results were obtained when people were asked to evaluate the news of different television networks [63]. 'Participants in the specialist condition (i.e., those who thought that the stories were done by CNN and other news networks) rated the news as more important, interesting, informative, and serious than those who watched the identical stories on a generalist network' (p. 148). In addition to the quality of the content of the news program being perceived as better, the technical quality of the TV was perceived as better. Participants who watched the stories ostensibly produced by specialists rated the color and clarity of the picture as better, even though identical TV sets and quality of tapes were being used.

6.3. Expertise in Web-based stores

Given the above findings, it can be seen how the expertise effect can work in the domain of Web retail as well. Based on the well-documented persuasive effect of expertise, and on the relative ease with which electronic media can emulate such effect, we propose that Web-stores can reap substantial benefits if appearing as experts, or specialists in a certain area. *Projecting an image of an expert would help WBR become more persuasive in the eyes of potential customers.*

There are probably several ways in which a WBS may project expertise. One such way is by *association with known experts in the store's product domain*. The nature of the association may take various forms. For instance, an expert may be used as a spokesperson for the company, e.g., golf professionals recommending a brand of clubs. Alternately, a known expert may write online columns on topics pertaining to the store's domain. Such associations may satisfy the customer's need to have the benefit of expert advice or create the perception that the store itself is expert in the area.

Another way of projecting expertise is by role-playing. One variant of using role-playing to project expertise is seen in advertisements. It uses people who play expert roles, such as TV actors who play lawyers

or physicians, to persuade consumers [57]. Reeves and Nass [63] suggest that such role-playing can also be effective in designing human-computer interactions. For example, software agents can assume the role of 'experts' for certain tasks, thus enhancing perceptions of the software's performance. For instance, CDNOW's Album Advisor™ refers customers to other music albums based on common interests of the customer and other customers. Another example is a feature called 'Shoe Dog' by the Web-based shoe store 'Road Runner' (<http://www.roadrunnersports.com>). Consumers can easily input various parameters of their running style and habits as well as of their feet characteristics into Shoe Dog, which, in turn, recommends the best fitting shoes based on those parameters. Thus, *Web-stores can project expertise by including simulated experts as a part of their Web-site to improve the store's persuasiveness.*

Yet a different approach to harnessing the 'expert effect' on the consumer to the retailer's benefit is the display of references to experts' opinions about the retailer. For example, vendors in the computing industry often cite reviews by PC Magazine as a proof for the quality of the vendor's products. In fact, vendors even try to 'spill over' an expert award for one specific product to an entire line of products or even to their entire business. This tactic coincides with the suggestions to display, or link to, praises about the retailer (see Section 5). In the case of experts' opinions, though, the effect of combining a praising message and an expert source may even be magnified. Thus, a general guideline would be for *Web-based stores to provide links or references to positive expert reviews about their store or about some of their products.*

Specialization is another way in which WBS might project expertise. For example, toy stores project greater expertise about toys than department stores selling the same products. In conventional retailing, the historical evidence on the advantage of specializing is mixed [2]. In some periods, department stores selling broad categories of goods have outperformed the specialist stores, while in other periods, specialist stores have done better. In Web retailing, the conflicting approaches continue to thrive. Anders [2] describes the diametrically opposite strategies of Amazon.com and eToys.com. Amazon.com's strategy is: 'Build the world's biggest online department store, then offer everything from Milton to modems, so shoppers can get what they want with one click on their Web browsers' (p. A1). In contrast, eToys.com's strategy is: 'Build a single-focus Internet site, . . . and don't let the customer

get confused by clutter from other goods or services' (p. A1). Whether one approach is inherently better than the other remains to be seen.

Interestingly, the Internet may blur the distinction between the generalist and the specialist. Two examples are provided. First, CDNOW sells all genres of music. Thus one could view it as a general music store. CDNOW also has distinct sections for different music genres, each of which presents its unique merchandise, reviews, promotions, buyer's guides and searchable database. This division clearly creates a sense of specialization in each of the genres. Thus the Web allows a large generalist site to be broken down into seemingly separate sites that appear to be 'specialized'. Second, 'all the physical constraints go away', [2, p. A14], allowing stores to rethink now a store should work. For instance, Amazon.com has 110 Lego selections (compared to the 60 to 70 carried by conventional department stores) and is adding more to catch up with the 200 selections that the specialist store, eToys.com, offers. In effect, in spite of being a department store, an electronic retailer can easily offer the same selection range in a product category as its specialist counterpart.

The examples cited do not detract from the arguments that specialization projects expertise, or that the projection of expertise is beneficial. What it does point out is that Web design tools enable a generalist store to project an image of specialization and expertise. Thus, *WBS can benefit from being generalists and from projecting expertise at the same time.*

6.4. Research challenges

The above propositions suggest that Web-stores should project expertise and also indicate some of the ways in which they could do so. The question of the extent to which the projection of expertise enhance sales and profitability warrants empirical investigation. Further, researchers need to determine the relative effectiveness of the various methods that could be used to project expertise. An examination of the issues discussed in this section would answer questions such as: is it appropriate for Web-stores which have established themselves by specializing in one product, such as Amazon.com in books and Virtual Vineyards in wines, to diversify to other products as they have done? Should Web-stores like CDNOW establish specialized units for different genres of music under the umbrella of one store or should they establish different Web-stores for each genre? Have sites such as Dr. Koop's site (<http://www.drkoop.com>) fared better than other sites, which have offered similar content without the benefit of comparable perceived expertise?

7. Aesthetics and atmosphere

Beauty is a good letter of introduction.

German proverb.

7.1. *The role of aesthetics*

The 'What is beautiful is good' maxim refers to the social phenomenon of inferring personality attributes from physical attractiveness. The maxim's verity was empirically demonstrated by Dion, Berscheid and Walster [16]. Dion et al. found that people who are physically attractive are assumed (by other people) to possess more socially desirable personality traits than persons who are unattractive. The 'beautiful is good' phenomenon can be explained by two mental mechanisms. One such mechanism suggests that the carry over from the physical appearance to other traits may reflect a stereotyping approach, which associates beauty with other personal attributes [16,19]. The other mechanism involves the halo effect. That is, because physical beauty is the most obvious and accessible personal characteristic accessible to others [16], it is perceived early in the interaction and then tends to color later perceptions and inferences about other personal characteristics.

Gradually, issues of aesthetics, and more generally, affective properties of the shopping environment became the foci of research in the fields of marketing and consumer behavior. The concept of 'retail personality' was introduced by Martineau [53], who illustrated how a store's functional and psychological characteristics are capable of defining its image in a consumer's mind. Russell and Pratt [64] suggested that a store's affective quality (which is based to a large extent on its physical characteristics, including aesthetics) must be considered in any complete description of the shopping environment. Donovan and Rossiter [18] found that feelings generated by a retail store environment relate to shopping behavior, while Bloch [8] concluded that the 'physical form or design of a product is an unquestioned determinant of its marketplace success' (p. 16). Edell and Burke [20] demonstrated that feelings generated by advertisements (especially by the nonverbal elements of an advertisement) may subsequently influence cognitive processing of the advertisement's content. A study by Darden and Babin [13] found that not only are store characteristics capable of enticing affective response in consumers, but that a store's functional (i.e., more objective) and affective (i.e., subjective) qualities are interrelated in the consumers' eyes.

Similar to the 'beauty is good' phenomenon in social psychology, consumer researchers suspect that a halo effect is responsible for a carry over of first impressions of products or shopping environments to consumers' evaluations of other attributes of these products or environments [11]. In addition, this literature suggests that aesthetics may affect perceptions of products by inducing affective response which, in turn, influence evaluations of other product attributes and of the product in general. In Fazio, Roskos-Ewoldsen, and Powell's [21] terms, 'affect is preattentively 'extracted' and influences subsequent perception' (p. 212).

7.2. *Media-mediated aesthetics*

Common wisdom suggests the prominent role of aesthetics in the media in general and in computers specifically e.g., [49]. Yet, the effects of computer aesthetics had seldom been studied. In recent studies, Tractinsky et al. [74,75] found strong association between users' perceptions of the aesthetics of a computerized system' and its perceived usability. The association, which was detected when users were first introduced to the system (thus reflecting the 'what is beautiful is usable' phenomenon), persisted even after the users actually used the system. Tractinsky et al. [75] suggest three different processes, all social in nature, that may induce the positive relationships between perceived aesthetics and perceived usability of information systems. (i) A popular stereotyping which might associate successful design on one (noticeable) design dimension (e.g., aesthetics) with successful design of other, less implicit dimensions. (ii) A halo effect may cause carry over of an aesthetic design to perceptions of other design features. (iii) An affective response to the design's aesthetics may improve users' mood and their overall evaluations of the system.

It is likely that computer users, especially those who seek online substitutes to the physical shopping experience, would value aesthetic designs just like consumers of other commodities (e.g., [13,41]). The interface is the 'facade' [33] of the information system; it is what users experience first and it is what cues users about the inside; it taints the user's perceptions of further interactions with the system. As such, the aesthetics of the interface might be as important as the aesthetics of stores and shopping malls.

7.3. Aesthetics in Web-based stores

In addition to aesthetics' potential carry over to other perceived qualities of a WBS, it is also likely to increase consumers' enjoyment of the shopping process. As such aesthetics might play a motivational role in the consumer's shopping behavior. In IS research, intrinsic motivation to use computers was studied mainly in the workplace. The influence of such motivation on intentions to use computers was generally found to be negligible [14,36], although it was also found to increase satisfaction and involvement [76]. Yet shopping is not only work; it is also fun. As such it has both hedonic (intrinsic) and utilitarian (extrinsic) values [5]. Thus, the increase in the hedonic value of the shopping experience that may be caused by aesthetic design of WBS adds to its importance in the design of such stores.

In evaluations of Web-based stores (e.g., [51,70], Bizrate.com's Web site) the site's aesthetics is generally not considered a major factor. This approach reflects the tendency of the human-computer interaction community to underestimate the importance of aesthetics (cf [75]). Yet, as recent studies have demonstrated, at least under certain conditions aesthetics might affect users' perceptions of other attributes of the computing system [41,75]. The processes involved correspond to those that were identified in the consumer's evaluation of products and stores, that is, both by creating a more pleasurable environment for interaction and by carrying over to other perceived dimensions of the system. These results, coupled with the findings from the marketing literature regarding aesthetics' potential to positively affect consumers' attitudes lead us to propose that *Web-based stores should strive to design aesthetic environments to improve consumers' perception of and attitudes towards the store.*

7.4. Research challenges

Despite attempts to set universal standards regarding what constitutes an aesthetic artifact in general or an aesthetic computer interface in particular, we believe that aesthetics is in the eye of the beholder and in the hands of gifted designers. Thus, we do not attempt to recommend how to achieve aesthetics in Web-page design. Rather, our goal is to draw attention to the fact that in electronic retailing aesthetics and site atmosphere are as important as they are in the physical retail environment. Clearly, of all the premises regarding the ability to design WBS to reflect social dimensions, it is most straightforward to propose that WBS can be

designed aesthetically. We therefore do not formally present this proposition. Nevertheless, we believe that the field of aesthetics and atmosphere in Web-based retail is a fertile ground for exciting future research. It is interesting to see whether different aesthetics concepts of Web-site design arise in different industries or in sites that target different types of customers. Of course, empirical studies should examine whether perceptions of aesthetics of the store's site affect customers' attitudes and purchase behavior. Because building Web-sites is inexpensive relative to building physical stores, more controlled studies can now take place on the effects of aesthetics on consumers in general.

8. Concluding remarks

Peter Keen has argued that 'conversation is the base of e-commerce. The very idea of personalization, one-to-one marketing, and relationship rests on having the many e-commerce technology enablers establish the equivalent of a face-to-face interaction' [42]. In this article, we have tried to suggest how this equivalent of face-to-face interaction can be achieved. We argue that effective design of WBS should take into consideration that by the mere presence of WBSs, by their design and their mode of interaction with the consumers WBSs become social entities in the shopping environment. Previous guidelines for Web-store design have focused mostly on objective measures, such as information content and usability dimensions. We agree that these are important dimensions, but suggest that they are not sufficient. There is no reason to believe that human social behavior will evaporate during an electronic shopping session. Reeves and Nass [63] have reported extensive observations to support that various media elicited social reactions from their users in various contexts regardless of the medium's level of sophistication. An extension of these observations is the basis of our contention that social interaction issues will be important in Internet shopping also.

We have focused on a few dimensions of social behavior to provide theoretical support for our arguments. For each of the dimensions, we have integrated literature in social psychology and marketing with the concept of media equation to infer that these social characteristics are relevant in the design of Web-stores. We believe that the online commerce technology holds many arrows in its quiver to incorporate features which will affect consumers' purchasing behavior by taking into account their social needs and reactions.

Finally, three caveats are warranted. First, the crux of our arguments rests on the Reeves and Nass concept of ‘computers as social actors’. That is, human beings tend to treat the computer medium as though they were dealing with another person, and they interpret signals from media as though the signals were being given by other persons. This concept is not the result of an overstated anthropomorphic view of human-computer interaction. Rather, it is grounded strongly in empirical research [63]. We strongly believe that viewing WBSs as social actors constitutes a strong basis for propositions concerning the social aspects of Internet shopping.

However, the apparent interchangeability of persons and media needs to be applied carefully. It is important to distinguish between the phenomena described by Reeves and Nass, as well as the arguments advanced in this article and the abusive application of anthropomorphic design to media. We concur with Shneiderman [66] who cautions against the overuse of anthropomorphism in designing the human-computer interaction. Anthropomorphism is easy to overdo, and consequently might lead to users’ resentment of the computer. The eventual success of designing Web-based stores according to social rules lies not in extravagancy but in the simple fact that people react naturally to social environments.

The second caveat relates to the research strategy advocated. We advocate, a research strategy similar to that followed by Reeves and Nass [63] for examining consumer behavior in Internet shopping. By replacing ‘person’ with ‘consumer’ and the ‘media’ with ‘online store’ it is possible to come up with a set of propositions regarding various design options of the Web-based retail store. This can be a useful starting point for both developing hypotheses and for conducting empirical research to test the hypotheses. Indeed, a few recent studies in electronic commerce have already demonstrated that various designs of Web-based retail sites can affect consumers’ perceptions of the vendor’s reputation and trustworthiness (e.g., [37,38,43]).

However, Reeves and Nass [63] observed that various media were all capable of eliciting social reactions from their users regardless of the media’s level of sophistication. Yet, we suspect that as research in this area becomes more refined, it will reveal the boundaries and contingencies of each medium. In certain dimensions of the social context some technologies will probably have stronger or maybe even different effects on consumers than other technologies. Thus, we caution that it is important that differences between media not be neglected.

Third, it is important to state that the framework used in this paper is clearly a candidate for further elaboration and expansion. This is certainly the case not only for adding dimensions for consideration in designing WBS, but also for the depth and breadth of the theories that deal with the phenomena discussed in this paper. Obviously, we have only scratched the surface of marketing and social psychology theories in discussing the framework and its implications. For example, based on social psychology theories of motivated behavior, one may argue that a distinction should be drawn between dimensions that are primarily affected by extrinsic or utilitarian factors and those affected by intrinsic or hedonic motivation. Similarly, one may ask for distinction between cognition-driven behaviors and those derived from affect, and so on. It was beyond the scope of this paper to address these and other pertinent issues in detail. Clearly, this article is just a starting point to stimulate thinking on an important and exciting line of research.

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